

A. Bame Nsamenang and Therese M.S. Tchombe

Handbook of African Educational Theories and Practices

A Generative Teacher Education Curriculum



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**HANDBOOK OF AFRICAN
EDUCATIONAL THEORIES AND PRACTICES:
A GENERATIVE TEACHER EDUCATION CURRICULUM**

A. Bame Nsamenang AND Therese M.S. Tchombe

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Editors

A. Bame Nsamenang and Therese M.S. Tchombe

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**To the African Teacher Educator
and her/his Students, especially to Joseph M. Kasayira, a
co-author whose death was announced as we went to press.**

«Politicians build edifices; teachers mould minds»

Bernard N. Fonlon

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FOREWORD

Pai Obanya

This monumental piece of work – covering nine thematic sections in thirty-six intellectually heavy weight chapters, mobilising forty-four contributors from sixteen different countries – breaks new ground in its efforts to address the challenge of *kutiwa kasumba* that has been Africa's burden since the colonisation of the continent and since its assimilation of western education.

Kutiwa kasumba is a Kiswahili term that can best be translated as 'brainwashing'. It was manifest in the doctrine that pretended that Africa had no history prior to its contact with western explorers. The doctrine also pretended that Education meant simply schooling and was therefore synonymous with education western-style, western values and western content.

This handbook is an attempt at de-Kutiwa-kasumbalisation of Education in the African context. The overarching point de depart is that Education predated schooling, that it is a lot broader and deeper than schooling, and that its primary purpose is intergenerational transmission of cultural heritage. Africa happens to be the only region of the world where all the role models to which its children in their formative years are exposed (angels and saints, great achievers, film stars, etc) are of a race that is different from theirs. African children are the only ones in the world whose socialisation begins with acculturation (learning about other worlds in a foreign language), instead of beginning with enculturation (being deeply entrenched into your own world first and foremost). African children are the only ones whose region is most lowly represented in international organizations, including the UN agencies, and about whom decisions for their situation and well-being are often taken without even token voices from their people's representatives.

In all other parts of the world, the educated is usually the cultured; in Africa, the educated is the de-cultured. Educational reforms undertaken in the continent since the 1960s have not strictly addressed these fundamental issues. Instead, reforms have simply tinkered with curricula, school calendar and the mere proliferation of institutions.

This handbook raises fundamental issues concerning the re-conceptualisation of Education and its goals in the African context. It explores Africa's philosophical worldviews, sociocultural values, beliefs and practices and suggests ways in which these can be ploughed into educational research and development, curriculum development and pedagogical practices. The discussions and arguments presented on the various chapters do not in any way foreclose debates; instead, they are presented as instigation to further discussion and in-depth analysis.

Nowhere in the book is it said that Africentricism rules out the exposure of African youth to the wider world. The clear message is the use of Africentric values

to gain the self confidence needed to explore today's global village in order to become a full contributor to its evolution.

Having thoroughly enjoyed being educated by the handbook, I am happy to commend to all its intended clientele:

- To African students of education, who should remain proudly African citizens of the world
- To teacher educators, who must help to restore the Education that Africa lost through colonial kasumbalisation
- To Africa's development partners, who must rise beyond counting numbers to assisting to transform the human in the African being
- To the leaders (of all levels) of African societies, who must lead by example by focussing greater attention on the real fundamental challenges of Education in the continent

PREFACE

This Handbook is a beginning, albeit an imperfect one. We have dared to begin expecting that reflection, critical feedback; research and field use of the handbook will lead to an improved second edition. If we continue to wait to feel faultless, we might never begin. So, bear with us for the shortcomings and gaps in this faultful but landmark first step.

We believe that the value of the school as a social institution is its role in connecting the school to its host community. Our work as researchers and African teacher educators who increasingly face the challenge to make our scholarship relevant jilted us into noticing a mismatch between the African school, beginning with early group care and education of children in Western institutional models, and the livelihoods of Africa's young citizens. We have since become aware that education curricula in Africa seldom take into explicit account its grounded subject-matter – the theories and concepts with which the beneficiaries of education see their cultural world and their ways of thinking and engaging with the world. We also discerned lack of concerted continental effort, beyond longstanding rhetoric by Africa's leadership and education partners, to contextualize education curricula by premising curricular contents on the African environment, child development, cultural heritage, and the demands of technological advances and economic development. We have learned that no people entirely dislodged from their ancestral roots have ever made collective progress with development and that the era of outsiders deciding and “supplying” what Africans need has not yielded hoped-for outcomes.

We think the donor community and education partners can do much to support Africa in its quest for apt teacher education, for funds and influence reside in them in disproportionate quantities. Their powers should not be used to ‘show the way’, but to support Africa's efforts to hear its own education theories and see its education practices, among others, and to seek its own way forward. The Handbook is mounted on precepts that will produce children who understand and appreciate human diversity, teachers who will frame their own contextually sensitive research questions, and leaders who will appreciate and gain from the riches of the past, as much as the possibilities of the future.

Education in African countries is largely unproductive; it enlightens by distancing and estranging Africans from their life circumstances. At the HDRC we have realized and now work from the position that community-based early childhood development (ECD) services are culture-sensitive, ensure community ownership, ease access and affordability, and are in tune with Africa's centuries-old traditions of childcare and education in which the family and children are the primary stakeholders. Having acknowledged teachers and teacher education as the hub of transformational education that seems to have eluded African leaders for 50 years, the HDRC initiated a long-term project of education textbooks and tools development within this insight. We frame the project within Africa's theory of the

universe and the social capital it exudes, life courses in African communities, and positive educative and childrearing practices. *Handbook of African Educational Theories and Practices: a Generative Teacher Education* is the first “product” of this initiative that a Swiss charity, Jacobs Foundation, has generously funded.

In June 2007 twenty five scholars were invited as prospective chapter authors. They were asked to visualize how their assigned chapter would fit into a generic chapter format whose main thrust was to identify and develop two or three indigenous African childrearing or education concepts or practices and articulate them into a basic teacher education text. Author-recruitment was based on disposition to creativity, innovation and a felt-need to outgrow current teacher education texts. Thus, a multidisciplinary team of authors was asked to figure out how best to introduce a truly new and unique disciplinary perspective into Africa’s teacher education curricula. Lead authors were informed that their chapters would be honed and improved through exchanges between each author and the editors. The editors made it clear that authors should anticipate editorial requests for changes, revisions and fine-tuning, whenever and wherever the editors saw the need for them. Such collegial exchanges, interactions, and interstimulation went on until July 2009 when the Jacobs Foundation made a grant to the HDRC for the publication of *African Educational Theories and Practices: a Generative Teacher Education Handbook*. Then, a meeting of authors and observers was held at the Holiday Inn Resort, Limbe, Cameroon, on August 7-8 to review draft chapters and strategize how to create “a product” to benefit our new vision of education in Africa.

The target audience for this Handbook is education students in African colleges of education and faculties of education. The secondary audience is comparative education students and researchers across the globe. International donor organisations and Africa’s education partners will find it handy and inspirational because, if they genuinely wish to enhance African teacher education and education in Africa, they had better understand African educational ideas and practices. By articulating broad, novel materials into meaningful teacher education content, the Handbook will be widely read for its informative, imaginative, and edifying value. We see it as not only constituting a critical contribution to human knowledge but also as a decisive statement on knowledge and processes Africa possesses and can share and exchange in academia and educational and other disciplinary development. We wait to see how it will make its way, we hope globally, and the feedback we will get for its second edition.

Bamenda, February 20, 2011

A. Bame Nsamenang and Therese M.S. Tchombe

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This Handbook exemplifies how perceptive academic leadership can galvanize scholars and partnership efforts into creating ingeniously valuable products and tools for Africa. Overall, it was a daunting task but we feel a sense of accomplishment to report satisfactory task completion, which is an incentive to take on new tasks. And, indeed, HDRC’s second product is already into the proposal phase – exploring African early childhoods and publishing an open access African Early Childhood Resourcebook.

Part I
BACKGROUND

Background

Part one opens with an introductory chapter by the editors, A. Bame Nsamenang and Therese Tchombe, in which they point out that waiting for certainty of “perfection”, they might never begin, because there is just no human state of perfection. They overview the state of postcolonial African education, which they judge as largely unproductive and unresponsive to multiple African needs. Visualizing teachers as the hub of education, they perceive generative pedagogy as a good thing for African teacher education. They then identify and explain its core principles, highlighting how it can generate Africa-centric educational knowledge to carve out an African niche in global knowledge waves in educative sciences.

The Handbook thus represents a modest contribution to Africa’s deserved but as yet imperceptible niche in human knowledge systems in general and international discourses on educative sciences in particular. The rest of the chapter presents the organization of the book to provide the reader with an idea of what to expect in the rest of the text. This introductory chapter is written to stimulate the interest needed to encourage the reader; it ends with a “How to use this Handbook.” The second chapter by Peter Baguma and Irene Abeisibwe presents another lens on the nature of African education systems by offering a critical overview of each tier of education and the challenges it faces, including traditional education. They bring out the challenges and issues in traditional, pre-primary, primary, secondary, tertiary and university education. It concludes with a brief glance at how to improve teaching and learning in African settings, particularly how to reduce excessive reliance on imported education models. Africa needs to figure out how to reduce, even eliminate, overdependence on imported knowledge and products for its development and progress.

Chapter 1

**INTRODUCTION: GENERATIVE PEDAGOGY
IN THE CONTEXT OF ALL CULTURES CAN CONTRIBUTE
SCIENTIFIC KNOWLEDGE OF UNIVERSAL VALUE**

A. Bame Nsamenang and Therese M.S. Tchombe

INTRODUCTION

Education is a torch that can illumine Africans and their Dark Continent. Teachers are the torch-bearers. But Africa's teachers, its education torch-bearers, thus far superficially educated into the *received* knowledge and cognitive values of their colonial masters have mainly been able to disseminate the fragmented bits and pieces of that education. As such, Africa's teachers largely lose "sight of the soil out of which the existing African society has grown and the human values it has produced" (Kishani 2001: 37).

For 50 years education has sought to light Africa's tropics with temperate, Euro-American educational torches. African states have tried to make their curricula and pedagogies as much like the latter's but less African as possible on the assumption (shared by most people in Europe and especially in the New World) that doing so will make their education similarly productive (Herzog 2008). Regrettably, these attempts have produced disappointing results for Africa, yet the same education models and curricula persist today. School education has not automatically brought economic growth and societal development in Africa, contrary to what was predicted by human capital theory (Dasen and Akkari 2008). Instead, education in much of Africa renders most graduates faintly literate and numerate with only a tiny minority mastering the intricacies of the Western country's knowledge and cognitive systems but with almost every educated African imitative of Western lifestyles with unsuccessful strives to be "modern" by eliminating indigenous African heritages from their behavioural repertoires.

Educated Africans, especially the apparently "successful" ones, wage an endless war to reconcile within their psyches and lives the conflicts engendered in living within the twilight of fiercely competing value systems and ideologies; they are alienated from their indigenous traditions and communities of origin (Nsameng 1992). It is Africans whose cultural tap roots, implying individual and collective identities, have been withering for centuries who are the citizens being called upon and expected to lead and develop Africa.

DISCONNECTS BETWEEN EUROCENTRIC CURRICULAR IDEALS AND SEARCH FOR RELEVANT AFRICAN EDUCATION

The school education most Africans have received is inadequate to usher them into a productive and hopeful way of life (Herzog 2008). In general, education in most African countries is more suitable for foreign than national labour markets because it offers mainly incoherent chunks of Western knowledges and skills repertoires and is deficient in local wisdom and situated intelligences, which Africa's agrarian economies require most. In fact, a good number of institutions can be seen actively advertising training programmes for Euro-Western employment agencies and labor markets. School leavers and graduates are thus alienated from

their cultural roots by dint of education and are mostly ignorant of their status quo because they have been “educated” not to reflect the factors that create and sustain their sorry state. How can such an educated elite class be expected to understand and effectively govern and develop communities and countries their education has qualified them to ignore, much less present their interests skillfully in the competitiveness of global geopolitics? As national governments in Africa grapple with slim budgets and low resource bases, their education systems are churning out masses of marginally literate school leavers and graduates, increasing numbers barely able to scratch a living from the continent’s largely agrarian livelihoods. Education prepares for white-collar employment in societies with largely agrarian livelihoods.

African education is not improving quality of life, but this is baffling in the light of rising continent-wide school enrollments and the students’ enthusiasm to learn, at least in Cameroon. Hirsh (2010) claims education is creating poverty in Kumbo in the northwest region of Cameroon, and ominously throughout the continent. The “culprit” is the school system itself, which is more suitable for foreign than national labor markets. Consequently, increasing numbers of African school leavers, graduates and professionals now imagine their futures away from their countries. A resultant massive youth and expert exodus is depriving their countries of human resources and causing problems in recipient Western countries and beyond as many are part of brain drain statistics around the world, many of them illegal immigrants in very precarious conditions (Nsamenang 2009).

The nearly universal conviction from the advent of formal education in Africa was that it would provide a good life and develop society. Paradoxically, the African school, the social institution officially mandated to deliver relevant education, has been responsible for Africa’s inability to ensure a good life, renew and strengthen its own culture and worse yet to generate and share its culture’s knowledge and know-how (Nsamenang 2005). Of course, education in Africa produces experts, but “ever since the early 19th century when the Euro-America presence in Africa began to be noticeably felt in the interior, Africa’s knowledge has increasingly ceased to be rooted in the African soil” (Ojiaku 1974: 204). Conclusions on African scholarship are significantly influenced by Western ideological perspectives, value systems and interpretative frames. The African school is aggravating the situation because it is detached from the social thought, cultural traditions and livelihoods of African societies. As such and despite a huge and growing number of Africans with impressive academic and research credentials, indigenous scholarship of a kind to be considered truly original remains sporadic, in relative short supply, and essentially imitative of, or largely patterned after, contributions by Western scholars (Kashoki, 1982). In addition, pedagogy and the educative sciences have mainly been imported from the industrialized societies of Europe and North America and remain overly Euro-American in character (Dasen and Akkari, 2008).

LEARNERS' RIGHT TO A CULTURAL IDENTITY

The cultural identity of Africa's children is a right enshrined in the UN *Convention on the Rights of the Child* (1989). Africans are facing the dilemma of trying to catch up with the rest of the world while holding on to their culture (Lanyasunya and Lesolayia, 2001). We live in an era of global knowledge waves wherein power-induced insensitivity and Euro-American hegemonic imposition of Institutionalized Public Basic Schooling (IPBS) (Serpell and Hatano 1997) pathologize other people's ways of preparing the young for responsible and productive adulthood. Sharp (1970) warned against destroying too abruptly the traditional background of the African child which, in the absence of governmental social security services, is still the best guarantee of the child's welfare and education. However, the IPBS model portrays Africa's forms of education as antiprogressive, hence longstanding "civilising" efforts to intervene them into irrelevance and extinction.

Africa's forms of cultural identity and patterns of education deserve investigative understanding and focused enhancement and incorporation of their positive elements into school curricula instead of substitution with purportedly "civilized" versions. It is critical to note that the interventionist skin grafts on to Africa's unproductive education have failed to take or are shriveling off rapidly, due to determined refusal to take into explicit account Africa's educational foundations and the theories that shape its educational practices. What good are we doing to Africa if its educational thoughts and practices continue to be substantively subverted by *received* Western narratives and models that depict African understandings of education and educative processes as primitive and anti-developmental? This handbook is developed from a belief that there is great value in Africa having the longest experience with childbearing and childrearing, which deserves a niche in global education discourses and educative practices. Indeed, Africans have "successfully" practiced education and "childrearing within the framework of African culture for centuries" (Callaghan 1998: 31) to produce icons like Nelson Mandela (see Chapter, 35, this Volume).

MAIN THRUST OF THE HANDBOOK

Humankind is being deprived in far reaching ways not unlike those dispossessions resulting from worsening losses of biodiversity; dominant narratives erase African forms of knowledge and practices. Therefore, we should be sensitive to the educative sciences and strategies that prevent Africans from understanding their circumstances and contributing educational knowledge of universal value to global knowledge (see UNESCO, 1999). For example, sub-Saharan Africa houses 10% of the world's population but produces only 0.4% of the world's research and development. It is for this and other disturbing facts of Africa's education that we set out to record how Africa's educational theories and social capital can be leveraged to strengthen the continent's education systems and boost its capacity to own,

generate, and share knowledge, albeit within the framework of global trends in educative sciences.

The purpose of this handbook is not to replace the Euro-American bequest of educative sciences, but so that we may make a modest contribution to wider and fuller understanding of educational ideas and praxes in their global diversity. This is an obliging necessity, given that the gulf between African promises and actual educational achievements is widening. Africans watch with dismay the non-fulfillment of the chimerical dreams colonialists and African successors of the postcolony promoted in enthusiastic rhetoric (Ayandele 1982). Africa's education partners and international advocates continue to reinforce this rhetoric with minimal, if any, feedback from obvious disjunction between Africa's predominantly agrarian livelihoods and the elitist *received* Eurocentric school curricula and pedagogies. Reaction to this educational mismatch has come in a variety of forms and can be tried within the vision of this Handbook (see Section Nine of this Handbook). There has been much discussion but little action on concrete strategies to translate rhetoric to transformational education. For example, there is little continent-wide evidence to show for the expressed wish of the then Organization of African Unity (OAU) and UNESCO that African educational authorities "revise and reform the content of education in the areas of the curriculum, textbooks, and methods, so as to take account of the African environment, child development, cultural heritage, and the demands of technological progress and economic development, especially industrialisation" (UNESCO 1961: 23).

This implies that the problem of educational relevance persists today in Africa. One facet of the inappropriateness and unproductive nature of Africa's education is pervasive insufficient training of the vast majority of teachers of all levels of education. We see evidence that African education does not prepare graduates satisfactorily for productive personal life and the world of work in public services and the private sector and in the increasing rates of school dropout, the disconnect between the curriculum's European ideals and the training relevant to a rural economy, hence the teaching of unemployment in Cameroon (Hirsh, 2010). Although there is worldwide apprehension about educational relevance, Africa's education, compared to that of the West which it copies unreflectively, does not match curricular contents with the learners' local realities. Our wish is that education in a global era should anchor Africans in the security of their cultural background from where they gradually take on the responsibility of creating, in the light of global needs and self-generated sense of direction, communities different from the ones they inherited (see Hart 2002). The hope is that Africa's huge young generations would, like Canada's First Nation "children who inherit the struggle to retain and enhance the people's culture, language and history ... continue the quest for economic progress for a better quality of life, and who move forward with a strengthened resolve to plan their own destiny" (Meadow Lake Tribal Council 1989: 34) within the requirements of a competitive, knowledge-driven global community.

Regrettably, the African school, the social institution now assigned the role of preparing children for life, is responsible for Africa's inability to regenerate itself. The didactic pedagogies of IPBS promote competitiveness and individualistic values that bypass Africa's socially distributed norms and participative pedagogies. Strategies that promote humaneness and practical work ethic are more ingrained in Indigenous African education than in the IPBS education model. It is perhaps for this reason that Pence and Nsamenang (2008) observed that Nelson Mandela's sterling qualities and moral stature hybridized from Indigenous African education, was fuelled by Western schooling and fortified with his lifetime commitment to his Xhosa roots (see Chapter 35, this Volume).

ORIENTING PRINCIPLES

The two orienting concepts that have shaped *African Educational Theories and Practices* are the hybridity of Africa's education landscape and the Generative Curriculum Model (GCM) (Pence, Kuehne, Greenwood-Church and Opekokew, 1993). Education always occurs in a specific ecological and cultural context. The eco-culture shapes the educational environment, as every facet of education is deeply influenced by the local context. A contextually-oriented approach is the more desired because Africa's children are not socialized only in school; they also receive family-based education as they develop as accredited participants in their cultural communities (Rogoff 2003). Therefore, their education is best promoted in light of the cultural practices and circumstances of their families and communities, which also change. Once we accept and understand the value and role of context and its culture in education, the next step is to recognise the importance of cultural conceptualisations of education and of the educational theories and practices that follow on from these in a given community (Smale 1998).

Thus, an objective portrait of contemporary Africa's education landscape is incomplete without an account of the indigenous patterns of education that existed prior to the intrusions of Islamic-Arabic and Western-Christian educational heritages. Centuries-old traditions of African educational wisdom have survived invasive colonial and neo-colonial forces until today; they continue to be useful and have not entirely yielded to abrasive colonial efforts and waves of postcolonial interventions to eradicate them. Therefore, relevant educational efforts in Africa today should begin with at least a brief reconstruction of the key features of these three intertwined significant educational heritages that coexist, i.e., Indigenous African education, Islamic-Arabic education, and Western-Christian education (Baguma and Aheisibwe, Chapter 2, Gwanfogbe, Chapter 1, this Volume). The overarching lesson we have discerned is schisms-disconnects which alienate Africans from their cultural roots, particularly the care and education of children; schisms that are largely muted in educational discourses, policy development, and curriculum design. Instead, Euro-American education models are promoted in a manner that suggests ignorance of the other heritages and a mistaken belief that African ways are incapable of educating

healthy children. The sorry state of Africa tends to be blamed more on cultural inadequacies and less on insidious or overt historical traumas and vested geopolitical interests that bypass African educational theories and practices. The main thrust of this handbook is on some of those theories and practices (see Sections Four and Five); it reveals useful aspects of indigenous African educational ideas and processes with the potential of enriching and extending not only teacher education curricula but also African school curricula. There is therefore need to draw inspiration and “strength from the fountain” of Africa’s rich social capital and enduring educational traditions (Callaghan 1998: 33).

We foresee a bright future for African education in not continuing fixated adherence to Eurocentric curricular ideals, but in designing generative curricula, not in isolation but in the light of global trends in educative sciences and sound scholarship in education. Such efforts should gain from the lessons of other educational traditions. The aim of generative education is to secure African cultural identity and to teach African knowledge bases, complementing them with productive techno-cognitive contents and responsible values. The intention is to open up teachers to new ways of looking at and valuing Africa; they should see value in and appreciate Africanity (indigenous African institutions, knowledge systems, and techniques). Teachers who will handle Africa’s emerging generations and the future fate of the continent through education, more than in the past, must acquire competitive dispositions and analytical and visionary skills with which to assess situations and organize and interpret often inconsistent information inherent in Africa’s hybridism and networks. Increasingly, teachers are being called upon to develop essential competencies in the efficient use of resources, interpersonal skills, information systems and technologies. Future teachers will also have more technology-based interactions and will require networking skills and cyberspace literacy. These ongoing global trends oblige teachers to not only instruct along domain-specific knowledge and skills but more importantly to build into their pedagogic strategies generic skills and work-oriented attitudes as well as sensitivity to learners’ rights to a cultural identity. In actual fact, the importance of local knowledge, problem-solving and communicative skills, responsible actions, and other generic skills are gaining increasing emphasis in teacher education as is ingenuity in domain-specific knowledge and skills.

A generative curriculum (Ball and Pence, 2006; www.ecdvu.org) starts and develops on the interests of children and teachers; interests that should remain at the center of teaching and learning. As children and teachers pursue areas of interest, new knowledge is generated and new curricular content is created collaboratively. Thus, learning becomes dynamic, as one avenue of interest leads to another (Fischer and Cordeiro 1994). This type of dynamic generativity is built into *African Educational Theories and Practices* by inserting learners’ exercises and adopting an evocative presentation style in most chapters. As themes and topics are initiated and actively pursued, connections and relationships are made. Working with learning contents

this way allows for authentic learning and provides teachers with opportunities to be learners, too; teachers become learners who teach (Cordeiro 1993) and the learners become knowledge generators with teachers as facilitators. In this way, a generative curriculum in general and this handbook in particular foster not only lifelong learning but also lifetime generation of knowledge. Thus, in this generative model, we expect teaching-learning transactions to proceed in ways that renew knowledge and skills, inspire insights and new visions and generate authentic knowledge in shared processes. In this way, generative education provides rich opportunities for inquiry-based learning. The learners take ownership by pursuing their interests and in so doing discover and develop their potentials, passions and talents. As lifelong learners and deep, critical thinkers, they are able to make significant contributions whose meaningfulness they can demonstrate in their eco-cultures that are part of a complex and changing world.

Generative inquiry embodies an underlying belief in children as learners whose natural curiosity leads them to explore their world in meaningful ways. Tacit African theories posit children's innate capacity to be agents of their own developmental learning from an early age (Nsamenang 2008). Accordingly, indigenous pedagogies organise learning in participatory processes at home and in the community, religious service, peer cultures, and so forth through "hands-on" and "work-play" activities, with little to no explicit didactic support (Pence and Nsamenang 2008). The generative curriculum is based on a belief that children can both learn and share their knowledge in multiple ways and that everyone has areas of strength that educational effort can capitalize. This approach applies to both students and teachers as learners in the world and can lead to developing a broad repertoire of teaching strategies that enable children to approach their learning in different ways. In a generative curriculum, there is a continuous interplay between content learning and process learning. The two complement and enhance each other (Fisher 1991). For example, learners apply the processes of reading, writing, speaking, listening, art, music, drama, and mathematics to gain meaning and understanding from the content areas of social studies and science, with children's Literature playing an important part in linking these processes and content. In this way, content is learned through process, and process through content.

The version of generative or transformational education this handbook has adapted targets Africanity, not for substitution but for systematic, minimally invasive enhancement into useable local knowledge and techniques that can be shared in international forums on educative sciences and exchanged with those of other educational heritages. The transformation should be undertaken not in isolation but within the framework of global educational discourses and knowledge exchange networks. The contents are organized around significant themes and questions that set the students into a deep inquiry and discovery mode. The book positions teaching as both a science and an art and honours the importance of the relationships and sense of community that should be cultivated between teachers, students, parents

and the family, such that they become a community of learners, par excellence. A generative approach is a perspective not a method. It is a way of viewing teaching and learning that respects the fact that each student comes to school with varied interests, skills and knowledge of the world. This important distinction underscores the fact that a “generative curriculum” should be regarded as a way to look at the world, rather than a teaching methodology. Within this frame of organizing curricular inputs students are expected to consult with holders of indigenous knowledge in their own communities, and bring this information into the school curriculum. As such, the Generative Curriculum Model provides an effective framework for incorporating local knowledge into pedagogic processes, policy, and research in order to sustain useful facets of culture and promote the community’s development. This approach can bestow the reproduction and modification of culture through educational curricula on the community with teachers as intermediary enabling agents.

The Generative Curriculum Model shifts away from a firm search for a universal educational approach to a celebration of the reality and richness of diversity in educational ideas and practices. By bringing together the three worlds of Western instructional approaches, Arabic educational traditions and African pedagogies, this “blended” curriculum opens a door to developing culturally specific understandings of educational ideas and practices and the educational needs of Africa’s ethnically diverse communities. It also has the potential to uncover and focus on elements of the social ecology of Africa’s children, how community members see those elements, and their perceptions of the implications of these elements for school education. Elements of Africa’s social ecology that have been the subject of extensive educational debates include: roles of parents, siblings, the peer group, grandparents and elders; historical experiences with school; literacy; culturally influenced learning styles; and culturally appropriate instructional processes. Others are language of instruction; approaches to problem-solving; impact of social relationships on cognitive performance; indigenous definitions of intelligence; cultural goals of maturity and their influence on participative learning; and children as social partners in educative processes.

CONCLUDING STATEMENT

So far, schooling and the mass media deepen a sense of alienation in Africans by suggesting that they should be like Westerners, but there are neither resources and avenues nor any need to achieve it. Africa’s overriding educational challenge is to mold Africa’s children into an African identity (Nsamenang, 2004), productive citizens who are adept and adaptable to the requirements of a global era. Foundation skills (reading, writing, math, science, etc), communication skills, adaptability skills, personal management skills, group effectiveness skills, and influence skills are essential for academic success and adaptation in a global community. These academic and workplace skills should be worked into school curricula. In addition, African schools poised for the competitiveness and knowledge-driven global marketplaces must

integrate into school curricula basic skills in organizational and communicative effectiveness, creative thinking and problem solving, leadership and team spirit, and interpersonal negotiation, and above all else future career visions.

Drawing from their research African and Africanist scholars present, in this handbook, hitherto bypassed indigenous knowledge systems and practices as curricular content that can extend and enrich the IPBS system. It gives Africa a generative model for building new, contextually appropriate schools capable of undertaking the renewal of its rich cultural heritage. The handbook is designed to provoke debate into how Africa functioned prior to the overrun of its educational ideas and practices by the IPBS models! It aims at highlighting how current educational efforts are similar to that of a study of the Nso' mother tongue as it distorts Nso' schoolchildren's learning of Oxford English (Fai 1996). The study surreptitiously brought into sharp relief the disruptive influence of English on African languages; putative knowledge in general has disrupted Africa's knowledge systems. Africa's path into global knowledge systems was truncated when imperialists condemned African versions of knowledge and colonial scientists and experts recorded innovations, even discoveries, by African farmers but refused to acknowledge and promote them as achievements (Nsamenang 2005: 283).

The more Africans invest in and pursue the elusive goal of Western lifestyles and social thought the more inept they function, incidental to struggles to give up their centuries-old sociocultural inheritance. All authors are sensitive to the fact that worldwide, cultural groups are seeking ways to ensure the survival, revival, or re-envisioning of their cultures, while at the same time ensuring that their community members have access to and gain from global opportunities. The Generative Curriculum Model is an approach that can add value and renew Africa's knowledge as well as create capacity for global marketplaces. The education brought into Africa and that was being dispensed in Africa was not and still is not designed to enhance Africanity; it instead dispossesses Africans of their social capital and educational heritages. We must concert and work to reverse such a situation of disempowerment; the sector to begin the reversal is teacher education.

THE ORGANISATION OF THIS HANDBOOK

This Handbook consists of 36 chapters on key dimensions of education in Africa, written by English-French language African and Africanist scholars, a feat indeed for collaboration between scholars of these two language blocks which is seldom seen in African scholarship. The chapters are organised into the following nine thematic sections, namely, Background, Africa's Educational Foundations, African Child Development, Frameworks of Learning and Intelligent Behavior, Didactic and Participative Pedagogies, Monitoring Development and Educational Performance, Educational Needs and Services, Africa-centric Educational Research, and Innovations in Curricular Reforms. A brief section opener is not provided in this introductory chapter but can be found where the chapter fits in the Handbook.

HOW TO USE THIS HANDBOOK

There are many ways of looking at what teachers in the classroom do, at what the curriculum is. The conventional curriculum is segregated: teachers' and learners' activities tend to be kept separate. As a student teacher or teacher of the 21st century you are being called to shift from a product-oriented teacher into a process-focused facilitator, equipped to conduct classroom and other types of educational research as well as incite learners' curiosity and zeal to discovery learning. This will enable you to renew and generate innovative pedagogical strategies and techniques, along with your learners.

The Generative Curriculum Model, which we have offered in this Handbook, has been developed on the basis that teachers need to recognize and accept responsibility for the potentially acculturative effects of Euro-Western curricular ideals upon the development and delivery of education programmes. Therefore, teachers need to explore new ways of being responsive and accountable to the cultural communities whose children come into their care and education. A generative approach is a perspective, not a teaching method; it is a way of viewing teaching and learning in respect for students coming into school with varied interests and knowledge of the world. It makes for tolerance and respect of diversity and differences.

The Handbook offers a hybrid curriculum model that requests teacher educators to concede to their students' inputs into what will be learned and to collaborate with students' research and exchanges to extend and enrich curricular content and didactic processes. It combines distributed learning methods, including classroom processes with others like face-to-face instructional methods, independent study models, and peer interactions and exchanges in group tasks in and out of classrooms. The expectation is that you as teacher will challenge students through generative and inquiry-based approaches to learning to become deep, curious thinkers and lifelong explorers and investigators who are able to make significant contributions to the community, country, and to a rapidly changing world. Your role as teacher trainer is to figure out how to creatively channel such contributions toward the meaning systems and benefits of your school's community and country.

You will find this type of potential generative creativity in the section on learners' exercises and in the didactic presentation style that evokes enquiry and exploratory discovery. Your next step is to endeavour to achieve integration and coherence by collaboratively connecting subjects thematically across the curriculum and guiding the class to travel a pre-planned path to a common predetermined endpoint for everyone (Cordeiro, 1992). The contents of each chapter are offered to tease you and your learners into further exploration. To achieve this, teachers will need to draw on several sources: the interests of the children and their wants and needs, the interests of the teacher, the established school curriculum and community/national realities. Within a supportive school environment and community, your students will take ownership of their learning by discovering their unique potentials. We call

on you to adjust and give up part of your didactic control of learning and power to your students. You will be amazed at your students' ingenuity and prowess at exploiting new frontiers.

Using this generative focus enables teachers and students to create personal research paths even within the prescribed curriculum. Following your students' leads as often as you ask them to follow yours, you are showing your interest in several aspects of what students have to share - topics or sub-topics that interest them in their life outside school, curiosities and uncertainties that bother them, resources and artifacts that they provide, and happenings that you did not plan on (Goodman, 1985).

The Handbook encourages your recognition and appreciation of the value of local knowledge and skills and your facilitative role in bringing local understandings of educative processes into the school curriculum and into yours and your students' pedagogical strategies. Of course, you are well aware that indigenous knowledge is essential for the construction of individual and ethnic identity. Note that every child has a right to a cultural identity, which is enshrined in the UN *Convention on the Rights of the Child* and you shall not mess up with it. Upholding of cultural identity provides a foundation for social inclusion in teaching and learning processes. The likelihood that sources of indigenous knowledge can be tapped for your co-construction of culturally sustaining, community-appropriate models situates you at the center of social policy and human service practices in the local cultural ecology of your school and life of the country in which you work.

The teacher must prepare to walk in both worlds of indigenous knowledge and received imported knowledges and techniques. The generative curriculum model enables you to focus on the co-construction of concepts and practices relevant to school learning in the local community through the consideration of both indigenous and Western knowledge systems. Teachers should consult with holders of indigenous knowledge in the host community and creatively bring this information into the curriculum in general and classroom processes in particular. As it is assumed that everyone has knowledge and experience that embodies own culture of origin and contemporary cultural identity, and that this knowledge is important for informing dialogue and policy, you are a key player in educational decision-making, policy development, and renewal of instructive strategies. This format invites you to become an active partner in the renewal of Africa and the co-creation of culturally relevant understandings of African education that is poised for exchanges within international educational discourse networks and global knowledge waves.

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Chapter 2

ISSUES IN AFRICAN EDUCATION

Peter Baguma and Irene Aheisibwe

CHAPTER OBJECTIVES

The objectives of this chapter are to:

- 1) Analyze the issues affecting African education at various levels of the education system,
- 2) Examine what African education systems have done to contain the problems they face, and
- 3) Identify African solutions that can be applied to deal with the challenges facing African education

INTRODUCTION

The word education is derived from two Latin words. The first is word EDUCARE, while the second is EDUCERE. The Latin word EDUCARE means to support and nurture the growth of, while the other Latin word EDUCERE means to draw out or to cause to come out. Education refers to the act of developing knowledge, skills or character of a child. It may also be defined as the act of bringing up, rearing, guiding or directing a child. However, Omona (1998) proposes that education is not only tied to children. Ocit (1994) divides education into the following three categories:

- a) **Formal Education:** This refers to the hierarchically structured, chronologically graded 'education system', running from primary school through the university and including, in addition to general academic studies, a variety of specialized programmes and institutions for full-time technical and professional training.
- b) **Informal education:** This refers to the truly lifelong process whereby every individual acquires attitudes, values, skills and knowledge from daily experience and the educative influences and resources in his or her environment - from family and neighbours, from work and play, from the market place, the library, the mass media, and so on.
- c) **Non-formal education:** This refers to any organized educational activity outside the established formal system whether operating separately or as an important feature of some broader activity that is intended to serve identifiable learning clientele and learning objectives. Four characteristics can be associated with non-formal education: relevance to the needs of disadvantaged groups, concern with specific categories of person, a focus on clearly defined purposes, and flexibility in organization and methods.

African education involves the effects of the colonial education system on African peoples and their countries' political and socioeconomic development (Wandira, 1971).

This chapter examines the specific issues and challenges that Africa faces at the different levels of education, including traditional/non-formal, pre-primary/

nursery, and primary, secondary, tertiary/vocational and higher/university education. Intrinsic issues include quality of teachers, instructional materials, management, curricula, community involvement, facilities, supervision, assessment, pupil/teacher ratios and appropriate books and tools. Extrinsic issues include economic conditions, political stability, security, distribution of wealth, culture and social values, health and nutrition, population growth and faith/religious issues. These realities impinge on the growth, operation and development of education and learning processes.

THE STRUCTURE OF THE FORMAL EDUCATION IN AFRICA

African education has the following levels: Pre-primary education which is the initial stage of organised instruction designed primarily to introduce very young children between the ages of three and six to a school-type environment, that is, to provide a bridge between home and a school-based atmosphere. This is followed by primary (or elementary) education; in most African countries it consists of seven years of formal, structured institutional education. Then, secondary education in Uganda consists of the years of formal education that occur during adolescence and consists of 6 years, i.e., 4 years for ordinary level and 2 years for advanced level. Tertiary education in most settings is non-compulsory education provided via a specialist institution, usually labelled a college or polytechnic but does not include the university. The highest level of African education is University education which includes teaching, research and social services. It includes both the undergraduate level and the graduate or postgraduate level. It would be interesting to examine the different tiers of education in an African country of your interest.

AFRICAN TRADITIONAL EDUCATION ISSUES

African traditional education refers to ways of teaching and learning in Africa which are based on indigenous knowledge accumulated by Africans over centuries in response to their different physical, agricultural, ecological, political and sociocultural challenges (Merriam, 2007). The general aim of African traditional education is based on the sociocultural and economic features shared by the various communities. The harsh natural environment made survival to be the main aim of education. Every skill, knowledge or attitude learnt was either for protection, and acquisition of food or shelter and ensuring successful reproduction. Other aims were to create unity and consensus in society, to perpetuate the cultural heritage of the ethnic community and preserve its boundaries, to inculcate feelings of group supremacy and communal living and to prepare the young for adult roles and status. This traditional system of education is similar in most African countries. In Nigeria, Ghana, Tanzania, Malawi or elsewhere in Africa, traditional education of youngsters involves intellectual, physical and attitudinal training in order to develop fully into acceptable adults in the society. In addition, different kinds of games, including wrestling and running, training for healthy living, cooking, dressing, hunting, farming, carpentry, training to become a black smith, drumming, dancing, marriage counselling

and critical thinking form part of the traditional education curriculum at different stages of the life of the youth (Adeyemi and Adeyinka, 2002).

The African education experience was strictly set up to prepare the young for society in the African community and not necessarily for life outside the ethnic community (Nsamenang and Lamb, 1994). Boys and girls were taught separately to help prepare each sex for their adult roles. Every member of the community had a hand in contributing to the educational upbringing of the child. The highest point of the African educational experience was the ritual passage ceremony from childhood to adulthood. The peculiar aspect and challenge of the African traditional educational system was the absence of academic examinations necessary to graduate. Up to now there is no agreed upon systematic curricula for traditional African education, but what exists is tacit and unwritten. Nevertheless, African traditional education, like any effective system of education, was based on sound philosophical foundations or principles. These foundations or principles have been rightly identified by Omona (1998) as preparationism (*obwetekatekyi in Rukiga Language in Uganda*), functionalism (*omugasbo*), communalism (*kukorera hamwe*), perennialism (*ekimazire obwire bureingwa*) and holism (*kutwara ekintu hamwe*). A major problem in the practice of traditional education was the inability of the people to write and keep records, the knowledge concerning many professions remains undocumented (Ssekamwa, 1991).

The situation in many African countries is much more complex, especially the challenge of moving from past to future types of work and expectations. Female education was predominantly designed to produce future wives, mothers and homemakers. There was no clearly defined method of instruction and no standardised method of testing the learners for the purpose of graduation and certification as is the case in the western-type of educational systems. The content of instruction and the duration of learning or apprenticeship were generally determined by the master on the basis of his assessment of apprentice knowledge and competences in the chosen trade. Teaching methods included devoted observational and practice learning, storytelling, proverbs and myths and learning was a lifelong process; it was practical and needs-based.

CURRENT ISSUES IN AFRICAN FORMAL EDUCATION SYSTEM

The issues of facilities and Administration: For an education system to function properly, it needs infrastructure, i.e., classrooms, laboratories, office space and storage facilities, playgrounds and staff accommodation, among others. Majority of African primary, secondary, and tertiary institutions and Universities operate with either substandard or inadequate facilities. Learners are not provided with supportive facilities that maximize independent learning. The lack of appropriate and enough infrastructures undermine the efforts to provide quality education for African citizens. For example, forty years ago, Fourah Bay College in Sierra Leone, Makerere University in Uganda, and the University of Ibadan in Nigeria were cited amongst the best

universities in the developing world. Today, these universities are crumbling and have chronic shortage of library resources and laboratory equipment. Student and lecturer strikes create irregular academic sessions and it is not uncommon for students to take five or six years to complete a four year degree.

The management of African primary, secondary, tertiary education and universities is weak and lack vision for the implications of educational and global trends for local and national realities. Most administrators of these institutions do not have good knowledge of administration of education institutions. The effect of this is a tendency towards mismanagement of issues and possibilities of poor or non-implementation of visionary education standards programs. This obviously has direct effect on the learners (Ocit, 1994), who do not get what they are intended to get from learning. Frustration sets in and the outcomes are stress, anxiety, low self-esteem, depression and sometimes suicide.

Globalization and global market interests: An equally important factor is globalization, which continues to reinforce the interdependencies between different countries and regions; it keeps Africa subservient to the North. It has also deepened the partnership between the advanced countries and Africa. And to support this partnership in a mutually beneficial way, the advanced countries could help to open their markets to the products and services in which the developing world has a comparative advantage. Unfortunately Africans leave Westerner interests to strategize this, of course, to their advantage. This means that African countries will need to continue to be supported by adequate financing on concessional terms. This state of global affairs has to challenge African countries to design perceptive public policies to maximize the potential benefits of globalization, and to minimize the downside risks of destabilization and/or marginalization. It has been noticed that most Africans have minimal global view for their citizens; they experience themselves as local people in a global world. In consequence, Africans are disintegrating as a people and are disorganized and are losing solidarity to the benefit of a handful of African global players. This has negative consequences because we have forfeited one of the most vital functions of people, the responsibility for intergenerational cultural transmission. There are no systematic socialization structures for proper welfare of masses of Africa's children: some of whom are raising themselves or they are being raised by other children or minors. This has resulted into a growing loss of independent faith in communities, becoming more subordinate in institutions that we do not control and lack of long-range strategic goals and mobility programs. Without goals, planning and mobilisation quality of education has been sacrificed.

Commercialisation of education as seen in introduction of new courses, increased use of part-time and distance learning programs, the politically-motivated introduction of student bursaries or loans but raised course fees in private institutions, massive increase in university enrolment, and high teacher-student ratios resulting in poor education quality are commonplace. However, teachers' salaries and working conditions have remained poor; hence the accentuating waves of brain drain.

Globalization is affecting the governance and funding of education through decreased government regulation but increased pressures from transnational market interests whose impact on national and local political economies have not yet been determined. For instance, advertisement of teaching packs and sponsored videos on school computer screens, brings brands of large companies directly to learners with obvious direct influence on what is taught. Thus, there has been de-localization of schooling. Along with scares around child protection and truancy, these have encouraged parental choice between low-cost, low-quality public versus high-cost, higher quality private schooling. It is therefore crucial to rethink the purposes and impact of development cooperation in education.

Inadequate funding for research in African educational institutions and insufficient attention to professional development has led to a crisis in academic staffing just when teachers are most needed to instruct the rising numbers of students. A combination of inadequate pay, heavy teaching workloads resulting from increased staff-student ratios, deficient personnel management, and lack of research opportunities makes staff retention and recruitment increasingly difficult. Programmatic research is needed to understand problem behaviours in schools, a growing concern across the continent. The most common cases of problem behaviours include disobedience, bullying, fighting, irresponsibility, attention seeking, social withdrawal and short attention span (Aheisibwe, 2007). Teachers believed they spend a disproportionate amount of time dealing with problem behaviours in class compared with time spent on instruction and academic activities (Akinpelu, 1981). The number of children with problem behaviours is on the increase yet no measures have been put in place to contain the situation. This affects the teacher psychologically, causes psychosocial adjustment problems among students and teacher's hatred of the job. Classroom problem behaviours are a principal source of stress and burnout for both new and experienced teachers; this eventually affects the performance of teachers and learners.

Community Involvement: The most persistent issue in education systems of Africa is that communities are not well sensitized and mobilized to be fully involved in education matters. This is unfortunate because schools are established and set to work without community involvement. A well-sensitized and mobilized community will form a dynamic and committed organization such as Parent Teachers' Associations (PTAs). Where the community considers a school to be theirs, they will not be tempted to loot it in case of conflict or war. Instead, they will go out of their way to protect it from such occurrences (Aggarwal, 1981). A major problem that interfaces community and school is HIV/AIDS that has affected education and public services in general (Baguma, 2000). Children leave school to care for parents or family members, or they may themselves be living with HIV. Many are unable to afford school fees and other such expenses, particularly those who have lost their parents to AIDS.

Teachers who are affected by HIV/AIDS are likely to take periods of time off work; those with sick families may also take time off to attend funerals or to care for the sick or dying relatives: in addition absenteeism may result from the psychological effects of the epidemic. For example, the Tanzania Teacher's Union estimated that Tanzania needs around 45,000 additional teachers to make up for those who have died or left work because of HIV/AIDS (www.avert.org/aids-impact-africa.htm, site accessed on 19/04/10). This is particularly disturbing, given the central role teachers should play in the fight against HIV/AIDS. Without education HIV/AIDS will continue its relentless spread.

Internal or external factors and donor-driven agendas: Regarding political instability, in 1991 one in three African countries was affected by conflicts. Today, there are more refugees in Africa than in any other world region. Many African countries are experiencing conflicts and wars and this has become a major challenge to the education sector. In Uganda, many professionals emigrated during the brutal reigns of Idi Amin. A similar situation occurred in the DRC during the presidency of Mobutu and in Nigeria during Sani Abacha's rule. The war in Sudan between the Islamic north and the Christian south has led to the emigration of half of Sudanese professionals. Political instability has a number of effects including killing of children, teachers and parents, and the displacement of many families. Political instability also affects the education sector by reducing learning and teaching hours, and thus academic performance. Insecurity makes countries spend more on arms than on education and teachers. Note that the genocide of Rwanda of 1994 caused three quarters of trained teachers to go into exile or to be killed (UNESCO, 2008). Whether there are internal or external causes to Africa's conflicts is an intensely debatable matter in need of a studied position.

A non-conflict situation that influences African education is the stealthy immigration policies of some Western countries that have attracted and drained Africa's material and human resources. Another factor is the structural adjustment programs that are implemented to ensure the channelling of donor money into specific "conditionalities" and not necessarily into national education agendas of the recipient countries. Africa is increasingly urged to engage in evidence-based policy development, but donor support of programmatic research is hardly evident in much of sub-Saharan Africa. Some development partners even lobby country budgetary allocations into preferred sectors in pact for more aid. Africa's development partners have no doubt provided valuable financial and technical support as well as capacity building in institutional and human resource development, but the clash between the interests of development partners and those of national governments has hitherto been a taboo topic. This has for long affected Africa's education systems since whatever is done in education is tailored to the needs of donors and lenders like OECD and the IMF and World Bank.

On account of the foregoing, there has been weak support for research and development, poor linkages of programs with social and productive sectors of the

economy as well as weak technical and vocational education and training facilities for industrial expansion (Wandira, 1971). The continent is currently serving its debts to the tune of US\$13 billion annually due to structural adjustment program when all it needs is some US\$3 billion a year to fund universal primary education to give every African child the direly needed smart start in life. Some countries have to struggle to even pay the interest on their loans (Akinpelu, 1981).

EFFORTS OF AFRICAN COUNTRIES TO CONTAIN THE CHALLENGES

As a first step toward a long-term solution to the continent's education problems, the UN System-wide Special Initiative on Africa is placing a major emphasis on facilitating basic education for all African children over a 10-year period. Action plans are being prepared analyzing the fundamental constraints on expanding access to basic education. But "what of Africa" is in those Action Plans?

In Africa, ministries of education such as the Ugandan, are doing all they can to ensure that standards are progressively improved. In the short term, the government is aiming to reduce the student-to-teacher ratios in the first two grades to 80:1, and in the remaining grades to an average of 50:1. Some of the money saved through debt forgiveness under the heavily indebted poor countries initiative of the IMF and World Bank will be spent on recruiting more teachers. New financing strategies have been put in place in the public sector to generate revenue from institutional assets, mobilize additional resources from students and their families, and encourage donations from third-party contributors. Many governments have encouraged the creation of private institutions to ease pressures on the public treasury and satisfy pent-up demand, improving female access to education; the curriculum designers in Africa "struggle" to equip learners with enough knowledge and practical skills to make them self-reliant. Adult education has become common in many countries. It takes on many forms, ranging from formal class-based learning to self-directed learning and e-learning. A number of career-specific courses such as veterinary, medical billing and coding, real estate license, bookkeeping and many more are now available to students through the Internet (UNESCO, 2008). This will increase access to higher education. Regrettably, these measures are both inadequate and not yet quite contextually relevant to Africa's multiple needs.

African countries may need to give serious consideration of innovations in and contextualization of alternative education, also known as non-traditional education or educational alternative. This is a broad term that may be used to subsume all inclusive forms of education outside of traditional education (for all age groups and levels of education). This may include not only forms of education designed for students with special needs (ranging from teenage pregnancy to intellectual disability), but also forms of education designed for a general audience and employing alternative educational philosophies and methods.

The restructuring of many African economies is gaining momentum but this requires rethinking for relevance in the light of local and national needs in consonance with global trends. Throughout the continent, government intervention in economic activity is on the wane, albeit hesitantly. Administrative price controls are being reduced and agricultural marketing has been widely liberalized, but all countries in the continent are still in dire need of a suitable mass of human resources to manage such competitive political economies. The process of restructuring and privatizing state enterprises has been underway for decades in most countries, albeit with varying speed and degrees of success. And finally, fiscal reform is gaining ground but its processes and impacts are little understood. African countries are taking firm steps to rationalize their tax systems, to reduce exemptions, and to enhance administrative efficiency, simultaneously with reorienting expenditures away from wasteful outlays towards improved public investment and spending on key social services, particularly health and basic education. All these strategies, if properly implemented, will help to increase funds to the higher teacher training and education sectors, which should inspire generative processes for local knowledge and skills.

WAY FORWARD AND CONCLUSION

At each level of education in Africa there are many challenges, including inadequate facilities, poor management, globalisation, poor community attitudes, learner problem behaviours, poor funding, HIV/AIDS, political instability, adjustment problems, and disagreement with development partners and dearth of foundation in traditional African education. This situation can be improved through some strategies

Regarding globalization, it is not a zero-sum game – it is not necessary for some countries to lose in order that others may gain. But to take advantage of this trend, countries will have to position themselves properly through the right policies, which come through sound, competitive education to citizens. This underscores the importance of flexible and well-informed policy-making, of solid, well-governed institutions, and of transparency in national governance (Auala, 2007). The development partners should respect what host governments are seeing and suggesting in terms of policies, programs and funding ratios.

African countries need to understand and put in place measures to mitigate effects of globalisation (Leys, 2001). It is necessary to reassert the public domain and to police the boundaries between the public and the market sector with some vigilance. Furthermore, African educators need to be able to do what is right rather than what is 'correct'. They can, at least, seek to undermine the narrowing and demeaning processes that pass under the name of education in many systems. Alternative ways of educating that look to well-being and participation in the common life can be used as long as we are courageous and able to work with others with similar visions.

Among other challenges are the new forms of brain drain resulting in a loss of local capacity in fields critical to development, the absence of a proper international accreditation framework, the absence of legislation for foreign tertiary education providers, the lack of intellectual property regulations governing distance education programs, and barriers of access to information and communication technologies. The World Bank will work with its partners in the international community to promote an enabling framework for these global public goods, which are crucial for the future of tertiary education. A critical task is to work out and sustain talent-retention strategies for African countries with the African Union.

It should be noted that tertiary education investments generate major external benefits that are crucial for knowledge-driven economic development, including the long-term returns from basic research and technology development and the social benefits accruing from the construction of more cohesive societies. Also, tertiary education plays a key role in support of basic and secondary education, thereby buttressing the economic externalities produced by lower levels of education. However there is need to create a clear vision for the long-term development of a comprehensive, diversified, and well-articulated tertiary education system. There is need for African governments' intervention in the creation of a regulatory environment that encourages innovations at the level of individual institutions as well as private sector initiatives to expand access to education. Key facets of regulation are the rules for establishment of new institutions (private and virtual), quality assurance mechanisms, financial controls on public institutions, and intellectual property rights legislation.

Students' mobility needs to be encouraged through open systems based on the recognition of relevant prior experience, degree equivalencies, credit transfer, tuition-exchange schemes; access to national scholarships and student loans, as well as comprehensive qualification frameworks. Education is an important pillar of development strategies emphasizing knowledge and skills generation and the construction of democratic knowledge societies.

African nations will need to produce a larger pool of good quality tertiary graduates particularly in the disciplinary (and interdisciplinary) fields relevant to a country's chosen strategy for economic development. There is need to develop a strategy for national human resource development that identifies research priorities within frameworks of competitive, comparative strengths. There should be funding reforms to offer incentives for achieving policy goals while providing stability. There is need to strengthen institutional autonomy buttressed by accountability mechanisms to support increased system differentiation and institutional innovation. African Education systems need to encourage diversity in teaching and learning approaches that facilitate institutional specialisation. African education systems need to foster the development of national and regional postgraduate programs to increase academic staff numbers and build research competences. One primary objective

would be to document indigenous knowledge and skills through research (see Section Eight of this Volume).

There is need for sensitization especially within teacher training institutions on how to handle problem behaviours. In this regard since every qualified teacher should pass through teacher training institutions, there is need for more sensitization into counselling behavioural problems perhaps as a separate course unit to enlighten teachers on how to handle problem behaviours among learners. Teacher education is the sector for African governments to start off young scholars to engage in research and provide solutions to daily challenges other than getting theoretical knowledge. African countries need to explore several measures, including teaching literacy in small, brief courses while teaching other skills in spontaneously organized groups formed to meet the local need. Efforts need to be made in teacher training institutions to prepare teachers to develop a positive perception towards learners in the process of growing and require positive attitudes and assurance that they are accepted and if necessary, counselled.

Regarding school curricula, there is need to revise the African education system to include practical subjects like food crop production, animal rearing and marketing practices, health, etc. in the curriculum rather than continue to stress western style education that prepares Africans for white-collar jobs in their agrarian economies. Stronger partnerships with all education stakeholders, including parents, students, civil society and teachers' unions, should gear at building support for education. Better performance and better management of African economies as a whole means that more resources can be devoted to education. It has been noted that African institutions still mimic those of former colonial masters in most cases. Some still have governance of education in the hands of former colonial masters. While we may have friends and allies, there will be no saviours for us from the structural adjustment conditions of such education partners. We must emancipate ourselves from hegemonic structures and adopt "efficient", productive African-focused ways of functioning. We must deal with issues that are not applicable in African education through the redesign of curricula, which is the intended purpose of this handbook. The need and emphasis throughout this handbook is to set children into lifelong learning processes, education being practice- and needs-based and visionary within globalization and educational trends, but founded on local content such as poems, storytelling, proverbs and so on.

LEARNERS' EXERCISES

Identify and analyze some of the major issues in African traditional education system.

Compare and contrast African traditional education system with the current education system of an African country of your choice.

African conflicts are caused more by external than internal forces. Agree or disagree with tangible reasons.

Privatization of education system has done more harm than good to education systems in Africa. Debate.

How have globalization and other external forces affected African education systems?

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Part II

AFRICA'S EDUCATIONAL FOUNDATIONS

Part Two comprises five chapters that examine different aspects of the foundations of education in Africa. Foundations of education courses aim to develop in teachers and other school personnel the ability to interpret knowledge within its historical, philosophical, cultural, and social contexts. The aim of interpretation is to get clear understanding of the context of education both within and outside of the school. In the first chapter, Mathew Gwanfogbe traces the origins of education indigenous to Africa and the advent of Islamic–Arabic education and Western-Christian education. He briefly reconstructs key features of each component of this triple educational heritage. This is followed by a comparative perspective on the three education systems and a proposal of how to gain from the strengths of each heritage in order to build a “blended” education system that is uniquely African, but reflects global educational trends. In Chapter Four, Bame Nsamenang’s conceptual search for an African philosophy of education explores how to visualize education within Africa’s theories of the universe, how every culture’s theory of the universe engenders philosophic ideas that begin with beliefs about children, their development and right to a cultural identity and extend to Africa’s philosophic sagacity. Amina Ali, in Chapter Five, presents African proverbs mainly from East Africa as an important source of philosophic ideas from which to extract elements of an African philosophy of education.

In Chapter Six, Mobamadou Sall and Bame Nsamenang advance a positive view of ethnicity not only as constitutive of individual identity but also as fundamental to collective identity and the national character of African countries. They believe that each African country can better understand its educational realities if it could establish a national ethnic education map. They cite Senegal as a case study, where several ethnic groups live together in peaceful harmony, implying that ethnicity does not mean animosity, conflict and civil war. Furthermore, they explain the necessity to teach ethnic identity, culture and values in school in order to develop fraternity, respect and tolerance of diversity and how diverse ethnic identities can galvanize into citizenship. Finally, Godfrey Tangwa’s Chapter Seven discusses the place and function of ethics in African education, both traditional and modern. He treats the fundamental principles of ethics, conveniently captured in the Western idioms of autonomy, beneficence, non-maleficence and justice, and asserts that these principles have cross-cultural validity and applicability. He highlights some of the main critical ethical issues for African education in the 21st century and ends with a stimulating case study that captures some of the ethical problems plaguing contemporary African education and societies as a whole. The aim of the chapter is to demonstrate the place and importance of ethics in society in general and in African education in particular, especially in teacher education and training and to stimulate the reader into regular systematic reflection on the values of traditional African culture, and how these can be salvaged from recession into oblivion and integrated into the modern school. He notes that ethical concerns are central to the African traditional system of education and should remain central to schooling because, within African cultures, every individual is perceived as essentially a relational being whose acts and actions impact directly on others in the family/ community, a community of significant others in ever widening social networks.

Chapter 3

**AFRICA'S TRIPLE EDUCATION HERITAGE:
A HISTORICAL COMPARISON**

Mathew B. Gwanfogbe

INTRODUCTION

Chapter Two appraises the extent to which Western educational models and interests have devalued indigenous cultures and education, projecting them as anti-progressive. This chapter identifies the origin and briefly reconstructs key features of three significant educational heritages now coexisting in Africa derived from indigenous African, Islamic–Arabic, and Western-Christian civilizations. That historical background is followed by proposed broad strokes of how to gain from the strengths of each heritage to build a “blended” education system tuned to the multicultural realities and needs of Africa.

In the chapter, I endeavor to expose how Africa’s education efforts fail to draw inspiration and strength from the enduring traditions of family-based and Islamic education. The chapter ends with a call to African countries and their international partners to gain from the three educational heritages.

OBJECTIVES OF THE CHAPTER

By the end of this chapter we expect that readers would be able to:

- 1) Identify the origins and core features of the three African education systems,
- 2) Distinguish between foreign influences and traditional elements in African education systems,
- 3) Compare the three educational systems and draw inspiration from the best elements of each model, and
- 4) Specify how to use the gains from each educational heritage to enrich contemporary education efforts on the continent.

NATURE AND PATTERNS OF EDUCATION IN AFRICA

Deciding how to care for and educate the next generation is an old matter to which individuals and cultural communities the world over have evolved various approaches. By revealing that Africa is home to the earliest humans, scientific evidence informs us that the continent has had the longest experience with the care and education of children, principally within family systems. In fact, for centuries and continuing today, Africa has educated its offspring “within the framework of an African culture” (Callaghan, 1998: 31). Education has however been defined differently by different scholars.

For the purpose of this chapter, we shall limit ourselves to the definition given by Boyd and King (1977), who consider education to be the training and instruction of the young for the business of life. This definition is appropriate because since the beginning of human civilization this has been one of the most ancient concerns of humankind. Each human society has been interested in training the future generation to improve on their social, economic, cultural and political life of their

society. Such an education is derived from the traditions of the people and conditioned by their worldview and environment as well as borrowed or imposed foreign factors. A historical examination of the educational systems in Africa will reveal that there are three major origins of the current practices of education in the continent. These are:

Indigenous or what others term Traditional Education (see Baguma and Aheisibwe, Chapter 2 in this volume for complementary coverage)

Islamic-Arabic Education

Western-Christian Education or Eurocentric Education

Meanwhile Eurocentric views argue that there are just two educational systems i.e. Western education and Islamic education. They observe that since education necessarily involved writing, and African education was not written before the invasion of the continent by Arabic-Islamic and European educational systems, it means that there was no education. This view was not strange especially at a time when Eurocentric scholars like A.P. Newton, Professor of imperial History at the University of London, stated that “History only begins when men take to writing”. Yet a close study of the indigenous African education system shows that the universal objectives of education were targeted and remain inherent in African childrearing cultures. However, the predominance of the Western education model is unquestionable because of the ideological and technological influence on the world at large. Nevertheless, it is important to note that effective curricula reforms aimed at rendering education relevant to the advancement of any African nation can only succeed when the triple heritages are consulted. This has not been the case in most African countries and that is why reforms have tended to fail to render education relevant to African perceptions and development needs. This chapter attempts therefore to give an overview of the history of educational systems in Africa from a comparative perspective. It starts with an examination of the indigenous education system, followed by the introduction of the Islamic-Arabic education system and ends with the introduction, development and dominance of Western education.

INDIGENOUS AFRICAN SYSTEM OF EDUCATION

To effectively enhance the receding African component of the continent’s triple education heritages with the objective of evolving contextually grounded education policies and culturally tuned school curricula with which to render education germane and transformational in Africa, we must first reconstruct the indigenous African system of education within Africa’s worldviews.

An African theory of the universe is theocentric, holistic, and pronatalist in social thought and value orientation. The determinants of these worldviews constitute a very different *psychological frame of reference* (Serpell: 1994, 18) from that which informs institutional models of education imported into Africa. The theory imputes a sacred

value in childbearing and childrearing and positions the marital couple of mature man and woman in extended family networks, as the foundation on which to offer childcare and education (Nsamenang, 2004). However, some “organized” educational approaches to preparing children for meaningful cultural life existed throughout Africa and still persist in some communities today. Some examples include the *poro* (for boys) and the *sande* (for girls) in Liberia, the ‘voodoo convents’ in Benin, the *bogwera* (for boys) and *bojale* (for girls) in Botswana and rites of passage in Cameroon (Tchombe, 2007) and in the Southern African region.

Some Specific Dimensions of Africa’s Indigenous Education

The curriculum

African Education does not divide curricular contents into disciplines such as arts, sciences, agriculture, economics, arithmetic, etc. although these are implicit in educational ideas and practices. Nsamenang (2005) clarifies that Indigenous African education wedges the children’s daily routines and the livelihoods of their family and community together, integrating skills and knowledge about all aspects of life into a single curriculum.

The curriculum is not written but tacitly organized in sequence to fit the expected milestones of different developmental stages that the culture perceives or recognizes (Nsamenang, 2005). In other words, what is taught or what children have to learn fits their abilities and succeeding stages of development. This type of education provides not only a means for survival but also “connects” children to various social networks. The occupation of the individual, the social responsibilities, the political role as well as the moral and spiritual values was targeted in all educational considerations (Gwanfogebe, 2006). Moumouni (1968) described this type of education as “the school of life” whose objectives were manifold, focused on producing an honest, respectable, skilled and co-operative individual who fitted into the social life of the society and enhanced its growth. Fafunwa (1974) argues that indigenous African education was functional because the curriculum was developed to attend to the realities of the community and was needs-based.

Teachers and pedagogic approaches

African educational ideas and practices are entrenched in family traditions to permit parents, especially mothers, to be the first teachers and educators. They start with language (mother tongue) training and follow with sanitary and aesthetic education. Like all other educational systems, the Indigenous African Education system also encourages physical training. But unlike European education where conscious training is programmed for all aspects of physical education, the African indigenous system profited from inherited skills discovered through social life and leisure activities. This discovery was typical in music and dance which were frequent and involved a lot of song and body movements. However, many competitive games such as wrestling, swimming, canoe races, running, hunting and farming were

organized and could be interpreted as conscious training. The development of character and communal spirit took various forms in different communities. Some used the wrestling exercises to instill the spirit of reconciliation and solidarity. Such healthy competitive spirits were also taught to peer-group right from the early age. In some communities mock wars were organized. Usually in all societies, both winners and losers were congratulated and sometimes rewarded because the essence of each competition was not to win but to acquire the spirit of gallantry, tolerance and solidarity.

Aspects of communal solidarity were taught by the establishment of laws (usually referred to by Eurocentrists as taboos) against killing, witchcraft, stealing, adultery, incest, disloyalty, infidelity, perfidy, corruption, etc. The divulging of the secrets of the society was tantamount to committing treasonable felony against the ethnic community and very often attracted ostracism. These measures were taken to ensure the imbueing of the spirit of honesty, kindness, uprightness, decency and cooperation. It was commonly accepted to remain childless than to have an uncouth child who would bring dishonour to the family and the society. When direct parental care and intervention was no longer required, children were better with their peer groups. The boys and girls who were poised for the responsibility of adulthood were assessed for proficiency on the basis of their social, moral, intellectual, and practical competency in peer cultures. Age-grades, i.e., children of the same community who identify with cohort members at all developmental stages are a common feature of many African cultures, as the learned from one another (Nsamenang, Chapter 16, this volume for a more comprehensive account of developmental learning).

Evaluation system

To assess a child's level of understanding and ability to practice the basic concepts of ethics, some teachers set up deliberate tests for evaluation. This was particularly the case with attempts to test for honesty, kindness, endurance, cooperation, concern or love for others, and for animals and public property. Through conversation and running of errands, levels of development in psychology, philosophy, sociology, literature and other disciplines pertaining to thinking, oratory and social competence were evaluated in children. The abilities and talents of children were also evaluated from their performance and demonstration of interest in given tasks. The responses and reactions were carefully analyzed over time to determine the character and ability and to help orient the children in vocational tracks. Many clan heads determined heirs from the degrees of social responsibility in their children.

Terminal evaluation for its part was largely deliberate. It was planned and had to involve a particular age group. The elders had to set up a program outlining the activities involved and the duration. The teachers concerned were local professionals with recognized experiences or assumed inherited family expertise. There was first of all an intensive training covering all the required disciplines as well as all what were considered to have been known and what was assumed yet

unknown but appropriate at that age. The best students in theoretical output were often directed towards priesthood and family leadership. Those excellent in practical work were encouraged to further develop their skills in the specific trades or professions. Graduation was during initiation into manhood or womanhood, typically organized separately. Graduation ceremony in some societies involved circumcision for boys and in others for both sex.

Epistemological and cognitive content

Those challenging the African education focus their arguments on the absence of intellectual training. Yet a close study of the educational system, especially the foregoing paragraphs, reveals active encouragement of intellectual development as well as training in other domains of knowledge. If reasoning abstractly is an intellectual exercise, then much of Africa's education before outside influence involved intellectual training. The learning process emphasized observation, imitation and participation which are indisputably abstract processes. Besides, the child was taught the characteristics of seasons and how to determine the beginning of each season by observing atmospheric changes, the appearance or disappearance of certain fauna and flora. The effects of the changing seasons on the environment including the vegetation, the water level, and communication systems were taught to show how these changes could affect farmers, traders, builders, travelers, hunters, fishermen and all other forms of activities. Following Western classifications, such studies covered disciplines like Geography, Environmental studies, Nature studies, Rural Science, Meteorology and Bio-geography.

The study of nature or botany was through identification of plants by name and utility as food, medicine, flowers, and fuel. Animal husbandry, amply covered aspects of modern veterinary sciences, included knowledge of animal care and treatment. Local history was taught, first, at family level, then at village or clan level and later at ethnic level. Heroes were identified and songs of praise composed and showered on them and their rulers, demonstrating levels of intellectual engagements (see Akinsola – Chapter 15, and Esere et al – Chapter 18, this volume for a more comprehensive report on various forms of mental drills). The themes of mental drills varied with the occasions and the person or focal events. For example, childbirth and in some societies, the birth of twins was given special meaning and ritual attention. In some societies a distinction was made between male and female death rites and the age and the status of the dead. Ululations at festivals (religious or others) also had specific themes and were also done through lengthy incantations and recitations which were interrupted mainly by choruses. Priests, diviners and healers were adept at this form of oratory.

Mathematics was also well developed. The children were introduced quite early to the notion of counting and calculating local produce. Through games, folklore and rhymes, these notions were further impressed. Concepts of addition, subtraction, multiplication and division had always existed in all African languages prior to their

introduction in school. The notion of quantities existed though not as precise as those of the West. Knowledge and competence in geometrical shapes and trigonometry was more evident in house construction. The construction of components of a house was done separately on the ground and then assembled together. That these pieces fitted together when erected is proof that the architectural level was well developed and the mathematical involvement was highly sophisticated. Unfortunately that is rapidly being lost to lack of research and incorporation into school curricula. It is therefore undeniable that pre-colonial indigenous education was well developed in all parts of Africa before the introduction of the Islamic-Arabic and Western-Christian education systems.

How Africa's oral educational system has coped and is coping with the introduction of alien education systems is a research matter.

ISLAMIC EDUCATION IN AFRICA

Islamic-Arabic education was introduced in Africa by Ibaadi clerics from the Arabian Peninsula before the end of the first millennium, c.647 (Hunter, 1977). It began in North Africa and spread to the Horn of Africa. Islam spread into West African communities from the North through trans-Saharan Muslim merchants as well as from the Horn of Africa by the 10th century. Between the 11th and 12th centuries, the rulers of the kingdoms of Takur, Ancient Ghana, and Gao had been converted to Islam by the Almoravids. As converts they appointed advisers from among the Muslims who were literate in Arabic.

Islamic education has a religious emphasis. The principal factor determining and even dictating the content and the development of the Islamic education system is derived from the belief that God's final judgment to humankind was revealed in its entirety through the prophet, Mohammed, and is enshrined in the Koran.

The divine revelation included the dogmas of faith and the religious and moral duties of the believer as well as guidance on the political, social and economic organization of the community. It can therefore be said that Islamic education differed from Indigenous African education because it had a well laid out policy concerning all aspects of life in a society. The main principles guiding the content were of divine origin aimed at directing the conduct of the individual and the community to respect Allah's command. Since these commands were written, it became incumbent on Muslims to have literary education so as to gain fully from the religion.

Education therefore became an indispensable aspect of Islam because the study of the Koran is important for the Muslim faithful. Prophet Mohammed himself underscored this fact when he stated that, "...the ink of the scholar is holier than the blood of the martyr" (Brown, 1975). For all prospective Muslims, elements of reading and writing were taught often from the Koran as the textbook before receiving instructions in religious knowledge. Islamic education evolved into two

sub-systems, the *ulaama* and the *Madrassa* (Winters, 1987), perhaps to separate adult-child spaces.

The *Madrassa*, a system of Koranic learning for Muslim children and youngsters, did not exist from the foundation of Islam. Within the *Madrassa* system, a group of students study in a classroom setting, either in an institution or, in any available space. The earliest *Madrassas* were often connected to a mosque. The *Madrassa* system developed in the Arabian Peninsula during Islam's first centuries. The origin of *Madrassa* can probably be linked to an early Islamic custom of meeting on the premises of mosques to discuss religious matters. In the early history of Islam, people seeking religious knowledge tended to gather around more knowledgeable Muslims in mosques; these informal teachers were later called *shaykhs*. Under the *ulaama* system, a man or boy studies under an Islamic cleric at his residence. Males of all ages attended these meetings, and many of them became *imams*.

Sub Sahara Africa was not left out in this process of Islamic educational development; it has a long and well established history of Islamic education. The central Sudanic system was based on both Arab and African traditions (Winters, 1987); it still exists today in some communities. The Sudanic system evolved the University of Sankore in Timbuktu, which was highly regarded as a centre of in-depth learning by Muslims around the world. The Sankore curriculum consisted of faculties of law, medicine, grammar, letters, geography, and industrial arts. Baxter (2003) estimated 3,000 neighborhood Koranic schools in Mali's capital, Bamako. In these schools, groups of youngsters, aged 4–10 years, sit with wooden tablets, reciting Koranic verses, hour after hour, day after day, until they know them by heart.

Variations and impact of Islamic education

There is no doubt that even though a lot of force was applied in propagating Islamic religion, Islamic education and culture were not widespread in Africa. This can be explained by the fact that learning the Islamic scripture was not necessarily a condition for conversion into Islam. All that the convert needed was to accept the faith and start learning by recitation to say the prayers. It should also be noted that in most areas the converted rulers used Islamic education to serve their political aspirations and to exploit the non-faithful. This explains why in spite of so many centuries of the introduction of Islam centuries before Christianity, the religion did not spread in sub-Saharan Africa as widely as did Christianity. Meanwhile, aspects of Islamic culture such as polygamy and mystical practices that had semblance with African traditional belief systems attracted the non-faithful. Hence there were people who adopted Muslim names, modes of dressing and mannerism in order to cope with the social pressure.

WESTERN IMPERIAL-CHRISTIAN EDUCATION IN AFRICA

Western education was introduced in most African countries by Christian Missionary societies. The establishment of colonial rule further strengthened

European determination to establish their educational systems. Europeans of that age and even long after regarded Africans as uncivilized and barbarous. Hence the declared objective of both the Missionary and imperialist education was to bring enlightenment to save African souls from damnation.

Undoubtedly, the growth of European activities on the African continent reflected the expansion of European trade and political influence in the world. Similar motives and values justified their commercial, political and cultural expansionism. The technical, industrial and military superiority of the West came to be taken as signs of corresponding moral and spiritual superiority. It is therefore no accident that the early Europeans whether Christian Missionaries or colonial administrators did not consider African culture or environment in planning educational curricula.

Not much was done to adapt Western Education to the realities of the pupils. The people's music, dance, habits and the entire culture were considered evil. As a result, Western education intended to alienate the learners from their own culture and people; and to a large extent succeeded in many parts of Africa. Since the scope of education taught was very inadequate, it also became difficult for education to transform the society. Africans were not involved in the formulation of the educational policies. The acceptance or denial of the school system by Africans depended largely on the attitude of the colonial administrators. When they were sympathetic and amenable to the Africans, they attracted many school children. But when they were harsh and brutal, many Africans were reticent of Western education.

As educated Africans evolved, they felt that the practicality of the adaptationist education policies introduced by the British indirect rule policy, for example, was invariably aimed at maintaining Africans in European servitude, a state of education that has not changed much today. These elites felt that the limitation of the scope of curricula reduced the hope for scientific and technological education considered essential for acquiring Western knowledge for development. It can therefore be argued that the African perception of education was shaped by the introduction of relationship between educational achievement and socioeconomic advancement. The demand for educated Africans to serve in the colonial services also required the acquisition of a more literary education than that offered by adaptationist and assimilationist education. Accordingly, African elites regarded any insistence on adaptation as a constraint on development. As such, there was a conflict between the British concept of colonial education and African perceptions of education. Missionary societies also required educated Africans to eventually take over the responsibility of local Christian Churches in their communities. The type of education given to them differed from that proposed by the colonialists, which was a replication of the metropolitan practice meant to ensure the suitability of the recipients for colonial service. Since those who had colonial education enjoyed economic mobility

and enhanced social status, most Africans tended to be more attracted to it and thus resisted the Missionary education they perceived as low-grade. Such contradictions ultimately affected the realization of all educational policies and affected learners' perceptions.

REFLECTIONS ON AFRICA'S TRIPLE-STRAND EDUCATIONAL HERITAGE

Attempts to chart the history of education in any African country, identifying issues of educational policies, curricular content, pedagogical models, educational access is a fraught task indeed but one that must be undertaken. The Western education that arrived in Africa from Europe was not secular; it aligned with colonisation and Missionary motives. Various imperial powers imposed their systems of education on unwilling African colonies. Since colonialism was practiced differently by various imperialists throughout Africa, the consequences of "imposed" education systems differed from colony to colony, and these differences can be noticed today across the continent. Thus, each African state has its own particular history and dynamics, but each also has a firm foundation of indigenous educational values and visions overlaid by various external, colonising models (Pence and Nsamenang, 2008). For example, Cameroon education consists of two distinct systems inherited from colonial regimes, which, in their unreformed state are unsuitable for modern Cameroon (Gwanfoghbe, 2006). Not only did significant changes in religious beliefs and practices taking place in Europe followed the heels of colonialism to Africa, permitting colonial rule to provide an enabling environment for many forms of Christian Missionary work throughout much of sub-Saharan Africa, but with it came new orientations to education.

Colonial agents saw their 'burden' as one of enlightening and civilising Africans and their societies; they adopted education as the right way to relieve their yoke. Given this self-imposed responsibility, one might expect colonial governments to have made major efforts to introduce schools throughout the African colonies. Regrettably, most colonial governments did little to support schools and educational development. Colonial Europe did not want to spend their own resources to build, maintain and administer African colonies; they insisted that each colony supplies the revenue to develop and govern it. Accordingly, colonial regimes prioritized natural resource extraction, access to cheap labour for mining and plantation drudgery, and the spread of Christianity to subtly sooth the "wounds" of colonisation. If one compares those colonial attitudes against today's motives for development cooperation in education in any chosen African country, there will be a vast visible difference, albeit basically similar underlying motives in development cooperation. Colony-specific interests did not prioritize education, as universal basic education for Africans was not in colonial policy. Colonial strategies and efforts to achieve the twin goals of generating wealth for the coloniser and achieving a stable administration of the colony left destructive legacies visible today in Africa's educational efforts. In

fact, at the end of colonial rule, no African colony could boast that more than half of its children had completed elementary school, and far fewer attended secondary school (Fafunwa, 1974). Thus, at independence, African governments were torn between creating more higher education spaces for leadership needs and addressing the equally challenging need for more basic education. The situation has not changed much today, as most African countries are still struggling with this education dilemma, hence liberalization of education into private interests across the continent.

The colonisers needed mainly subordinates – a few clerks and sub-administrators to do ‘back work’ not ‘head work’ (Pence and Nsamenang, 2008). In Angola, for instance, the Portuguese authorities took fright at the surge of ambition in education and in 1901; a law was passed stipulating that anyone wanting to be a telegraph operator had to pass exams in Latin and geography, which were not offered in Angola (www.bbc.co.uk/worldservice/africa/, 2007). Such tactics may be inherent in some development cooperation partnerships with African governments and are often drenched in Social Darwinian intentions. The low education levels which most colonial governments provided to sustain elementary structures of governance, law, and order, have contributed to postcolonial difficulties to expand basic education. This has been exacerbated by remarkable disparities across countries, ethnic groups and regions of the continent. Even Ghana, which next to Ethiopia had the highest level of primary education in Sub Sahara Africa at independence in 1957, had a glaring contrast between the number of schools in the north and in the south of the country (Apiah, 1992). Some of the disparities in access to education in many African countries at independence persist today. Colonial educational services were thus unevenly developed and produced mixed results; a historical precedent that has been difficult to reverse in much of Africa. In spite of limited support for public education, those who were able to receive an education often became their countries’ pre- and post-independence leaders. But some of the leaders were killed, imprisoned, or overthrown by the armies that the imperialists put in place to protect them.

At independence, three forces affected educational developments in Africa (Pence and Nsamenang, 2008). First, colonial governments lacked not only the resources but also the goodwill and motivation to initiate universal basic education for Africans. Second, Islamic education encountered and acquiesced to self-governing African kingdoms and ethnic states, such as Ancient Ghana, Bamoun in Cameroon, Bagandan in Uganda, Mali, Yoruba in Nigeria, Zulu in South Africa, among others, but Western education was established as part of the disruptive process of colonisation and acquisition of African spheres for European states. Third, the establishment of institutional education or schooling in much of Africa was by Christian missionary societies (Gwanfogbe, 2006). Unlike earlier envoys of Islam against the reading of the Koran in native languages, Christian missionaries believed in the ability of Africans to read the Bible in their own languages as important to the conversion process. In addition, the curricula of Christian schools not only

focused on the Bible and denominational liturgy but were broad to take in secular or non-religious content. However, as most Missionary societies were poor, they could not and still cannot, support their preferred number of schools. Therefore, they have not extended their education outreaches as far as they desired.

While colonialism is now viewed as morally reprehensible, there are differing views that are easily identified on its social, economic, and political consequences. The overarching message from the foregoing historical sketch is schisms—disconnects which alienate Africans from their cultures, particularly their indigenous roots regarding the care and education of the young. But these apprehensions are largely muted in ongoing education discourses and educational policy development for Africa. Models of Western schooling are instead promoted in a manner that suggests both an ignorance of the coexisting education heritages and also a misguided belief that those “others” are incapable of educating a healthy and productive adulthood (Pence and Nsamenang, 2008). The system of Islamic education in Africa is multi-tiered and less rigidly structured than its Western counterpart, but more so than its African host. Although the African and Islamic educational traditions constitute systems of education in their own rights and have operated on the continent centuries prior to the intrusion of rudiments of Western-Christian education, each endures within current educational efforts as a submerged system that is relatively unknown to development planners and therefore is seldom taken into explicit account by Africa’s education partners (World Bank, 1999), and most African governments, into policy development and strategic planning.

The current *mélange* of Africa’s triple educational heritage is central to understanding Africa in its struggles to cope with its appalling condition and yet live up to the demands and expectations of a competitive, technology-driven global age. Whether Africans like it or not, scholars of comparative education and comparative law would confirm that when several systems coexist, the phenomenon called conflict of systems would emerge (Shu, 2000). The hybridism in which contemporary Africans are educated is disquieting and compels reflective policy development, research, and transformational teacher education to address inherent problems. The clash or restive coexistence of imported philosophical, ideological, and social-anthropological circumstances that diverge from those of Africa is indeed daunting, but not impossible to address. Without reflection, research, and teacher training, Africa is unlikely to understand the hybridism with the objective of designing suitable education curricula for Africa’s checkered history and varied needs.

African education policy development should gain from the strengths of the three education heritages. Thereafter, we can figure out how to “blend” such gains into a contextually apt curricular framework that can anchor learners in their cultural roots but prop them into educational visionary pathways into global possibilities and competitive opportunities. From Africa’s developmental learning – learning as one grows – we can gain how children learn with parents and are increasingly but gradually transitioned into ever enlarging circles of social and public spheres. If

education planners could listen to the African worldview and consider African livelihoods, for example, they would learn to focus on a holistic and integrated way of looking at the family and the universe to visualize and design Africa's education in new ways (Callaghan, 1998). Policy can equally learn from community involvement wherein the extended family and the rest of the community participated actively in the education of the child. The philosophy behind this collective education was derived from the belief that the child belongs to a particular family only until birth and becomes that of the entire community from birth and especially when the child develops communicative and productive abilities. The entire community desired to and indeed inculcated humble, courageous, honest, sociable and persevering attitudes in children so that individual behaviour could reflect family and community. This precept can inform citizenship education in Africa. We can gain moral education and vocational strategies from Islamic forms of education (UNDOS, 1995). The most critical lesson to take from Eurocentric education is principles of educational organization and management and technology.

CONCLUSION

From the foregoing, it can be concluded that the three types of educational systems practiced in Africa (Indigenous, Islamic-Arabic and Western Christian) were rich and rewarding at different phases of African History. Inadvertently, ideas and methodologies extracted from these educational systems and blended together can produce even better outcomes if educational planners and policy makers can identify and make use of their respective strengths to develop African curricular contents that reflect the developmental patterns and livelihoods of Africans. The indigenous education system enhanced family ties and cooperative communal practices which are less evident in western education models that are characterized by individualism and competitive achievements. Indigenous education also seriously respected the laws of nature by paying allegiance to African worldviews as against the universality of western dictates that impose laws and regulations that are not always suitable to nature and African environments. The Islamic–Arabic system is enshrined in Islam, as it enhances ethical standards for a specific way of life although it is also linked to commercial activities. Meanwhile western education has an incredible organizational and technological framework that enhances inventive skills, thereby making it generative and productive. If these attributes are blended to develop an African education system, then African education will undoubtedly produce graduates capable of “catching up” with the challenges of competitive development.

If the leadership of the African Union and Africa's education partners could insist on reforming Africa's education systems within this “blended” framework, then development in Africa will be enhanced and brain drain will likely reduce. Skillful Africans in the Diaspora will also return to build their economies and make Africa competitive with other continents.

LEARNERS' EXERCISES

Describe the indigenous education system of African ethnic groups of your choice.

Analyze the impact of Islamic-Arabic and Western education on various aspects of Indigenous education in an African country.

What aspects of Indigenous African education system do you admire that are not in western education models and how can they reinforce African schools?

Why is the Western education system said to be individualistic and not communal and how is this not helpful for African lifestyles?

Given its chequered history, the most valuable approach to Africa's education should be a "blended framework". Debate this point, clarifying what this entails and who should promote it and why.

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Chapter 4

TOWARD A PHILOSOPHY FOR AFRICA'S EDUCATION

A. Bame Nsamenang

INTRODUCTION

This chapter is written by an author without academic credentials in philosophy; his main qualification is a felt-need to contribute to a philosophical basis for education in Africa. As such, the chapter does not pretend to address any specific domain of philosophy; instead it attempts to chart a crude conceptual lens for philosophical thinking on African education. It floats the idea that African scholars in general and philosophers in particular need not always take their cue from elsewhere but from their African roots, albeit with keen awareness that they belong to an international community of scholars (Bodunrin, 1985). That is, the search for and development of an appropriate philosophy of education in Africa must occur within the framework of global trends and traditions in academic philosophy of education. Africa must live up to the global age signals that all cultures can contribute scientific knowledge of universal value (UNESCO, 1999).

PHILOSOPHY AND WORLDVIEWS

Human intentions and understanding are organized in the light of cherished goals, values, and pictures of the world (Berlin, 1976, p. 195). A concept that encapsulates such meaning-making is worldview or theory of the universe. Worldview is a cultural frame of reference to the universe that includes a psychological outlook regarding the place and role of the human being in general and the child in particular. In a nutshell, a theocentric theory positions the family, ancestry and a supreme being in existential and metaphysical hierarchy. An African theory acknowledges everyone's humanity, imputes spirituality into human life, and situates the child not in his or her sovereignty but as socially grounded in the extended family (Nsamenang, 2008).

Philosophy is the study of general and fundamental problems concerning such matters as human existence, knowledge, values, reason, mind, language, truth, and the nature of the child, the purpose of education, and much more. Philosophy advances disciplined rational arguments in search of meaning and understanding of problems and concerns. From the origin of humanity the search for meaning, purpose and human understanding has been central to human existence. As such, philosophy can be seen as a conceptual anchor of human culture and civilization, even if Africa's philosophy is only partially charted. To philosophize is to make meaning of human existence in terms of searching for answers to some fundamental questions and issues, such as the purpose of life and how offspring fit into that meaning. Most, if not all, academic disciplines and professions begin with a philosophy. Thus, philosophic ideas or distinct mindsets shape academic and service disciplines like education and medicine, among others. If indeed a theorist's view of development is closely tied to his or her view of human nature, a view intimately tied to his or her conception of how the universe works (Nsamenang, 1992, p. 210), then, we ought to organize education within Africa's theory of the universe.

PHILOSOPHIC IDEAS UNDERLINE EDUCATIONAL SYSTEMS

Education is a fundamental problem for which every culture has engaged its educational ideas and efforts to equip its offspring with knowledge, skills, and the modus operandi that are needed to mature individuals, improve personal and collective well-being and conserve cultural heritage. In other words, every human society throughout history has educated its offspring within a particular philosophic vision of the child and his or her development and the future toward which that child should mature. All systems of education are systematic processes organized to mature and induct children into their culture's most cherished social status – adulthood. In this sense, the goal to fit children into a globalizing world is secondary.

Cultures do not visualize the same endpoints of development; “various cultures ... recognize, define and assign different developmental tasks to the same biological agenda” (Nsamenang, 1992, p. 144). Whiting and Whiting (1975) heightened the value of culture by proffering it as a *provider of settings* for educating children. Therefore, worldviews and their educational curricula ought to be central to philosophy of education. African culture is particularly central to educational efforts in that education is framed within African family traditions which accredit parents and children as partners in the educational process. If philosophy of education “is to be authentic, its distinctive concerns must arise out of issues thrown up by firsthand experience of life itself” in African societies (Mason, 1985, p. 105). Without roots in African experiences and livelihoods, philosophy of education would be reduced to “intellectual gymnastics” (Mason, 1985, p. 105).

Intellectual honesty demands acknowledgement that philosophical dispositions to education preoccupied all racial and cultural groups for centuries prior to the development of the Greco-Western philosophies that now dominate all other philosophical outlooks. That is, Western philosophy of education is but one of several philosophical mindsets in educational thinking of which Africa's educational ideas is a subset. Therefore, Africa must endeavor to outgrow the Greco-Western philosophies to evolve a philosophy on which to embed its education. Consequently, the main thrust of this chapter is to ignite an active search in student teachers, their trainers, African education scholars, and interested parties to explore and document Africa's educational ideas and practices, particularly those of students' and scholars' societies and countries, as foundational content for an appropriate philosophy of education.

The chapter charts the broad features of concerns on which searchers of Philosophy for Africa's education may reflect. African philosophy of education is not an imperative that will remain unachievable until we have experts trained in technical philosophy and educational sciences (Njoroge and Bennaars, 1986). Student teachers, teachers and scholars can extract its elements from oral sources and African practices with systematic context-sensitive strategies. Africa's longest experience with the education of offspring, as the birthplace of humanity, implicated and still

implicates a “philosophical attitude” about life, the universe, and how best to induct children into the canonical ways of society, even if that “philosophy” is oral and uncharted. While a key Western philosopher, Socrates, is known to us entirely for oral arguments imputed to him by his student Plato, Western philosophical traditions have developed increasingly as ones which pay careful attention to written arguments. It is crucial to note that substantive arguments in ethics and politics, metaphysics and epistemology, aesthetics and other major subdivisions of philosophy across cultures have been little written about outside of the broad traditions of Western philosophy.

REFLECTIONS THAT COULD FRAME EVOLUTION OF A PHILOSOPHY FOR AFRICAN EDUCATION

The methods of philosophy that have developed in the West through “progressive” analyses of texts are not found everywhere (www.rep.routledge.com/article/Z018, 2010), but we can find the major questions that have preoccupied Western philosophies in oral traditions and tacit in the practices of every culture around the globe. These concerns constitute the primary sources, regardless of positive or negative judgmental values Western scholarship has imputed on them, from which philosophic ideas and practices of education should be extracted. Of course, they should complement those that have developed and are developing since the introduction of Western training in academic philosophy and professional education (Kariuki, 2009). “African philosophy” also exists in Africa’s political philosophers, for example, Kwame Nkrumah, Leopold S. Senghor, Julius Nyerere, Nelson Mandela (see Brown and Shumba, Chapter 35, this Volume) and academic philosophers like Kwasi Wiredu, Godfrey Tangwa, among other African academic philosophers.

Admittedly, Africa has knowledge and, logically, power and scholars. But these differ from the Euro-American in one major respect: ever since the early 19th century when the Euro-American presence in Africa began to be noticeably felt in the interior, Africa’s knowledge has increasingly ceased to be rooted in the African soil (Ojiaku, 1974, p. 204). African knowledge has increasingly become foreign because conclusions on African scholarship “are significantly influenced by ... Western societal beliefs, value systems and ideological perspectives” (Ojiaku, 1974, p. 209). The rest of this section identifies statements and questions that can rouse reflections on sources of philosophic ideas and methods of philosophical discourse that are not only germane to and meaningful within African knowledge systems but that could guide a systematic approach to articulating a relevantly coherent African philosophical statement on education.

Omogbe (1985, pp. 6-7) believes that the fact that the philosophical reflections of African thinkers in the past were not preserved or transmitted by writing accounts for the fact that these philosophers remain unknown to us. But this does not mean

that they did not exist, for we have evidence of their philosophical reflections preserved and transmitted through channels other than writing such as mythologies, wise-sayings, proverbs, folktales, and religious ideas and practices (see Chapter 5, this volume). It is thus un-philosophical and simplistic for a philosopher to claim *a priori* that certain kinds of things do not, as a matter of fact, exist (Bodunrin, 1985). Whether a thing exists or does not exist is a matter of fact; it is not a philosophical problem. Philosophers have no special privilege to tell what is and what is not fact; the question of what is to count as philosophy is itself a philosophical question. What philosophy one does emanates from an understanding of what philosophy is. A hallmark of philosophy is to take a position, then justify and defend it with rational arguments. In so doing, one must realize that a consensus may never emerge in debates about an African philosophy of education because consensus hardly ever occurs in philosophical debates (Bodunrin, 1985, p. xiii). In addition, rights-based thinking and scientific fairness do not permit African philosophical ideas to be suppressed by classical western philosophical thinking, as we seem to have acquiesced to its misguided supremacy.

Although writing is the most effective record-keeping system, it is not the only means of transmitting knowledge across generations. Apart from mythologies, wise sayings, worldviews, knowledge can be preserved in the socio-political set-up of the people and cultural tools, especially those associated with childbearing and childrearing. These are only some channels through which reflections and views of African philosophers have been preserved and transmitted and can be exploited for an African philosophy of education. The individual original authors of the ideas remain unknown to us, however. Yet, we know that these ideas must have been the products of deep and sustained philosophic reflections by some individual African thinkers in the remote past.

ON DEVELOPING A PHILOSOPHY OF EDUCATION FOR A HYBRID AFRICA

Today's challenge is to find out the reasoning behind the ideas and practices Africa's great minds have bequeathed to posterity. This is as much a challenge to the African teacher trainee as it is to the African teacher trainer, scholar and his or her education cooperation partner. Efforts to tackle this challenge would realize the inadequacy or insensitivity of current philosophical orientations as comprehensive mindsets with which to understand the African philosophic thinking. This is partly due to the fact that a great deal of the African social thought and knowledge are locked in maxims, proverbs and folklore, not easily translatable into European languages except at the cost of impairment to their essence, or distortion of their full meaning (Ojiaku, 1974, p. 211). This point, among others, compels not only innovative context-sensitive theorization and methodological creativity but also development of a Philosophy for African education that explicitly incorporates African epistemologies and pedagogies. Africa's hybrid cultural character of

coexisting strands of Islamic-Arabic philosophical ideas and varied Western-Christian philosophical orientations further obscures the African education field.

The coexistence of philosophical ideas and values from three significant heritages itched Africa into gradual atrophy of its indigenous political and institutional structures and value systems. Greek philosophers observed that the universe combined unity with diversity and continuity with changes (Omoregbe, 1985); so do African philosophers and education scholars. We can adopt a blended approach to build a viable philosophy (Bodunrin, 1985, p. xi) from the continent's "bewildering diversity and extraordinary dynamism" (Olaniyan, 1982, p. 1). This reconstructive framework should seek to determine which aspects of African philosophic ideas and the practices they enlighten can mesh with relevant Western philosophic orientations to constitute the foundation for preparing Africa's next generations to navigate local and global spaces with confidence and educated competences.

The certain common quality (Maquet, 1972, p. 3) perceivable as one traverses Africa's diverse communities emerges from one cultural river with numerous tributaries (Asante and Asante, 1990, pp. ix-x), common political and social institutions with only slight variations (Nkwi, 1983, p. 102) and beliefs in ancestry, the existence of a supreme being and the value of the extended family (Mphahlele in Mwamwenda, 1996, p.421). The role of oral traditions and a communitarian approach to the education of children in participative pedagogies are also common features throughout sub-Saharan Africa. Education in African family traditions prompted children to self-care and to reflect on their own life conditions and take responsibility to improve them. Most African parents encouraged children to become independent at a much early age and this independence is fostered and enforced by letting a child do even difficult things on his or her own (Munday, 1979, p. 165). Children are rights-bearers who can contribute to their development and society. In fact, the UN *Convention of the Rights of the Child* requires children's participation to promote their own survival and development. Yet, international advocacy stigmatizes the participative agency of Africa's children as child labor!

FOUNDATIONAL PRINCIPLES FOR AN AFRICAN PHILOSOPHY OF EDUCATION

Whereas the foundational concepts of Western education are *educare* and *educere* (see Baguma and Aheisbwe, Chapter 2, this volume), the driving force of African learning processes is *emergence* (Nsamenang, 2004). The Western school is a primary learning site, organized to keep children away from adult settings; it primes into mature roles by giving them nonproductive tasks distant from their livelihood realities (Rogoff, 2003). It construes children as "reproducers, to be filled with knowledge and values and made 'ready to learn' and 'ready for school' ..." (Moss and Petrie, 2002, p. 3). On the other hand, African parents do not actively "raise" children; parental values create participative spaces that permit children to emerge or mature by themselves out of one set of developmental tasks into the next. Accordingly, the

responsibility for children's learning falls less on parents or other adults and more on the children themselves emerging or "coming up" gradually and systematically into more mature statuses as co-participants, first, as novices in peer cultures, and later, as accredited participants in the social and economic life of the family and community. In this way, children "graduate" from one role level and participative sphere to another until they gradually transition into adult roles. Boys and girls poised for adulthood are best evaluated for social competence and esprit de corps more in the social, moral, intellectual, and practical matters of peer cultures than other criteria.

Development and learning within Western educational models is believed to depend on "educated" adults as parents, teachers or practitioners guiding and raising children but less on the action of children themselves, particularly in the early years. Such children's restricted access to productive environments contrasts with the participative learning settings of African children, which highlight children's "becoming" (Erny, 1968), "not as a set of organisms to be molded into a pattern of behavior specified in advance as educational outcomes, but as newcomers to a community of practice, for whom the desirable outcome of a period of apprenticeship is that they would appropriate the system of meanings that informs the community's practices" (Serpell, 2008, p. 74). Thus, an African philosophy of education should place children's agency at the centre of learning processes, as children are active in the business of learning. We should envision a philosophy of education that permits children and their families as participants in productive education. If we adopted an African worldview we would visualize a holistic and integrated way of looking at the family and the universe (Callaghan, 1998, p. 32) and this could inform us to philosophize and plan education in new ways that are sensitive to African child development.

Pedagogy of sagacity (Njoroge and Bennaars, 1986) is another principle for an African philosophy of education. Philosophic sagacity was and still is skeptical; it employs reason to critique the social order and status quo. This principle calls for developing an African philosophy of education from sage philosophy, which reveals both folk wisdom and critical personalized philosophical discourse. Odera (1991) believes that there have been and there will be African sages to inspire authentic roots of an African philosophy (of education). Pedagogy of sagacity and the pedagogy of the oppressed (Freire, 1972) are interrelated. Paulo Freire (1972), a Brazilian educationist developed a trend in philosophy of education called pedagogy of the oppressed. Pedagogy of the oppressed "is an instrument for ... critical discovery ... of dehumanization" (Freire, 1972, 25) in formal education. Pedagogy in which the teacher has-knowledge and the learner has-not-knowledge is oppressive. The central problem of pedagogy of the oppressed is how the oppressed, as divided, unacknowledged and unappreciated beings, can participate in developing the pedagogy of their liberation. This pedagogy makes oppression and its causes the objects of reflection by the oppressed, and that reflection is expected to incite their

necessary engagement in the struggle for their own liberation. Freire (1972) employs the analogy of the banking industry to expose contradictory pedagogical attitudes and practices that mirror the oppressive society as a whole. The teacher acts as the 'bank-clerk' by using banking methods of domination. Such a teacher mechanically transmits fossilized pre-packaged ideas in terms of curricular content without critical reflection. Most teachers in African school systems are dogmatic; they fail to emancipate themselves from dominant oppressive pedagogy of *received knowledge* which they deposit on their students.

Freire's (1972) pedagogical paradigm shift replaced the educational goal of deposit-making with that of posing human problems in interaction with the world in general and learning materials in particular. We can refer to this as liberating or generative education which "consists in acts of cognition, not transfers of information" (Freire, 1972, p. 53). Generative education first of all demands a resolution of the teacher-learner contradiction. Generative processes – indispensable to the capacity of cognitive actors to cognize and cooperate in perceiving the same cognizable object or content as the teacher – are otherwise impossible in banking education (Freire, 1972). A problem-posing teacher nurtures regeneration of learners as enlightened and emancipated active learners who demystify deposition-education in celebration of generative education as a transactional and transformational process that nourishes and empowers both learners and teachers. Generative education allows freedom for "the critical reflection of both teacher and students" (Freire, 1972, pp. 53-54) and leads to emergence of consciousness, critical intervention in reality, and new knowledge generation.

CONCLUSION

Contemporary Africa is heir to a triple inheritance (Mazrui, 1986) of strands of Islamic-Arabic and Western-Christian educational philosophies that have been superimposed on Africa's deep-seated philosophic ideas of participative education. Although African and Islamic systems of education have operated in Africa centuries prior to the arrival of Western-Christian education, educational planners on the continent have degraded them to "submerged systems" and have seldom taken them into "explicit account in their policies and strategies" (World bank, 1999, p. 1). A philosophy of education that objectively attends to African historical realities must transcend such myopia to blend the strengths of each system into a philosophical outlook that fully engages primary education stakeholders – children and their families.

Education in Africa is largely imitative of Western educational models due to lack of a philosophical anchor, whose articulation is long overdue. Philosophic ideas exist in various sources of African oral traditions and practices and yearn for systematic and resourceful articulation into a coherent philosophy. This chapter calls on African student teachers and their trainers to begin the process of extracting

and documenting the building blocks for an African philosophy of education from the ideas and practices in African systems and sage sagacity. That we expect an African philosophy of education to diverge from the Western is plausible in the face of an African infant study that revealed alternative childcare practices based on different moral and practical considerations that constituted normal patterns of development that had not been imagined in developmental theories (LeVine, 2004).

An overriding question is whether an African philosophy of education will necessarily cause a paradigm shift into a humane education for a divided continent and world. An African philosophy of education should be built on African humanistic values; an education that genuinely serves humanity (See Venter at www.bu.edu/wcp/Papers/Educ/EducVent.htm, site visited on 06/02/10, 1995 and Brown and Shumba, Chapter 35, this Volume).

LEARNERS' EXERCISES

1. What is philosophy of African education? Who should contribute to its development in Africa and why?
2. What is an African theory of the universe and what are its core elements in your school district?
3. What ideas and practices of child development in your community do you think should be incorporated into a philosophy of African education? Why do you think so?
4. What components of the African worldview may be useful in your school?

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Chapter 5

**PROVERBS AS A SOURCE OF PHILOSOPHIC IDEAS ABOUT
AFRICAN EDUCATION**

Amina A. Abubakar

CHAPTER OBJECTIVES

By the end of this chapter the learner should

- 1) Have a general appreciation of how to extract philosophic ideas on education from Africa's oral traditions, and
- 2) Identify some proverbs with philosophic ideas about education that can be useful in the school community and school learning.

INTRODUCTION

The current African educational systems are largely rooted in Western viewpoints and approaches to education; hence, they reflect the traditions of the recent colonial powers (Fafunwa and Aisiku, 1982; Fordor et al., 2003). Early educational writers gave the impression that Africa was a *dark* continent filled with an illiterate population (Fordor et al., 2003). These early educational writers somehow failed to acknowledge the fact that Africans had both formal and informal educational systems, some of which would measure to the highest standards of their time. The problem of viewing Africa as lacking in educational systems is that it encouraged the development of formal educational systems that were devoid of any influence from African philosophy (Higgs, 2008). There is therefore a need to systematically evaluate and include African ideas into the educational discourse. As part of that effort, the current chapter is evaluating how African oral traditions can provide ideas for African educational systems. The chapter will take several philosophical ideals that can be related to education in Africa and situate them within the African oral tradition, especially relying on proverbs. I shall draw examples from *Methalis* (Proverbs/Saying) from the Swahilis of Africa East Coast (The Swahilis are a group of people who occupy the east coast of Kenya). Like all other oral traditions in Africa, *methalis* are widely disseminated by word of mouth; however, recently there have been efforts to make a collection of them into written text. The proverbs presented are part of the collection by Wamitila (2001). Previous writers have systematically evaluated African traditions e.g. ritual and rites to extract ideas on African Philosophy of education (Monyenye, 2002). However, we do not know of any piece of work that has systematically evaluated African proverbs to extract ideas about education. This chapter, therefore, sets out to extract ideas from *methalis* and to assess how they shed light on an African philosophy of education.

REFLECTIONS ON AFRICAN PHILOSOPHY OF EDUCATION AS PRESENTED IN PROVERBS

The focus on African oral tradition is meant to acknowledge the richness of this tradition and its contributions to the African philosophical thinking, which does not exclude the fact that there are other sources of philosophical ideas within Africa (for more details, see Nsamenang, Chapter 4, this volume). The proverbs

that have been chosen here provide a fairly appropriate account of how African oral philosophy can be applied to the educational context. Obviously, these are just examples, which can be used in combination with others that the teacher deems appropriate for its use in the classroom in his/her specific context.

Communalism

Africa has a diversity that needs acknowledgement from the outset; yet, despite this diversity there is still a commonality in the African worldview that many researchers from different fields have recognized. It has been argued that some philosophical themes such as communalism can be found in most African communities (Higgs, 2008; Letseka, 2000). An evaluation of African proverbs presents several instances in which this idea is clearly indicated. Among Swahilis it is said that *'mtu ni watu'*, that one can only define oneself in the context of other people. Within the concept of African communalism, belonging to a community of people constituted the most vital aspects of one's life experience (Higgs, 2008). Africans define themselves within the context of their community. This aspect is very elegantly declared by the Kenyan philosopher Mbiti (1970) who affirms that in the African context an individual can only say 'I am because we are; and since we are, therefore I am' (p. 108 as cited, Higgs, 2008).

Noteworthy here is the fact that African communalism was not meant to be promoted at the expense of hard work and striving for excellence. Hard work was a virtue instilled in all children very early in life. In Swahili it is said that *'mgaagaa na upwa bali wali mkavu'* (The person who walks and searches around a beach never eats "dry" rice (rice with no fish stew) - i.e. as long as one takes time to go and search he will not go hungry, somehow he will find something to eat). Another saying that goes in the same direction is *'mtakaa cha mvunguni sharti ainame'* (The person who wants what is under the bed must bend). The focus of each saying is the fact that one must strive hard for whatever they want. To further exemplify that the African communalism was not promoted at the expense of personal excellence and thriving, the Swahili say that *'mtegemea cha nduguye hufaa maskini'*, which translated into English would mean "The person who consistently depends on a sibling will die poor". This was meant to encourage everyone to strive for self-sufficiency. Swahili proverbs encouraged people to work together in harmony to achieve their goals, it is said that a person cannot pull and set off a ship alone (*Mtu pekee yake hasbui jahazi*); furthermore, if a person showed a tendency towards working alone and lacking the team spirit s/he was often reminded that *'mtu pweke ni uvundo'* (i.e., a person alone sinks).

The educated person in the African setting

A Swahili proverb states that *'Elimu bila Amali ni kama nta bila asali'*, which can be translated into English as 'Knowledge without good deeds, is like a beehive without honey'. The key message in this proverb is what has been seen to be core to the idea and ideals of an educated person in the African setting. An educated person

in the traditional African society was one who was morally upright, observed ethical norms and societal values, and combined these values with specific survival skills - e.g., being a medicine man, and fisherman- (Balogun, 2008). In the African context, virtue training and character building are considered to be two of the most salient educational goals. The educational process was aimed at producing an 'ideal citizen'. It has been affirmed that the African educational system aimed at producing citizens who were honest, respectful, and just among others (Elleni, 1995; Fordor et al., 2003).

On the value of education

Several Swahili proverbs can be used to infer the value placed on education and learning. It is said that '*elimu ni taa, gizani buzagaa*'; this proverb translates to 'knowledge is light that spreads in the dark'. This proverb is used to teach people the value arising from gaining education (i.e., enlightenment which enables one to better manage their lives). To further emphasize the non-commercial value of education another proverb states that '*elimu ni mali ambayo adui hawezi kuteka*' (education is wealth which an enemy cannot take away from you). Education is viewed as the most valuable investment since no one else can take it away compared to material goods of which one can easily be deprived by seizure or theft.

On the saliency of early childhood education

The saliency of early learning as an important concept in the Swahili tradition is emphasized by several proverbs. For instance, it is said that '*mti mkande unjali mchanga*', which translates into English as a tree must be straightened while still young, or '*udongo ukande unjali maji*', which means that clay must be modelled while still wet. Another Swahili saying states that '*mtoto umleavyo ndivyo akuavyo*' (the way a child is brought up is the way they grow). These proverbs were used to remind parents and other socializing agents that the child's character will be a reflection of the socializing process that the child undergoes. These sets of proverb can be interpreted to imply the need to implement a strong educational system that ensures that the children are well trained and prepared for their roles. Therefore, the adults in the child's environment, and not just the parents, were given a duty to teach, guide and educate the child.

Education as a lifelong experience and as part and parcel of living

A common Swahili saying compares education to the ocean: '*elimu ni babari*'. A key feature of the ocean is that it is vast and one cannot really see its end. In the African traditional set-up, education was viewed as a lifelong ongoing process, meant to prepare one for his/her role in the community. The learning process was not seen as having an endpoint, and at every major transition in life, there were educational activities meant to ensure that the person was well prepared for his/her roles in life. To emphasize this, another Swahili proverb stated that '*elimu ni maisha si vitabu*'. This translated to English meant that 'Education is in life and not books', implying that one continued learning way beyond schooling and would learn important life lessons

as part of their day-to-day experiences. The implication is that education should be relevant to the livelihoods of learners.

Learning and teaching by role modelling

A popular Swahili saying states '*mtoto hufuata kina cha nina*' or '*mtoto ukimbeba butazama kisogo cha nina*' which means that children who are straddled on the back, observe their mothers' backs. This proverb was used to remind people that children will observe their parent's habits and follow suit. Given that teachers play a caregiver role in the educational process these can be extrapolated to mean that students will observe and imitate their teacher's habits. Therefore, teachers should be seen to practice what they teach (i.e., they should teach by example; they should act as role models).

IMPLICATIONS FOR CURRENT EDUCATIONAL PRACTICES

Training for values that are cherished in the African context can and should be included in the day-to-day activities of the student's life. This can be done within existing school curriculum and activities. A good example in the Kenyan educational system is the Scout movement. The scouts are an international movement that has chapters across countries of the world. The scout movement has its own pledge of honour. In the scout clubs, teachers have an opportunity to include pledges of honour that are based on African traditional values. These values and affirmations can be phrased in idioms and terminology that are uniquely African. This kind of communication practice can be used to enhance the development of a strong and positive 'African identity' among the youth. For instance, one of the original pledges for scouts is that '*A scout's duty is to be useful and to help others*'. Within the concept of African sense of community, this can easily be translated into something much more contextually relevant, i.e. use terms such as '*utu*' or '*ubuntu*' to convey the idea of being humane and useful to others. The inclusion of idioms and terminology such as *ubuntu* into curriculum and extra curriculum activities could play a very salient role in shaping children's character development and ensuring educational outcomes that are in line with African values.

One of the most outstanding contributions of African worldview to the field of psychology is the observation that the African conceptualization of intelligence is much broader than the Eurocentric definition that guided the development of cognitive mapping. In Africa, the definition of intelligence has included both a cognitive process and social responsibility. Serpell (1993) presents one of the earliest studies that describe the African concept of intelligence. According to this study, intelligence among the Chewa of Zambia is understood in terms of four indigenous constructs: *nz̄elu* (wisdom) and *chenjela* (aptitude), which represent the cognitive aspects of intelligence; and *tumilika* (responsibility) and *kbulupikila* (trustworthiness) which represent the social aspects. Yet in preparing our evaluation of educational outcomes there is an overemphasis on examination of 'classroom work' such as

literacy and numeracy without any due consideration of aspects such as social skills and citizenship. The lack of adequate consideration of social development as a measurable school outcome has had serious implications in terms of our human development and state of African countries (Balogun, 2008). Many of the problems faced in Africa today (e.g. corruption and crisis in the care of vulnerable children) would be tackled if society went back to long cherished values of 'shared destiny'. An important first step toward good citizenship is to start teaching children very early how to place the needs of the society/country before personal needs, which is a deeply entrenched principle intrinsic in almost all ethnic communities throughout Africa.

The purpose and goals of education can be greatly enhanced when a clear understanding of the value of education is stated to the students and teachers. Many a times the educational process is planned in a way to imply that one's education is only as valuable as the job they can attract due to their training. However, a look at our oral traditions indicates an intrinsic value for education. People are encouraged to gain education and training for its value in enhancing someone's qualities as opposed to pursuing education for the sake of commercial gains or employment opportunities. Such a philosophy of education encourages the evaluation of educational goals, aims and outcomes so that they go beyond the need for education for employment and value education for the sake of gaining knowledge. This does not mean in any way that the functional aspects of education were undervalued. On the contrary, African educational systems were practice-oriented and people learnt skills meant to earn them a living. What needs to be emphasized here is that there was always a balance between value for education and functional aspects of education.

An evaluation of the ideas on education in the proverbs among Swahili indicates the fact that education was seen as a lifelong process starting at birth; that education was not confined to the classroom or formal education institution. Therefore, educators need to look at education as a process that starts in the family before the school takes over. Therefore, there must be continuity between family education, school education and adult education as well as other informal places in which one learns. Modern educational planners who take such a view would be more comprehensive and inclusive in educational planning.

Among the Swahili, it is said that a noble man is known by his actions and not by his words (*Muungwana ni vitendo si maneno*). This is inevitably a big lesson for African teachers. What we would like to achieve and the value we would like to impart on our pupils is not achieved by preaching alone; it has to be modeled as well. The teaching-learning process has to be by example. Therefore, if we want to teach our children virtues such as hard work, diligence, and social responsibility, we need to portray them ourselves. A teacher needs to constantly evaluate and question his/her own actions in pursuit of the excellence in character and actions. An important question one should ask then is whether s/he is living up to the standards they set

up for their students. The way the teachers present themselves, their actions and work ethics should clearly indicate the values they intend to teach to their students.

Proverbs provide an interesting venue to look for philosophical ideas related to traditional as well as “modern” African education. However, proverbs provide one potential limitation in that there may be proverbs that provide conflicting ideas. For instance, in Swahili it is sometimes said *baraka baraka haina Baraka* (“hurry, hurry has no blessings”), which seems to encourage slow, deliberation in one’s actions. It is also said that *‘ngoja ngoja huumiḗa matumbo’* (a long wait may harm the stomach), which encourages speed in one’s actions. It is critical to note, however, that proverbs might have meaning that is hidden in the context of usage. Thus, the interpretation and usage of proverbs has to be contextualized; the teacher needs to extract meaning that fits different purposes, i.e. there are moments when one needs speed and moments when one must move slowly after careful deliberation or information processing. In general, these types of proverb warn against impulsive action without reflection on the consequences of the action.

CONCLUSION

African educational philosophy guided the educational process in the traditional African societies ensuring children grew up to be socially responsible and productive members of the community (Okawah, 2002). By looking at the oral traditions of African peoples, such as proverbs, we may get a good idea of some of the philosophical aspects of the African educational systems. These identified ideas can be incorporated into the day-to-day educational processes to enhance the educational outcomes of modern-day schooling.

The incorporation of African oral traditions in the educational process fosters cultural identity, even as Africans move forward. A well-known Swahili maxim warns: *‘mwacha asili ni mtumwa’* (he who discards his traditions and culture is a slave); an obvious potent reminder to Africans not to lose their cultural heritages. Africa should learn from their cultural heritages while enhancing them within the school system and other channels of purposeful cultural recreations.

EXERCISES

1. Based on the oral traditions of a community of your choice or the community of the school district, please do the following:
2. List and describe at least two proverbs that have direct implications for classroom teaching or school learning.
3. List and describe at least two proverbs that have direct implications for the conduct and behaviour of teachers.

4. Describe how you could incorporate the African oral traditions related to education and socialization processes to encourage specific outcomes in education.
5. The African school curriculum ought to promote social responsibility and communalism. Debate this assertion, illustrating how this applies or does not apply to students, teachers and the school community.

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Chapter 6

**AFRICA'S ETHNICITY AS THE SOCIAL FOUNDATION FOR
EDUCATION IN AFRICA**

Mohamadou Sall and A. Bame Nsamenang

CHAPTER 6

INTRODUCTION

One line of thinking indicates that Western scholarship on and about Africa set the pace for the many prejudices and myths that have channeled the study of African societies and eventually their history. We attribute the origins of negative connotations of “ethnicity” and the flood of literature on it to dubious Western historical and ethnological research (Thomson, 2000). Indeed, the quasi definitive rigidity of ethnic categories (Middleton, 1997) consolidated during colonialism.

Perceptions of and attitudes to education and political and governmental efforts in much of Africa are deeply entrenched in ethnic frames of reference. The African continent and its various countries can and ought to establish an ethnic map of its educated elite, those who are currently enrolled at all levels of education, the perceived values of and attitudes to education of its constituent ethnic groups, and educated citizenry. This would constitute a veritable social anthropological foundation of education that could enable a more transparent and equitable management of pluralism, political programs and educational provision. This compels a positive disposition to and exploitation of ethnicity, which is the main thrust of this chapter.

CHAPTER OBJECTIVES

After studying this chapter, you are expected to:

- 1) Analyze the origins and persistence of negative views on African ethnicity,
- 2) Understand the place and importance of ethnicity for individual and national identity, as the basis for equity in educational provision,
- 3) Explore how to use personal and ethnic identities to strengthen national character,
- 4) Highlight the significance of individual and ethnic identities vis-à-vis other's identities,
- 5) Understand the implications of multiple identities in Africa's educational settings.

HOW AFRICA WAS STREAMLINED INTO TRIBES AND ETHNIC GROUPS

Western scholarship on Africa set the pace for some of the many prejudices and myths that have influenced and continue to shape African studies, even by native-born African scholars. The concept of ethnicity stands like a “birthmark” on the face of postcolonial Africa. In no other part of the world has “ethnicity” left such a deep scar as in Africa. Political scientist Alex Thomson (2000) insists that “ethnicity” or “tribalism” has been used almost as a standard explanatory variable of African affairs. John Middleton (1997) believes it was during colonialism that the

ethnic categories which designate different human groups gained quasi definitive rigidity. During the period leading up to European conquest and eventual colonization of Africa, western explorers, travelers, intellectuals, researchers, administrators and missionaries were obsessed with studying “primitive” African societies, and some still do today. They referred even to vast African kingdoms as tribes. This dubious historical or ethnological research (Thomson, 2000) inserted “ethnicity” and “tribalism” into the vocabulary of African discourse. These concepts later inundated much of the literature on and about Africa. Some scholars, among them Chinua Achebe have since challenged such pejorative scholarship, which indicates that most African ethnic groups would score very low on the Oxford dictionary definition of tribe as a group of primitive families and communities (Achebe, 2000, p. 4). If African scholars and writers continue to imitate and indeed sustain the models of the Empires, they obviously undervalue their homelands and their own people. Accordingly, Achebe (2000) requests African writers to focus their scholarship on where they come from in order to address the inequities of global oppression. African knowledge and value systems are as legitimate as any other. One’s personal, ethnic or racial story is a real source of power in the world and to imitate the literature of another cultural story is to give that power away.

We cannot persist in blaming the West for Africa’s 21st century problems. We must figure out how to understand ethnicity and push an agenda to integrate Africa’s ethnic identities into national cohesion and equitable treatment of all ethnic peoples. This brings one into another argument, however, that of how to handle pervasive disunity, conflicts and civil wars in Africa attributed to ethnic tensions and the open or covert forces that exacerbate them. Furthermore, ethnic diversity seems correlated with social fragmentation and cultural conflicts (Easterly and Levine, 1997). One argument is that the current appalling state of Africa reveals witting or unwitting mobilization of ethnic identities into conflict (Fassal 2003), usually for some advantage, such as resources extraction. As such, most scholarly analyses point to cultural diversity as a viable explanation for the difficulties the African continent faces in terms of sociopolitical instability and underdevelopment; they seldom analyze the roots of interethnic crises. In this regard, mobilization of ethnic identities rather than a national identity is posited as a more secure base into which Africans recoil into feelings of social security. Talcott Parson (1958) had rightly conjectured ethnicity as a secure space outside that of the family. The governance of most African states, however, does not seem to have transformed the security derived from ethnic identities into a sense of security in the ethnic pluralism of their nation-states. Ethnicity per se may not be as conflictual as it is portrayed. Instead, ethnicity tends to be associated with interpersonal trust and this could form the foundation of interethnic solidarity, which African leadership regrettably misses. This chapter is intended to rouse understanding and awareness of and the need for such a positive approach to ethnicity in Africa.

The chapter explores ethnicity as a central explanatory variable for individual identity formation and group/cultural identity awareness and solidarity as well as genuine consolidation of national character. It briefly examines such issues as ethnic, cultural, and national identities and their influence on the social construction of identity, national character, and the school climate. Given that cultural identity is enshrined as a right of every child in the UN *Convention on the Rights of the Child*, it is a rights-issue for an African nation to ignore the constellation of its ethnicities, which is the basis of national character. As such, it can serve as the pivot of inclusive nationalism, as it affects citizenship, nation building and integration of the different ethnic or racial groups at various levels of education and national life. The chapter tacitly suggests to every African country, as an act of good governance, to honestly and fairly create a national ethnic map with the objective of charting the spread of educational provision, ethnic educational profiles and place of ethnic groups in key sectors of national life. This would reveal how educational policies tackle ethnic pluralism and who is being left behind in the country's educational efforts and why?

Ethnicity In Africa

The official population count of the various ethnic groups in Africa has, in some countries, been controversial due to apprehension not to give certain ethnic groups the political weight and superiority that emanate from numerical strength. One of the main characteristics of the African continent is her ethnic diversity. In fact, all the countries in Africa are ethnic mosaics as well as pockets of racial mix in some countries. Africa is a continent of multiple ethnic identities (Southhall, 2000) but the borders colonialism erected for nation-states separated many of them into different countries. Ethnic groups in Africa number in the hundreds, each generally having its own language, or dialect of a language, and culture. Diversity has been superimposed on the cultural orientations of these ethnic mosaics, such that every nation has its own political style, religion, ethnic map and linguistic configuration. On to this complexity has been overlaid at least one European religious creed and colonial language – English, French, Portuguese, Spanish, German or Italian – or Islam and Arabic, depending on the primary imperial power that colonized its ethnic peoples.

For example, Islam is the predominant religion practiced by approximately 95 percent of Senegal's population; the Christian community, at 4 percent of the population, includes Roman Catholics and diverse Protestant denominations. Almost all Senegalese speak an indigenous language, of which Wolof is the most widely used language. About 50,000 Europeans (mostly French) and Lebanese and Vietnamese reside in Senegal, mainly in the cities. Cameroon's history reveals a varied population consisting of 24 major African language groups and over 279 ethnic groups with a distinct dialect, as well as three colonial languages – Arabic, English, French and German (www.nationsencyclopedia.com/Africa/Cameroon.html, 2010).

Ethnic diversity, though an obvious sign of Africa's cultural richness and social capital, is equally a source of tension between communities and nations. The question of ethnicity features prominently in every attempt to explain the lag in African development. This issue is considered as a potential source of conflicts and a handicap in the construction of a nation-state, which we think should not be the case. The cohesion of ethnic entities and of regional specificities thus appeared, one would expect, as a prerequisite to this construction. Political leaders who have been at the helm of Africa's independent nations assumed this objective which featured in a recurrent manner, as an essential component of their pronouncements and discourse on nation building. Mistrust for ethnicity seemed to have been fanned by facts observed in Africa. These facts are first of all related to the style of governance. The style of governance could be, in the main, based on neo-patrimonial patronage, that is, the absence of distinction between public and private resources or rather the blurred distinction between the public and private spheres. This neo-patrimonialism could also be associated to several factors among which Medard (1990) has cited tribalism. This type of governing style could have the motive of promoting "ethnocracy" as a tool for legitimizing power (Dazon, 2000). It could and indeed has put in place political patronage on the basis of ethnicity (Lemarchand, 1972).

Ethnicity or "tribalism" is a resilient reality in Africa but it has not received adequate scholarly commentary in academic, educational and political analyses commensurate to its experiential significance. As a result, today Africa is dotted with conflicts of various forms, often with ethnic overtones. The result has had devastating impact on the political and socioeconomic development of the continent and of most African countries in terms of conflicts, poor governance, and interethnic rancor from the cold hard realities of perceived unfairness in political and economic advantage in the national ethnic competition for education and jobs from very limited national resource bases. Attempts at checking the ravages of ethnicity in Africa have met with limited success. Yet ethnicity tends to be regarded and treated as a taboo topic or a subject that is best avoided. For some, ethnic distrust has historical roots. First, the slave trade damaged inter-ethnic trust (Nunn and Wantchekon, 2008). Slavery generated hostility among ethnic communities, which collective memory has not yet renounced. Some kingdoms and ethnic groups raided neighbors and sold them into slavery. Second, the colonial regimes introduced "indigenous" governing styles (Mamdani, 2004) that privileged some ethnic groups over others, thereby activating ethnic enmity. These two theories aver instigation of antagonistic and hostile "collective memories" in ethnic groups, which affected governance of the post colony and that of independent African governance of ethnic collectivities.

In order to more realistically address its development agenda, Africa must confront ethnicity directly, irrespective of its alleged negative connotations, which is promoted in resource-rich countries by political gains and global capitalistic intrigues. Africa should no longer afford to minimize the importance and impact of its ethnic map, treating it as a side issue or wishing it away; ethnicity will persist as a

decisive factor that plagues the continent and most African nations, if it is not harnessed and used as a positive force that it is. Post-colonial African states made nation building incumbent upon erasing ethnicity or at least equitable treatment of ethnic groups, and as a result, ethnic polities were superseded by the principle of nation-state. Consequently, ethnic histories, cultures, and languages were regarded as tribal, backward and therefore irrelevant to development; hence they were ignored and dismissed. The fact that the colonial nation-states were formed on the basis of ethnicity passed unheard, and is still largely unheeded today. Developmentalists and political practitioners saw ethnicity as inimical to modern statehood and explosive for national unity; but it is not.

In general, ethnicity has been associated with conflict-laden situations. But one can cite examples of precepts throughout Africa where the desire for and actual maintenance of harmonious interethnic relations is an indigenous goal. This should gear us into envisaging the galvanization of ethnic identities into Africa's educational settings and national psyches. This proposal is the more plausible for the simple reason that the pluralism of ethnicity is the commonest feature of all classrooms in Africa, especially in urban settings. There is therefore need to integrate the teaching, respect and tolerance of ethnic pluralism into the curricula of teacher education in Africa, either as a single discipline or as a cross-cutting theme in the curriculum.

IDENTITY FORMATION AND ETHNIC IDENTITY AWARENESS

Identity formation is the process of the development of the distinct personality of an individual, which is regarded as a persisting entity or personal continuity through phases of life. Personality manifests as a constellation of unique but enduring characteristics which an individual possesses and by which s/he is recognised or known. Identity formation leads to a number of issues of personal identity and an identity where the individual has some sort of knowledge of him or herself as a distinct, separate entity. This may be through individuation, the process whereby a child increasingly defines who s/he is by differentiating the self (that which is me) from the non-self (that which is not me). Individuation defines individuals vis-à-vis others. Parts of an individual's actual identity include a sense of continuity, a sense of being different from all others, and a sense of group affiliation, which is of central concern here.

Identity formation has been most extensively described by Erik Erikson in his theory of psychosocial development in eight stages from birth to old age. According to Erikson (1968), identity formation, while beginning in childhood, gains prominence during adolescence. Faced with physical growth, sexual maturation, and impending career choices and family formation, adolescents must accomplish the task of integrating their prior experiences and characteristics into a stable identity. Erikson coined the phrase *identity crisis* to describe the temporary instability and

confusion adolescents experience as they struggle with alternatives and choices. To cope with the uncertainties of this stage, adolescents may over identify with heroes and mentors, fall in love, and bond together in cliques, excluding others on the basis of real or imagined differences. According to Erikson, successful resolution of this crisis depends on one's mastery of earlier developmental tasks, centering on fundamental issues of trust, autonomy, and initiative. By the age of 21, about half of all adolescents are thought to have resolved their identity crises and are ready to move on to the adult challenges of love and work. Others, however, are unable to achieve an integrated adult identity, either because they have failed to resolve the identity crisis or because they have experienced no crisis.

In addition to carving out a personal identity based on the need for uniqueness, people also acquire a social identity based on the need for membership in various groups such as family, ethnicity, religion, peership, profession, and others. In addition to satisfying the need for affiliation, these group identities help people define themselves in the eyes of both others and themselves; they need a social identity. Individuals gain a social identity and group identity by their affiliation. Social identity derives from membership in various groups. The term collective identity is a sense of belonging to a group (the collective) that is so strong that a person who identifies with the group may dedicate his or her life to the group over individual identity: s/he will defend group interests and assume risks for the group, sometimes as great as loss of life. The cohesiveness of the collective goes beyond community, as when the collective grieves the loss of a member.

Many social scientists regard ethnic identity, that is, the enduring, fundamental aspect of the self that includes a subjective sense of membership in an ethnic group, to be one of the many facets of an individual's social identity with important real world implications for the intergroup relations (e.g., Phinney, Jacoby, Silva, 2007). The development of ethnic identity is determined by what the majority of adults in a given society at a particular time in history consider to be prominent. Societies have histories in the course of which identities emerge; these specific histories are, however, made by men and women with specific historic identities. Specific historical structures engender identity types, which are recognizable individual cases. Cultural identity is the identity felt by being a member of a group or culture, or of an individual as far as s/he is influenced by her/his belonging to a cultural or ethnic group. An ethnic identity is the identification with a focal ethnicity, usually on the basis of a presumed common genealogy or ancestry. Recognition by others as a distinct ethnic group is often a contributing factor to developing this bond of identification. Ethnic groups are also often united by common cultural, behavioral, linguistic, ritualistic, or religious traits. Various cultural studies and social theory investigate the question of cultural and ethnic identities, and we strongly recommend this for every African country.

National identity is a philosophical concept whereby all humans belong to groups called nations. Members of a “nation” share a common identity, and usually a common origin, in the sense of ancestry, parentage or descent. But most nation-states in Africa are not constituted on this basis; they were carved out from arbitrary state boundaries imposed by European powers at the 1884 Berlin Congress. The other side of the African perspective relates to the attitude in particular African culture areas or ethnic groups which were more immediately affected by the political surgery by being split into two or more colonies and, later, independent successor-states (Asiwaju, 1984). Despite all the divisive influences, partitioned Africans have all the same tended in their normal activities to ignore the boundaries as dividing lines and to carry on social relations across them more or less as in the days before the Partition (Asiwaju, 1984, p. 3).

In spite of the resilient reality of ethnic identities throughout Africa, post-colonial African states made nation-building incumbent on erasing ethnicity, an impossible political agenda, indeed. As a result, they viewed ethnicity in negative terms and as inimical to development and national progress. The fact that each African nation was carved out of multiple ethnic polities passed unheard. Africa must take a decisive step to understand and manage its ethnic diversity so that the various ethnic communities can live their individual identities at their level and at the same time live the identity of citizens within a nation-state (see Chapter 35, this volume). This chapter underscores the positive value of deeply entrenched identities at personal and ethnic levels and the necessity to reformulate new national identities of African nation-states built on historical processes of nation building that acknowledge and take into explicit consideration all of a nation's ethnic identities.

THE POSITIVE VALUE OF ETHNICITY

In this section, we share excerpts of data from a June 2008 study on ethnic affiliation in Senegal. Afro-barometer, an 18-nation study group affiliated to the Department of Political Science at the University of Michigan in the USA obtained questionnaire data on the political, economic and social realities of the countries from a national sample of 1200 Senegalese. The representative sample of Senegalese aged 18 and above was constituted through a three-degree Gallup poll. The first element that was examined was the identity claimed by the respondent Senegalese. It sought to determine whether Senegalese identified themselves with their ethnic groups or with the Senegalese nation-state. Part of the results showed that out of 100 Senegalese respondents, 48 affirmed strong feeling solely as members of their ethnic groups, 9 considered themselves more as members of their ethnic group and less as citizens of Senegal as a nation, 26 felt as members of their ethnic group and Senegalese in the same manner, 12 felt more Senegalese than members of their ethnic group and only 4% of the sample claimed a solely Senegalese identity. Taken together, the results point to deep rooted ethnic identities in Senegalese in the face of national efforts to promote national identity and evolve national character. We

suspect that a similar picture would emerge from such research in most African countries. Ethnicity is not antithetical to national unity.

We can view the strength of ethnicity and dual identity of Senegalese, probably like that of most other Africans, in a double caveat. First, we suspect that national tension and hostility usually derive from perceptions of inequity in significant government posts and resource distribution, including educational provision. Second, if we could tap into the positive but unexploited potential of the interethnic capital in interethnic marriages and the confidence in inter-communal relations, even across national borders, we could bring different ethnic groups into genuine perception and feeling of nationhood and its plural constituencies. Accordingly, we feel a need to incorporate understanding, respect, and tolerance of ethnicity not only into teacher education curricula but also national policy development and governmental programs.

THE PEDAGOGICAL SIGNIFICANCE OF ETHNIC AND CULTURAL SENSITIVITY

The African school brings into contact and interaction teachers and learners who belong to different ethnic groups and cultural backgrounds. The school is a meeting-point for cultures (Kanoute, 2003). By denying this reality, we run the risk of ignoring interactions that could be harmful to knowledge and skills acquisition and thus the quality of teaching and learning. One view is that refusal to take explicit account of the place of ethnicity in the education map of African countries has instead fostered inequalities that the school was expected to erase (Payet, 2006). Ethnic harmony (Diong, 1998) can yield benefits in terms of social peace and economic and social development of the communities involved. It is the teacher's task to promote plural socialization and living together to evade situations wherein taking cognizance of the ethnic differences could incite negative attitudes. Educational plans and pedagogic approaches that explicitly refer to and indeed engender the principles of tolerance of and respect for ethnic differences and of non-racism, prevent negative attitudes and encourage a positive vision of diversity in general and of ethnocultural diversity in particular. Of course, there are plausible arguments against sensitizing teachers and students to the importance of ethnocultural diversity and the need for interethnic harmony in school settings, but we see the need to stress the positive ones.

The debates against sensitizing for "ethnic harmony" (Diong 1998) could map out the attendant risks. Such risks are insufficient to renounce the sensitization (Payet, 2006); the risks involved in this renouncement are less important than the advantages to be gained. For example, by rejecting ethnic sensitivity training we are renouncing as a result the efforts to bring teachers into reducing subjectivity in their pedagogic endeavors and in the judgments they make about their students' ethnic backgrounds. That would be a renouncing of the optimization of the transmission of knowledge. Simultaneously, we are also renouncing attempts to create a climate of peace, understanding and agreement between learners belonging to diverse

cultures. In fact, the refusal to undertake intercultural training can have the likeness of denying that ethnicity exists in school. As a potential setting for the exhibition of ethnic tensions (Lorcerie, 2003), the school is thus confronted with an ethnic challenge. If teachers could learn decentering and train in ethnotheories and the sensitization of students, this could lead to the benefits diverse ethnocultural identities can bring to the interactions of teaching-learning processes that engage learners from different cultural backgrounds. Learners are carriers of different cultural scripts even if they communicate in the same language. Therefore, we need to put in place strategies for teaching conflict resolution, justice and peace amongst ethnicities.

Pedagogic relationships in African schools, especially in urban settings, often are ethnically heterogeneous sites for interactions between carriers of different cultures wherein interethnic understandings can be encouraged and sustained (Fassal, 2003). The teacher is part of what structures this heterogeneity and is best positioned to promote harmonious interethnic relations in those settings. As a member of a different ethnic and cultural community, the teacher will, because of that background, get into contact with, perceive and even judge his or her students from that cultural position. That is, the teacher perceives and interprets students' behaviors from the point of view of and mostly with her or his cultural lenses. S/he tends to give "social attributions" as "behavioral explanations" to learners' motives and actions. To accomplish her or his work well, the teacher needs to be on guard and to distance self from own culture so as to perceive and judge students more objectively. The more aware the teacher is of her or his ethnic identity which culturally places and structures her/him, the more likely s/he will be keen on understanding the ethnic and cultural backgrounds of students. In a similar vein, students can and should be sensitized into awareness of their cultural identities in order to acknowledge and respect the cultural backgrounds of their friends and peers. Such sensitivity can contribute to reducing tension and conflict in schools.

Knowledge of other cultures enables us to make better attributions by giving to behaviors what it means to the individual who is behaving, rather than the meaning of our culture's attributes to it. Cohen-Emerique (2000) and Leanza and Klein (2000) recall that the discovery of other cultures passes first of all through decentering in terms of own culture. Decentering entails learning to objectivize one's own cultural frame of reference in order to be able to admit other perspectives. Kanoute (2003) gives examples of learning decentering by teachers, based on role-play, which enables teachers to realize the "cultural self-portraits" in which one brings students to consider themselves as belonging to different generations of the same family and to project themselves on phenomena affecting their society or on events of daily life (birth, death, marriage, etc). Such exercises enable them to grasp "the moving character of culture" (Kanoute 2003) and therefore the relativity of one's cultural prisms.

Individuals tend to be so absorbed in their cultural frame of reference (ethnocentrism) to the extent of forgetting that other cultures exist. Once decentering is carried out, the teachers have to be trained in the understanding of the cultural

environments of their students. To effectively do this, they need, in an assured manner, a mastery of the conceptual and practical domains of ethnicity. It is in this perspective that Lorecierie (2003) steps in to affirm that the school is meant to ensure the foundations of the infinity of the democratic society; it is in charge of civic education. It is all the more wished, and undoubtedly so, that school agents should master the intellectual stock the concept of ethnicity offers in the social sciences. As for the cultural understanding of their students, ethnicity is the right vehicle by which to come to that understanding.

Teachers must know and respect the cultural identity of every student as a right enshrined in the *Convention on the Rights of the Child* and in the *African Charter on Human Rights and Freedoms*. This knowledge will even enable the teacher to better interact with the parents of the student. In fact, in many countries including Senegal, administrative authorities of primary and secondary schools organize regular meetings between teachers and parents (PTAs) to exchange ideas on the general and individual situation of students, on their performances, their failures, their challenges, etc. Meanwhile, to better improve these exchanges, it is important that the teacher grasps the cultural environment of the student so as to be able to understand how the parents look at his/her child as well as make herself/himself understood by the parent of the student. It is therefore necessary for the teacher to master ethnicity and ethnotheories – the ideas that organize the lives of people. The notion of ethnotheories refers to the fact that, in all societies, adults have social representations on what the child is, how and why s/he develops, how to evaluate her or his progress and what the final stage of this development is or should be.

Once the teacher has learnt to decenter, s/he must start to help her/his students to fight what Max Weber called “ethnic honour”, that is, an ethnocentrism which makes one believe that the customs of her/his ethnic group are superior to those of the others. An instance of learning of interethnic identities in Senegal consists of showing in a civic education lesson, the excellent relationships of social reciprocity between the nation’s diverse ethnic groups.

CONCLUSION

Ethnicity is said to be a haven to which personal identity may recoil. Citizens will rarely recoil into personal and ethnic identity if their governments are fair and inclusive. Ethnicity is a space that should be governed by rules and provisions that can promote excellent inter-communal relationships. It is this second view of ethnicity that needs to be fostered and integrated into the core of politics of African education. This choice is all the more vital for the African school is, willy-nilly, a setting characterized by ethnic pluralism; no African country is a mono-ethnic community. Teachers and students of all levels of education by virtue of their belonging to different ethnic groups are carriers of diverse cultures that they bring into the school and every learning situation and it blends with students’ to produce intricate complexity.

Accordingly, the formulation of more precise intercultural school programs, the teaching of ethnocultural identity awareness and their benefits constitute not only an unprecedented challenge for education in Africa but also carry great potentials for national harmony and continental unity. If diversity is the hallmark of Africa, it behooves educational and political leadership and policy developers to harness the strengths of each ethnicity as a resource and a lesson for others. This chapter is a bold proposal to handle this challenge by integrating sensitivity to ethnic identities into teacher training curricula, school programs and political agendas. The details of how this should be conceived and actually executed will depend on the national political will and national education system, with the local and national ethnicity map of each country as a decisive factor. We expect the African Union to take leadership in this direction and supportive understanding from Africa's education partners.

LEARNERS' EXERCISES

1. Identify 2 main strengths of ethnic groups you know.
2. Explain how you think the school and government can benefit from the strengths you have identified in (1) above.
3. A good politician should erase ethnicity from the country's educational map. Debate.
4. How can we promote harmonious relationships between the neighboring communities of your school district?
5. Argue for or against ethnicity as a factor in the African school.

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Chapter 7

ETHICS IN AFRICAN EDUCATION

Godfrey B. Tangwa

INTRODUCTION

The idea that the essence or most important thing about a human being is his/her character or manner of behaving is very pervasive in many African sub-cultures and languages and in other cultures and languages worldwide. In my own natal culture, Nso' culture of the Northwestern region of Cameroon, it is commonly said that "*Wir dze lü*", meaning literally that a human being is character. The obsession with human character or behaviour is an obsession about ethics in human acts and actions. This obsession was central in African traditional systems of education and should remain central in "modernized" systems because, within African cultures, every individual is perceived as essentially a relational being whose acts and actions or behaviour impact directly on others in the family/community, a community of significant others in ever widening concentric circles of relatedness.

In this chapter our general aim is to understand the place and function of ethics in African education. Our particular objectives include a critical reflection on and understanding of the concepts of ethics, education, culture, and how these play out and operate on the African continent in our day and time, whether in appropriate and acceptable ways or in other ways that need to be changed or improved. By the end of this chapter, you should be able to explain in very simple terms what education is, what we mean by culture, what we should understand by ethics, and what the main critical ethical issues are for African education in the 21st century. Above all, you should be able to appreciate the place and importance of ethics in society in general and in African education in particular, especially in teacher education and training. This chapter should stimulate you into regular systematic reflection on the values of traditional African culture, especially the ethical ones, and how these can be salvaged from recession into oblivion and integrated into a global age system of education. An exercise in the form of a case study at the end of the chapter will help you to reflect on and to discuss some of the ethical problems plaguing contemporary African education and societies as a whole and to be able to propose your own well argued solutions to the problems.

WHAT IS ETHICS?

An easy description of ethics is that it is an articulate branch of study which deals with the morality of human actions or behaviour. Morality simply is the judgment of human acts, actions or behaviour as being right or wrong, as being good or bad. Ethics can also be defined as the study of the fundamental principles of morality and their application in actual concrete situations. The terms 'ethics' and 'morality' are often used interchangeably as synonyms; but the concept of morality is much broader than that of ethics. Ever before we start studying ethics, we already have a sense of morality and we have made many moral judgments without necessarily consciously and explicitly reflecting on the principles underlying such judgments. Human beings everywhere seem to have a sense of moral intuition

by which they immediately can judge some acts or actions or behaviour as right or wrong, good or bad. Ethics presupposes that we already have a sense of morality and is a systematic reflection on the general principles underlying our moral judgments and intuitions. Ethics is a normative discipline because it seeks to study or to lay down the norms of acceptable human conduct or behaviour. Systematic moral reasoning or ethics can be carried out on any issue in any domain of human activity. Ethics is therefore inescapable as it is very pervasive and important in all domains where human beings operate or act or simply live their lives.

NATURAL ALLIES AND COMPANIONS OF ETHICS

The natural allies or road companions, to use a common metaphor, of Ethics are Law, Human Rights theory and practice, Civics, Religion, and the Customs, Taboos and Traditions of communities or societies. All of the above are necessarily mingled and interwoven with ethics; but ethics is separable from each and all of them. Ethics is, moreover, rationally more compelling than any of its road companions. For instance, no law, no custom, cultural or religious practice, is justifiable if it is unethical, that is to say, if it can be judged as morally wrong or bad; because, in a sense, all these are meant to serve morality and morality is more important than all of them. As Rebecca Cook and her colleagues (2003, p. 90) have rightly pointed out:

“... law aims to serve the ethical principle of justice. Accordingly, it is not an ethical justification of a policy simply that it is legal. It is not even an ethical justification that a democratic government of a country had a popular mandate to introduce or support the particular law, and that it has been upheld by a country’s most significant court according to the country’s constitution. These features alone, while legally and politically significant, do not show that the law is ethical”.

Ethics is, however, limited to acts, actions and behaviour that are free, purposive, intentional and liable to impact on other creatures. Un-free or externally compelled acts/actions are not voluntary or responsible acts/actions and cannot therefore be qualified as morally right or wrong.

NATURAL CHALLENGERS OF ETHICS

The natural challengers or adversaries of Ethics are Amoralism, and Egoism. An amoralist is someone who sees no reason why s/he should do what is morally right or avoid what is morally wrong; especially as doing what is morally right does not always pay personally while immorality is often personally beneficial.

Egoism or selfishness may be related to, but cannot be justified by the fact that human beings are necessarily egocentric beings. Egocentrism simply means that each human being is self-centred and cannot perceive and appreciate the world

except from his/her own point of view. This need not but sometimes it does lead to egoism or selfishness. According to the theory of psychological egoism, human beings are naturally selfish and cannot help being selfish. But to the extent that human beings are capable of genuine altruism (concern for others) and selfless love, to that extent is a theory of psychological egoism false. Some human beings do sometimes sacrifice even their lives for others. How could this be possible, if psychological egoism were true? Some of the most fundamental aims of education in general are to inculcate a spirit of altruism and feeling for others, a spirit of objectivity and impartiality. So education in general necessarily involves an ethical element.

WHAT IS CULTURE?

Culture is basically a way of life of a group of people, underpinned by adaptation to a common environment, similar ways of thinking and acting and doing, similar attitudes and expectations, similar ideas, beliefs and practices, etc. Cultures and sub-cultures are like concentric circles (Tangwa 1992, pp. 142-143) and there is no human being who does not fall within at least more than one such circle, as the nuclear family or, more ideally, the extended family in its African conception, could, in fact, be considered as delimiting the smallest of such cultural circles.

Unlike culture, morality is grounded on human rationality and common biological nature, and on human basic needs (food, shelter, clothing, self-expression, etc.) which, being common to all, irrespective of culture, may be considered as defining what it is to be human. That it is morally wrong to kill, steal or lie; that truthfulness, honesty, kindness and reliability are good in themselves, are universal imperatives not limited to any particular people or culture. But moral thinking and particular practices may differ from culture to culture and even from person to person within the same culture, because of environmental constraints and human limitations, including the impossibility of perceiving from more than a single point of view, the impossibility of being an experiential participant of all human existential situations, coupled with human ego-centrism and human fallibility. It is for this reason that some human practices or behaviour, such as homosexuality, polygamy, circumcision, capital punishment, etc. are controversial, being considered by some as morally wrong and by others as permissible. We therefore always need both critical awareness and sympathetic understanding when dealing with self and other-regarding issues.

No Human Culture is Perfect

Human ego-centrism coupled with ethnocentrism (the tendency to be too firmly set in within one's ethnic group, allowing it to define all of one's perceptions and relations with all outside groups) naturally leads individuals to perceive their own culture as *the* culture, but critical observation and reflection can help to correct

such mistaken perception. Professor Michael Novak in his book, *The Experience of Nothingness* (Novak 1970, p.16) remarks that every culture differs from others according to the 'constellation of myths' which shapes its attention, attitudes and practices. In his view, it is impossible for any one culture to perceive human experience in a universal, direct way.

...each culture selects from the overwhelming experience of being human certain salient particulars. One culture differs from another in the meaning it attaches to various kinds of experience, in its image of the accomplished man, in the stories by which it structures its perceptions. (Novak 1970, p.16)

Culture is like congenital tinted spectacles through which we look at reality. We inevitably impose our particular cultural tint on everything we perceive, but critical awareness can lead us to the realization that 'objective reality' is multi-coloured. It is very important always to try to see or imagine things from the point of view and perspective of the other. No human culture or community is perfect although that is not to say that some may not be more advanced or better-off in some respects than others. It is evident, for example, that modern Western education is more advanced in several respects than traditional African education. This would be a matter of critical appraisal. There may be activities/skills at which each culture is 'better' than all the others, but a culture in general cannot be described as being 'superior' or 'inferior' to another on that basis. The French, for example, may be better at wine making or some other such activity than the Germans, but it cannot on that account be said that French culture is superior to German culture. To say that one culture *qua* culture is 'better' or 'superior' to another culture is like saying that a donkey is better than or superior to a horse. A donkey *qua* donkey cannot be superior or inferior to a horse *qua* horse because a donkey is not a horse nor vice versa. The claim that French wine is better than German wine is a meaningful claim, which may be true or false, but the claim that French culture is superior to or better than German culture is a nonsensical claim, equivalent to the claim that a donkey is better than or superior to a horse. A donkey is not better than or superior to a horse because a donkey is not a horse; they are two different creatures with very different evolutions, aims and purposes.

Cultures *qua* cultures can be said to be equal in the same sense in which human beings are equal, in spite of great differences in their individual and individuating attributes and characteristics. We could qualify such equality as 'moral' equality, not to be confused with other senses of equality. From most other points of view, human beings are rather demonstrably unequal, but in spite of their un-equality in those respects, they are all equally human. All human cultures are, however, perfectible, because none is perfect; and none can be perfect, given that human beings, the creators of culture, are imperfect beings.

ETHICS AND AFRICAN TRADITIONAL EDUCATION

Moral strength and uprightness was one of the focal concerns of education in traditional Africa. Such education, unlike the Western education that has since become the norm in Africa, was not uniform throughout Africa, because it was not based on any formal syllabus. Nevertheless, it was derived from the same metaphysical worldview and its aims and purposes were generally the same, namely, to instill discipline, strength of mind, body and character in the young. It was both formal and informal. The formal aspects of traditional education were dispensed through traditional lodges, such as *Ngiri* and *Nwerong* among the Nso' of Cameroon, and through all manner of initiations and apprenticeships in various trades and professions. The informal aspects were inculcated everywhere at all times through a social system and cultural practices where there was great respect for age and the elderly, who in turn spared no opportunities to teach and to correct the young, through communal activities such as collective work, ceremonies, rituals, song, dance, the narration of tales, fables, parables, proverbs, riddles.

The formal aspects of traditional education in Africa usually lasted several years and required various degrees of concentration and seclusion from the general public. To take some examples again from my own natal background among the Nso' of the grassy highlands of Bamenda in the North West region of Cameroon, education in the two principal lodges attached to the royal palace, *Nwerong* and *Ngiri*, lasted for about 8 years, during which, for purposes of avoiding distraction among others, the trainee wore a mask when going out of the seclusion and after which one earned the title of '*Shey*' with the privilege among others of founding a lineage. The procedure for the acquisition of wives for graduates of these lodges was well laid down in the tradition (Fonka and Banboye, Undated, p. 28). Apprenticeship in professions and trades such as blacksmithing, wood carving, healing, wine tapping, basket making, mat weaving, drumming and dancing, etc. took variously anything from 3 years upwards. It would be very interesting to know the detailed content of these formal aspects of traditional African education but we are not able to go into such detail here. It is one of the aims of this chapter to inspire readers or student teachers into such further detailed research.

Regarding the centrality of the moral impulse of traditional education, the practice of any profession or trade in the traditional setting always involved ritual restrictions and taboos, calculated to prevent abuse of specialized knowledge. It was, for example, strictly taboo for a herbalist or other medicine practitioner, who generally had a thorough mastery of the particular characteristics and effects of the flora of their particular environment, to give a pregnant woman any substance with the aim of causing an abortion; or for a hunter, who equally had thorough mastery of the fauna, to sell or otherwise give a non-edible species of any animal to others under false pretext. Violation of such restrictions and taboos usually called for ritual expiation, cleansing and purification; otherwise, the violators were liable to encounter serious misfortune.

Communal consciousness and the extended family system ensured moral compliance as the moral uprightness of the individual was not an individual/private affair but the concern of a large number of people with kindred feelings who shared in the fate of the individual, good or bad, in more than a vicarious or standoff manner. When it comes to moral matters, to matters concerning God and the ancestors – the main addressees in daily prayers and supplications - to ceremonial matters connected with birth, initiation, marriage or death, to matters concerning fortune/misfortune, adversity and well-being, Africans are first and foremost relational beings, belonging to a series of ever widening concentric circles of relationship. This is one reason for the obsession with moral uprightness and the centrality of morality within the African traditional educational system. An individual's immoral acts/actions are perceived as directly threatening to a wide circle of relations. This might be contrasted with the situation within Western culture where individualism makes of personal morality a largely individual affair, even though ethics, both private and public, does have an important place in the Western educational system, both traditional and modern.

THE BASIC/FUNDAMENTAL PRINCIPLES OF ETHICS

The pre-conditions and fundamental principles of morality are the same for all societies and all cultures, because these are based on the fact that human beings are rational and social beings. Those who study the peculiarities of different societies, such as social scientists, might often end with an exaggerated highlighting of the differences resulting in moral relativism, and fail to realize, for instance, that the *mores* of the various societies are derivable from principles that are common to all societies. Acceptance of the moral equality of all human beings is perhaps the first pre-condition for morality. Where this initial moral equality is denied some human beings, acts will be carried out, such as colonizing or enslaving, which slap the face as highly immoral, thereby indicating that human moral equality is a moral imperative imposed by human reason itself. Other fundamental moral principles have been widely discussed in the moral literature of the Western world, notably, respect for the autonomy of others, beneficence, non-maleficence and justice. In simple terms, these principles have to do with respect for all other humans as moral equals, making sure that our actions are well-intended/motivated and calculated to achieve good ends or results, avoiding the infliction of harm, and treating others with fairness and equity (Beauchamp and Childress, 2001).

Autonomy

Autonomy implies an individual who is master of himself/herself and can act, makes free choices and takes decisions without the constraint of another. The principle of autonomy therefore implies both the freedom of each individual to act and the obligation of others to respect that freedom. The principle is thus alternatively described as 'respect for autonomy' or simply 'respect for others'. Individual

autonomy may be diminished or completely absent, as in the case of minor children, aged people with diminishing mental capacities, mentally handicapped or incapacitated persons, prisoners, etc. Autonomy is based on the moral imperative of respect for other human persons as moral equals. Such respect demands treating them as “ends” in themselves and never merely as “means” to any other end, treating them with consideration, giving due regard to their point of view and respecting their well-considered choices. The principle of autonomy accords very well with an individualistic perspective of life and may be overemphasized in discourse within individualistic cultures like Western culture and de-emphasized in communal cultures where the community usually is given precedence over the individual. But it is equally important in all cultures, including communal cultures like African culture, in which individuality as distinguished from individualism is also highly respected. It is quite possible for a culture to be communal in the sense of recognizing or affirming the superiority of the community over the individual and at the same time recognizing the uniqueness and importance or individuality of each person. The recognition of such individuality in African culture can be seen during naming, initiation and burial ceremonies. In all such ritual ceremonies, it is the individual strictly before God, the ancestors and his/her destiny.

Justice

Justice is *fairness* or *desert* or *entitlement*; it implies giving to each his/her due. Justice requires that “equals be treated equally and un-equals unequally”, unless there is a reasonable justification for treating them differently. The general moral idea or intuition underlying the principle of justice is that which states: “*Do unto others as you would have them do unto you if you were in their place and they in yours*”. According to John Rawls (Rawls 1999, p. 3),

“Justice is the first virtue of social institutions, as truth is of systems of thought. A theory, however elegant and economical, must be rejected or revised, if it is untrue; likewise, laws and institutions, no matter how efficient and well-arranged, must be reformed or abolished if they are unjust”.

An untrue theory, no matter how attractive must be rejected; an unjust system or procedure, no matter how convenient or profitable must be reformed. Society/community is a cooperative venture and distributive justice is concerned with the fair distribution of those goods, benefits, advantages, etc. resulting from collaborative ventures. However, morality/ethics includes but goes beyond strict justice. Philanthropy and supererogatory acts/actions are also part and parcel of morality. Philanthropy is helping others in need without getting or expecting anything in return and a supererogatory action is a good action that benefits another person but that is in no way obligatory or required and can be neglected without incurring any blame.

Beneficence and Non-Maleficence

The principles of beneficence and non-maleficence are best considered together. They are like two sides of one and the same coin. In simple terms, beneficence means *doing good* and non-maleficence means *avoiding evil/harm*. They are complimentary ethical principles, the one imposing affirmative duties and the other negative ones. However, not all achievable good is ethically mandatory; as already stated above, some good is *supererogatory* (that is to say, desirable or commendable but not obligatory); but harm ought always to be avoided. If you give a beggar money, you have done something good and commendable or praise-worthy; but if you do not give the beggar any money, you have done no harm and nothing wrong. But, of course, it not only is good but highly recommendable and praise-worthy to help the beggar and others in need. Such good actions which go beyond what strictly is required to avoid directly doing harm are said to be “*supererogatory*.” Hence, some people consider non-maleficence to be the most basic of all the cardinal principles of ethics; it lays down the least minimum condition for ethical correctness, as if to say: “even if you would not do good, at least do no harm”. In African conceptions, doing harm and other types of evil attracts calamity and other misfortunes, not only on the agent of the action but on his/her relations and community.

However, it is not always enough that we have done no harm; sometimes even without doing any harm, we do wrong; like the man who climbed on a cola nut tree and hid behind its leafy branches so he could peep at naked ladies when they were taking their bath in the shade behind the house. He did them no harm, as he argued in his defense when he was caught, but he certainly did them wrong. Would you consider someone who never does any harm (he would not hurt a fly) but who also never does any good (he would never help anyone in need) to be a morally good person?

SCOPE AND APPLICABILITY OF MORAL PRINCIPLES

The pre-condition for morality and the four fundamental principles of ethics mentioned above are equally relevant and important in all fields of human endeavour and activity and in morality generally, within all possible contexts and perspectives. They are cross-culturally valid, although the emphasis given to each and the way they are applied or operationalized may differ slightly from culture to culture, from place to place, from context to context, and even from time to time within the same context. The four principles, in the terms, language and idioms we have stated them above are, of course, very much a paradigm of the western industrialized world, where their relevance and urgent applicability have been made abundantly manifest by various activities that violated or that ran the risk of violating them, such as human enslavement, colonization or medical experimentation on humans. They, nevertheless, remain equally important even where they seem to be lying dormant

for want of stakes requiring urgent discussion and application. We should credit the industrialized Western world for the coinage of the very convenient terms and idioms in which these principles are discussed today. But the four fundamental principles are not absent in any human culture even if they are not thought of or understood in the same terms.

You may never have heard of these principles or thought about them in these terms, but if you reflect on the traditional moral ideas and practices of your own traditional society you will realize that these principles are recognized and taken into consideration in the day to day living of your own people. In Africa in particular, it is evident that these principles are recognized everywhere in the guiding adages of its various sub-cultures, in the social values and practices that are highly prized, and that they form the basis of the similarities underlying the remarkable diversity of the sub-cultures.

Reflecting on my own natal culture, Nso' culture of the grassy highlands of Bamenda in the North Western region of Cameroon, I can say that these four principles are captured in and derivable from two guiding adages: the one that states that "a human being is a human being simply by being a human being" and the other which states that "the essence of a human being is having a good heart (will)". The first of these adages implies that a human being, irrespective of its descriptive and particularistic attributes, is autonomous and of inestimable worth and must therefore be treated with due consideration and equity by other human beings (Respect for intrinsic value, autonomy and justice). The second adage implies that a human being is less than a human being if s/he does not shun evil, including avoidance of harm, or if s/he is not imbued with good purposes and intentions (Beneficence and non-maleficence). These principles are what make living in communities or societies as human beings possible and harmonious. They may not be "discovered" for sometime or theoretically nailed onto an analytic frame, but they are there alright, implicitly wrapped up in social norms, traditions and practices.

Moral/Ethical rules are different from all other rules. They are general, applying to a wide variety of particular cases and instances. They may be expressed in, mixed/mingled with, or reflected in laws, societal customs, cultural practices, taboos, etiquette, etc. They are perceived as universal and timeless, not as timely or context-bound. They are anchored on simple rationality, not specialized knowledge. They are uncompromising in their demands; they supersede laws, politics, economics, customs, social practices and even cultures. For instance, any law, custom or social practice that is unethical must be rejected, whereas no particular action or practice can ethically be justified simply by stating that it is the law, custom or social practice. A morally bad law, custom or social practice must be rejected. However, moral/ethical norms are not absolute or exception-less. The moral rule that we should not kill can, for example, justifiably be violated in self-defense against an assailant bent on killing you. Moral rules or norms need plastic firmness and flexibility, not cast-

iron rigidity; they do not have application *in abstracto*. To apply them is to apply them in particular, contextual situations, and they are then like water. Water poured into a container immediately assumes the shape and colour of the vessel without ceasing to be essentially water (Tangwa 2004, p. 67). Thus, what is of critical importance is for every people, every culture and every part of the world to reflect on the applicability of these principles in their own particular context and situation.

THE PLACE OF ETHICS AND CULTURE IN AFRICAN EDUCATION

The concepts of ethics, education and culture are closely connected. We have already discussed the centrality of the moral impulse in traditional African education as well as made allusion to the similarity between the seminal ideas of culture and education. Culture being a way of life of a group of people, underpinned by adaptation to a common environment, similar ways of thinking and acting and doing, similar attitudes and expectations, similar ideas, beliefs and practices, it goes without saying that culture is central for any system of education, and inevitably so. As for ethics, human beings can by reason alone know some things to be morally wrong, some morally praise-worthy and highly recommendable, others neither morally right nor wrong. The way and manner that a group of people do those things that they consider morally right or permissible, the way they avoid what they consider morally wrong and their attitude to what for them is not clearly either wrong or right, depends on their culture and the social organization of their society, their conception of the universe and its furniture, and the way they see themselves in relation to others. These then should form the core syllabus of their formal education system. A provisional course outline for ethics within such a system would include, *inter alia*, the following topics:

African metaphysics and worldview

- Human beings, non-human beings, superhuman spirits, ancestors and God
- African conception of the family and relations with outsiders
- African conceptions and practices related to birth and death
- Ethical dimensions of initiation practices
- The moral dimensions of African myths, legends, riddles, proverbs and songs
- The idea of destiny
- Divination
- Protections against evil, harm and misfortunes
- Doing harm
- Doing good
- Taboos
- [Un]Intentional breaches
- A good life and a good death

This minimal outline signals both the possibility and importance of an African educational system circumscribed by both elements of African culture and an African perspective of ethics. Otherwise, the educational system would be not only alien but alienating. [The instructor should attempt discussing and eliciting some ideas on some of the above topics].

Every culture evolves with time and has the capacity to change on the basis of well considered improvements on what it had hitherto done differently, the implementation and integration of ideas and practices willingly and voluntarily borrowed from other cultures or imposed by a conqueror. When cultural change is brought about by external imposition rather than by deliberate importation, it has the tendency to create split personalities within the society, unsure of themselves in spite of their education and ready to flee from their situation at the earliest opportunity. Only a culturally and ethically well grounded education is wholesome and stabilizing.

Culture and ethics are thus very important in education and every educational system must seek cultural relevance and ethical grounding. The ethical problems plaguing education in nearly all African countries today are well known. They include fraud, bribery and corruption, nepotism and tribalism, trafficking and forgery, in admission procedures, in evaluation, certification and job recruitment. The case study exercise at the end of this chapter covers some of these problems and will give you the opportunity of reflecting on and discussing them in depth.

One of the strategies for consolidating the grip and gains of colonialism in Africa was deliberately to subvert and to combat African culture in every aspect. The Western system of education, otherwise a valuable corollary of the colonial enterprise on account of its modernity and literacy, was one of the two main vehicles (the other being religion), for achieving this objective. Both in Christian religious proselytization and in the pedagogy of Western educational institutions, African culture was degraded and painted variously as 'primitivism', 'backwardness', 'paganism', 'satanism', 'uncivilized', 'illiterate', etc. and traditional Africans as lacking not only any sense of morality but also of any practical intelligence or commonsense. And, because Africans who converted to Christianity and/or embraced Western education were visibly more enlightened and more affluent than those who did not, it appeared almost self-evident that one had to flee from African culture and African ways of life and practices to be able to attain enlightenment and affluence. It even became fashionable for Western-educated Africans to demonstrate with an air of pride an inability to speak their very own African indigenous (mother) language and to pretend complete ignorance of their own traditional ways and practices.

This need not have been the case. Had Western education not come to Africa as a bye-product of colonialism whose chief attributes were exploitation and domination, its positive essence would have integrated and permeated African culture more naturally and harmoniously, thereby leaving intact the positive values of the culture. A good number of these positive values of African culture are moral values

such as the extended family/communal spirit, respect/care for the elderly, love of children and parenthood, collective responsibility for the upbringing of the young, modesty, love of harmony, mistrust of dangerous knowledge, etc. If on the background of such values the positive essence of the Western system of education – its highly rational and critical character, its inquisitive and empirical nature, its highly impersonal, objective and evidential approach, etc, - had been erected, the results might have been remarkably positive. It is time to attempt refashioning Western-style education in Africa by grounding it firmly in African culture and positive African values. Africans need not trade off their identity and cultural pride for a modern education well attuned to the competitiveness of a rapidly globalizing world.

CONCLUSION

One of the main tasks of African education in the 21st century, the era of globalization, must be to domesticate and culturalize Western-type education which has since become the norm in Africa. This will be done by integrating African traditional and ethical values in the pedagogical system in a more systematic and deliberate manner than has hitherto been the case. African traditional education was characteristically obsessed with morality and the moral uprightness of individuals, perceived not as an individual but as a communal/collective affair. In the domain of morality correct practice even without articulate theory is always better than correct theory without appropriate practice. The theories underlying traditional ethical injunctions and practices can mostly only be deduced from the worldview, pithy sayings, epigrams, proverbs, songs, myths and legends, in the absence of elaborate complete theories. It is more than time for African educational systems, through engagement, to elaborate more systematic ethical norms and theories from these varied informal sources.

The main values and advantages of Western education that must be maintained in a refashioned African education in the third millennium are its highly organized and systematized nature, its objectivity and its empirical methods. The dangers of exaggeration and extremism must, however, be kept in mind at all times. Every good thing can be abused and too much of anything is always inadvisable. Objectivity is important but there is also an important subjective dimension in life which should not be ignored; every system has its own limitations and there are many aspects of human life that defy purely empirical observation and treatment.

CASE STUDY EXERCISE

Sonia James is a third year Education student in an urban African University, majoring in English. Mr. William James, her father, a bank manager, travels from the town where he works, about 400 kilometres away, for a business meeting in Sonia's University town. He would, of course, take the opportunity to see his daughter whom he had visited several times before at the on-campus all-female hostel he had succeeded in securing for her by giving the official in charge a gift envelope of US\$ 1000. He would also try to see Sonia's lecturer in Linguistics 101, which she was carrying over for the second year un-validated, because, according to her in her last letter, "the man is very unserious; just because he have beg to go out with me and I refuse".

Mr. William James arrives at the 5-star hotel where his meeting would be taking place the whole morning of the next day at about 7:00 p.m. As Sonia's hostel is on the other side of the city, he decides he would check on her only the following evening after his meeting.

After checking into his hotel room and taking a hot bath, Mr. James suddenly feels a strong urge for female company. On his way from the restaurant after supper, he casually asks the hotel receptionist on duty in an appropriately conspiratorial tone:

"Say man, where can one find decent female company here?"

"Oh, that's quite easy, Sir!"

"No, I don't want a prostitute. I don't take chances with AIDS."

"I have some photos here, Sir", said the receptionist, pulling out a big album from a drawer under his counter. "These are not prostitutes but all young University students. I have all their contacts. Simply look through and make your choice and I'll arrange for her to come to your room whenever you want."

On the third page of the album Mr. William James sights the photo of a young lady who fulfills in every respect his fantasy of a beautiful woman.

"Yes, this one!" he shouts.

Before handing back the album to the receptionist, he quickly flips through the rest of the pages. On the last but one page another photo catches his attention and he shouts "Oh, No!!" as he sights his daughter, Sonia's sexy form, in a transparent bikini.

"What now, Sir?" enquires the receptionist.

"No, nothing, I think I will change my choice to this one", he says pointing at Sonia's photo.

"Okay, Sir, when would you want her to come?"

"As soon as possible", he says, making to go to his room.

"Okay, Sir, you have to pay to me, Sir."

Mr. William James pays the sum named and goes to his room, a thousand confused thoughts racing in all directions through his mind. He lies on the luxury bed and feels like crying for no specific reason. One hour later he hears a timid knock on the door and when he opens, his daughter, Sonia, in an extremely sexy evening dress, stands face to face with him.

“Sonia”, he calls in a calm even voice.

Sonia turns and flees without a sound.

DISCUSSION QUESTIONS

1. Could this story have taken place in your own country?
2. Enumerate all the characters in the story who may be ethically blame-worthy and apportion each person’s blame.
3. Isolate all the ethical issues hinted at in this story and discuss each of them fully.
4. What in your opinion are the causes of such ethical problems in Africa today?
5. What aspects of traditional life and culture, as you know them, would serve either to encourage or to discourage such ethical problems from occurring?
6. What reforms, in your opinion, are needed in present-day formal education in your own country to minimize or eradicate such ethical problems?

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Part III

AFRICAN CHILD DEVELOPMENT

Section Three focuses on how to care for and educate children, an old issue to which individuals and cultures the world over have evolved a repertoire of approaches. Nevertheless, an issue of general agreement is that there exists a positive relationship between education and economic and human development. Basically, education provides the human capital needed to improve productivity in the economy and facilitate development, hence the emergence of the child onto the international stage; a trend that has not gone unnoticed in Africa. In Africa, education represents an important means through which the people can acquire the skills needed to promote growth and development.

One of the most important ways to promote the process of education is through research and the dissemination of the knowledge generated by it. Without research Africa will never design evidence-based policies, as Africa's child development and education policies will continue to be based on imported research evidence. This section provides not only an overview of African child development but also the theories and principles so far developed through African child development research. Chapter Eight by Andy Daves and Linda Biersteker discusses the significance of the early years, including the risks to early well-being and the importance of health, nutrition, emotional nurturance and stimulation, the significant role of culture in shaping children's development in the years before school, and the implications for educational practice in the first years of school. They also provide examples of culturally appropriate interventions to enhance school readiness and transition to school. In Chapter Nine, Oumar Barry and Marian Zeitlin observe that academic environments allow children to prepare and acquire skills that will help them to adapt to the different settings that will punctuate their lives in older ages and in higher levels of education.

As African children "struggle" to acquire academic knowledge and skills, they simultaneously endeavour to maintain parental cultural values that confer a cultural identity and keep them in harmony with their families and society. For this reason, they see the importance of putting into place in African school systems new educational strategies that are in tune with the sociocultural realities of the continent while concurrently integrating the main procedural demands of schooling. The authors explore the content of parental traditional curricula in Senegal, which though widely used in the care of children and formation of distinct Senegalese identities are un-formalized in writing. They analyze parental curriculum and suggest how to train parents to ready children for school and how to adapt it to the demands and frameworks of the school. The authors envisage how the construction of a coherent educational system that systematically includes the involvement and education of parents would permit the African continent to fully develop its human resources and create and train a generation competent in scientific and technical knowledge, while still anchored in the values of an intrinsically African culture.

In Chapter Ten, Roderick Zimba presents the lessons he has discerned from childcare research in the Southern African context as a resource for serving children's needs and promoting their development and rights. The chapter focuses on two learner age cohorts, the 7-13 year olds, and the 14-19 year old teenagers. This chapter is a valuable resource for teachers on what learners' developmental needs are during the two non-adult phases of life and what the teacher can concretely do to meet children's rights-based needs. It also identifies some of the teacher education implications that arise from the developmental, pedagogical and learning needs of primary and secondary school learners.

Chapter 8

EARLY CHILDHOOD DEVELOPMENT

Andrew Dawes and Linda Biersteker

CHAPTER LEARNING OUTCOMES

After reading this chapter, you will have a basic understanding of: 1) The meaning of Early Childhood Development and the situation of young children in Africa, 2) The risks to early well-being and the importance of health, nutrition, emotional nurturance and stimulation in the early years, and 3) The role of culture in shaping children's development in the years before school and the implications for educational practice in the first years of school.

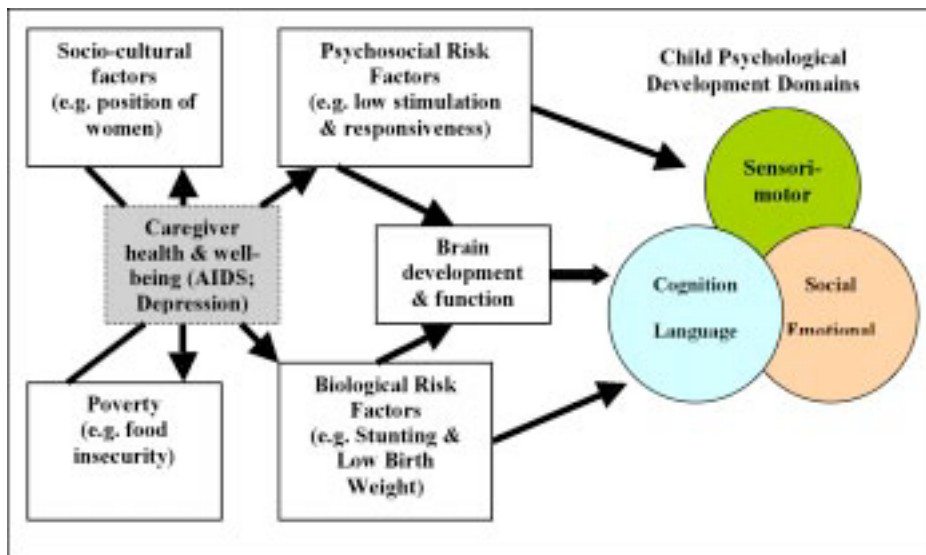
EARLY CHILDHOOD AS A CRITICALLY IMPORTANT PERIOD FOR CHILD DEVELOPMENT

Early childhood commonly refers to the period from birth through 8 years of age (UNESCO, 2006). Useful information about this period can be found at (www.zerotothree.org). In this chapter we concentrate on children under the age of six, when formal schooling commences in most countries on the African continent. We recognise that many of the most marginalized children in the region do not however begin school until later. The child's experience in the first six years of life has a critical bearing on later development, with the first three years being especially important because research has established that during this period, the developing brain is particularly sensitive to the effects of nutritional deficits, and also to the effects of stimulation (or stimulus deprivation). Young children require good health care, nutrition, warm and sensitive human interactions (particularly with those who care for them) and opportunities for stimulation and learning if they are to thrive and benefit from the opportunities provided in school (Alderman and Engel, 2008).

Unfortunately, there are major risks to sound child development in Africa, largely as a consequence of low levels of productivity and economic development, structural inequality, political mismanagement and conflict. The risks include child stunting, iodine and iron deficiencies, as well as low levels of cognitive and socio-emotional stimulation (Walker et al., 2007). The manner in which the risks operate is illustrated in Figure 1. As shown in Figure 1, the caregiver mediates much of the child's experience and development. When caregivers are unwell, for example with AIDS related illness or depression, their capacity to care for young children suffers. If the mother is too depressed to pay attention to her baby, the little one gives up signalling its distress (because the mother does not respond), a cycle is set up where the child's health, nutritional status and psychological development are put at risk. Also illustrated in the Figure is what the child brings to the picture in terms of her healthy or weakened biological status. For example, low birth weight poses significant threats to the well-being of the infant. Extreme stimulus deprivation and chronic malnutrition impact on brain development. This results in limited cognitive development and compromises school progress.

These problems are common in Sub-Saharan Africa. For example, thirty seven percent of children under five years have suffered chronic malnutrition and are stunted (Garcia, Virata, and Dunkelberg, 2008). Malnutrition is however, readily preventable. Many of the challenges that children from poor backgrounds present to teachers when they come to school, such as slow learning or disruptiveness can be a function of their early experience, as well as the disjuncture between home and community settings and school (Brooker, 2008). The poor outcomes of many children on the sub-continent are violations of children's rights (see Zimba, Chapter 10, this Volume). Teachers and particularly those involved in early education can play a key role in ensuring children's rights are realized.

Figure 1: A conceptual model of how risk factors affect early childhood psychological development



{Adapted from Walker and Colleagues (2007) }

RIGHTS AND THE YOUNG CHILD

Apart from Somalia, all African countries have ratified the United Nations *Convention on the Rights of the Child* (UNCRC), and all have signed the African Charter on the Rights and Welfare of the Child. Both documents recognise the importance of a sound start in life by specifying children's rights to survival, health, protection and development (which includes education). Article 11.2(c) of the African Charter highlights the importance of providing children with a location in the wider universe of their cultural context and speaks to a re-vitalisation and respect for indigenous culture and practice. It states:

“The education of the child shall be directed to: the preservation and strengthening of positive African morals, traditional values and cultures.”

Article 11.2(d) asserts that the child has the *right* to an education that is directed to:

“the preparation of the child for responsible life in a free society, in the spirit of understanding, tolerance, dialogue, mutual respect, and friendship among all people’s tribal, ethnic and religious groups.”

Article 11.2(d) asserts that education must provide opportunities for the promotion of intergroup tolerance and understanding (see Sall and Nsamenang, Chapter 6 in this volume), with the further goal of promoting peace among communities who live on a continent with a long history of oppression and conflict.

These key rights can be used as a platform from which to argue for initiatives to support the protection and development of all children in sub-Saharan Africa, but particularly during early development. The World Declaration on Education for All (EFA) and the 2000 Dakar Framework for Action also recognise the importance of early learning for later development, highlighting the importance of providing comprehensive services to young children, including health, nutrition and stimulation, particularly for the most vulnerable. In order to understand the capacities which the child brings to modern schooling, it is helpful to understand sources of development and how they operate in cultural context.

SOURCES OF DEVELOPMENT IN EARLY CHILDHOOD

Child development is a function of the interplay of three main factors, none of which operates independently of the other: genetics, environmental influences (including culture), and the child’s own activities. In many African communities, spiritual and ancestral forces are also considered to have a significant influence on how children develop (Reynolds, 1997).

GENETICS AS A SOURCE OF DEVELOPMENT

The child’s genetic make-up, inherited from both parents, has a basic influence on capacities that children display as they mature. Genetic influences may also interfere with normal development, for example in those children affected by congenital conditions such as Down’s syndrome. This condition is caused by the presence of an extra chromosome (on pair 21). The syndrome is always associated to a greater or lesser degree with intellectual disability, and produces particular physical features including slanting eyes, a fold on the eyelids, and broad hands with a crease running across the palm (among others). These children may be the source of ridicule and bullying. Teachers need to pay attention to their care and protection.

It is often asked whether genetic or environmental factors cause this or that aspect of a child’s behaviour. The answer is that both are *always* involved. Genetic

influences on behaviour never exert their influence alone, but always in combination with environmental influences.

ENVIRONMENT AS A SOURCE OF DEVELOPMENT

In the early years, the child's developing brain and neurological system are particularly sensitive to environmental influences. Many think the effects of the environment take effect after birth, but this is not the case. From the moment of conception, it is the mother who provides the child's environment. Her health and nutrition influence the child's growth and development. For example, if she is malnourished, this will affect the child's developing brain. If she is HIV positive, and medication to prevent the transmission of the HI virus is not provided, the chances are very high that the child will be born HIV positive and will not survive.

Neurological research has shown that the quality and extent of stimulation the child receives after birth either promotes or shuts down the expression of genes that control neurological development in different areas of the brain (e.g. the area responsible for language). Neural connections are made as experience of particular kinds occurs, and frequency of exposure to stimulation increases the density of neuronal connectivity (Young and Mustard, 2008). In *very deprived conditions*, connectivity is substantially reduced.

THE ROLE OF CULTURE IN DEVELOPMENT

Neurological development does not occur in a vacuum. Children's cultural contexts provide the major source of their development. Key role players are those who care for children. Cultural expectations for child development and methods of child-rearing determine what children learn, who interacts with them at different ages, and how they learn (Nsamenang, 2008; Rogoff, 2003). Children learn the 'proper' ways to relate to parents and other kin, when and how to express emotion, moral behaviour, obedience, and also what counts as intelligent behaviour (LeVine et al., 1994). Hierarchical patterns, in which children occupy subordinate positions to adults, are taught from a very young age.

All societies use the notion of intelligence to refer to children who can solve problems and often children are regarded as intelligent if they are helpful (Serpell, 1993). However, the problems that children are required to solve may differ across contexts, particularly between those that have embraced and live in a modern world and those who live a rural or more traditional life. In a modern community, a young child who can complete a pattern matching task more rapidly than peers would be regarded as showing 'intelligence'. In a rural environment intelligence might be equated with having a good memory.

Language development is strongly dependent on the opportunities provided to the child. Communities approach children's language development differently. In

the United States for example, verbal precocity and the ability to read is highly valued in young children, of the English-speaking middle class (Rogoff 2003). In rural African societies where books may be scarce, language is enhanced through practices such as singing and story telling. Caretaking also varies cross-culturally. During infancy and toddlerhood, child care is principally a maternal responsibility. However, in many Sub-Saharan communities, as the child becomes more mobile and mothers have to return to domestic and productive labour, others such as siblings and grandmothers take over this role, playing a significant part in all aspects of the child's learning and development.

The majority of African children learn valuable skills while taking part in domestic tasks. As skills are transferred even to toddlers and 4 year olds, self esteem and self-efficacy are supported as new skills are recognised by family and community members. Cognitive abilities, technical skills and local cultural competencies develop in parallel. For example, numeracy is stimulated as children learn to recognise (and count) family cattle by the patterns on their hides. Motor skills develop when assisting with tasks such as weeding the vegetable patch, sweeping the house or hanging up the family washing. Children who help parents to sell vegetables learn about profit (Nsamenang, 2008).

Expectations of young children's participation in work activities can be incorporated in the content of early childhood interventions even before school so as to promote their learning. For example, opportunities exist for carers to stimulate learning of colours and size as a child helps to hang up the washing. Classification abilities can be enhanced if carers point out the characteristics of weeds and crops and name them, thereby extending vocabulary and agricultural understanding (of 'good' and 'bad' plants).

Young children may also be asked to run errands, which will enhance self regulation, attention and memory. All are important in preparation for school. Of course children must be protected from activity that is harmful to their development (e.g. carrying heavy loads of wood or water). While these examples illustrate culturally relevant approaches to learning in young children, it is essential to recognise that cultural practices are constantly evolving. Later generations will always modify 'traditional' practice as different ways of bringing up children are encountered. Colonialisation produced major changes on the African continent particularly with the introduction of wage labour, schooling and different systems of government. The preschool movements imported during that period have imposed notions on parents of 'the right way' to bring up children, the 'correct' approaches to preschool education, to discipline, parent and so on, disrupting and also supplanting taken for local notions of child care. This is an inevitable outcome of cultural domination and exchange and is certainly not a process that has been specific to Africa (Penn, 2005).

However, in spite of the power of modern media to tell parents what is right if they want to produce intelligent happy high achieving children, there remains *significant cultural variation* in practice, even in Western modern economies such as the United States (Cole and Cole, 2001). The same variation is evident in Africa. There is no single African early childhood experience, and no one traditional African childhood on the continent. Parenting practices vary hugely as we traverse boundaries of language, culture, class, religion, and region. Variation is also significant in the same African city and country. The vast majority of African children are therefore likely to be subject to a mix of traditional and modern cultural influences.

THE ACTIVE CHILD AS A SOURCE OF DEVELOPMENT

The final source of influence is the child herself. Children engage actively with the world around them, learning and solving problems as they manipulate objects in everyday activity and when actively taught by older siblings and adults (Donald, Lazarus, and Lolwana, 2010). Through this process they construct mental models of how the world of objects and people works, and these models change with development and education (see Nsamenang, Chapter 16, this Volume). For example, the preschool child has difficulty separating reality from fantasy, particularly in screen media such as movies and videos. The people and animals seen are *real*. This tendency gradually falls away around nine or ten years of age, as the ability to reflect and analyse events using higher cognitive functions (particularly more sophisticated forms of reasoning). Many of these capacities are stimulated by schooling. They include the ability to understand conservation (that properties of objects such as weight do not change when their shape changes). Children come to appreciate that the same object may occupy multiple classes (colour; shape; size; animals to eat; animals kept as pets). Probably due to neurological maturation, children of this age can process information much faster than for example preschool children. In early childhood, what the child *sees* (for example in the movie) takes precedence in her understanding of what is going on. Toward the end of the early childhood period, children are much more adept at taking control of what they are exposed to, and make judgements as to the distinctions between what they see in the movie, and the fact that it is in fact just a movie.

Young children's cognitive development in particular is known to be enhanced through their activity (e.g. manipulating objects, solving problems, therefore experimenting with materials). Educators therefore stress the importance of allowing children free play alone in groups, with a range of materials that require different skills. In many African contexts it is uncommon for adults to engage in play with very young children. In such settings it is other children who largely provide the stimulus for a range of developmental domains as they engage in play.

In sum, children develop in culturally constructed environments that are designed by adults on the basis of what their culture tells them is the correct way to

rear children. In Africa, local approaches to children's learning and development may not fit well with the skill set that is required for the demands of the modern school (Serpell, 1993).

IMPLICATIONS FOR TEACHING PRACTICE

In this final section, we present some ideas for bringing the practices of the school closer to the experience of the child and for easing the transition to school. Transitions to formal school present a challenge to the young child. Readiness for school depends on the child's level of physical well being and motor development, social and emotional development, language and cognitive development and approach to learning (e.g. Arnold, Bartlett, Gowani, and Merali, 2006). Children who have attended a preschool programme are likely to be more familiar with the learning materials and some of the routines they will meet at school. However, very few sub-Saharan children have this privilege. Only twelve per cent attended a formal preschool in 2004 (Garcia, Virata and Dunkelberg, 2008).

Transitions to school can be facilitated in a variety of ways. We present some examples.

The most common approach is to assist the transition by providing services for young children such as parental support, play groups, home visiting or centre-based care. These are however often not feasible. Innovative programmes have been successfully employed in assisting young children with this transition. One example is the East African Madrassa programme in which teachers are based in the child's community and have strong links to primary schools (Mwaura and Mohammed, 2008). The 'Little Teacher' programme in Botswana draws on the common practice of sibling care by involving older (and of course sensitive and competent) children in supporting the education of those younger than them (www.child-to-child.org). It is based on the child to child approach commonly used in the health sector. The programme has involved Grade 6 children to assist preschoolers in their preparation for school (Bernard van Leer Foundation, undated). Among other positive outcomes, the preschool children adapt faster and better to school than those who do not receive this intervention. A similar approach has recently been introduced in Ethiopia ([/wf09_agenda/38_waninge.pdf](#), Accessed 5 October, 2009).

Myers (1997) cautions against expecting the child to be ready for school while the school makes no attempt to take account of the goals, values, styles of learning and languages that the young child brings with her to the school. We offer some suggestions. As a first principle, teachers who have knowledge of the types of learning, stimulation and social relations that the children have been used to prior to arrival, will better appreciate how teaching practice may need to adapt to take them into account. A key approach is to incorporate local culture into schools by for example, using local languages as the medium of instruction, at least initially. Another

is to fit the school to local lifestyles and livelihoods so that there is less conflict between parent and community needs and expectations and the demands of schooling (such as requirements for children to assist with harvesting). For example, the Alternative Basic Education for Karamoja programme directed at pastoral communities in Uganda, changed parental attitudes by education by teaching under trees at suitable hours so that learning would not interfere with domestic chores. Curricula are taught by community members who introduce formal skills of literacy and numeracy in relation to indigenous knowledge and culturally valued life skills (Chelimo, 2006: 36–37)

The barrier between school and home can be reduced by helping caregivers to engage with children's education (Vogler et al, 2008). The Senegalese Grandmother Project recognises the role that these relatives play in children's education. A booklet on the role of grandmothers in the local culture that seeks to bridge the gap between young and old, and between home and school has been developed for use in literacy classes and schools (www.grandmother.org). We know that in many African societies, children have learnt their problem-solving in the real world drawing on indigenous skills. For example, schools can use gardens to enhance the formal curriculum by introducing a whole range of knowledge domains: biology; nutrition; climate; numeracy and literacy, while also enhancing the tradition of collective responsibility and service as the garden provides food for the school community. There are many other options that teachers may consider. In these ways we can facilitate children's transition to school, while building on the cultural tool kits they bring with them, and scaffolding their learning to higher levels.

CONCLUSION

At the outset of this chapter we stressed the importance of a good start in life. We have presented the main sources of the child's development and have drawn attention to the powerful role of the child's cultural and material environment.

In the examples we have presented in the final section, we have stressed the importance of drawing on common cultural routines learned outside the formal educational environment. Apart from enhancing the young child's transition to school and enhancing their experience of school, such an approach provides an opportunity to enhance African children's right to connection with their many cultural *heritages* as specified in Article 11.2(c) of the African Charter on the Rights and Welfare of Children.

As we say:

"It takes a village to raise a child."

We need to be sure that the school is part of that village.

STUDY EXERCISES

Referring to the conceptual model for how risk factors affect early childhood psychological development (Figure 1), describe the most serious risks to early childhood development in your school district. This would be the area where most of the children who attend your school are resident.

Reflect on your own childhood. Were there any attitudes, values and activities that your caregivers shared with you and that were helpful in preparing you for school? What were they? Looking back, what do you think they could have done to prepare you better?

Find two people you know and interview them about their first days at school. How were they prepared if at all? Compare your experiences with theirs. What can you learn from this exercise to give advice to parents as they prepare their children to attend your school?

What are the main challenges for teachers in your area/district experience when children make the transition from home to school? What policies and practices could you introduce in your school to reduce these challenges?

Are there local practices or cultural institutions that could be used as a basis for making home-school transitions easier for young children? In what ways would these assist?

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Chapter 9

**SENEGAL'S TRADITIONAL AND MODERN CURRICULA
FOR CHILDREN AGED 0-3 YEARS**

Oumar Barry and Marian Zeitlin

INTRODUCTION

Academic environments allow children to prepare and acquire skills that will help them to master the different settings that will punctuate their lives. For African children the differences between traditional rural and modern urban life settings tend to vary far more widely than elsewhere in the world. To succeed in school, African children need to be prepared and supported in order to possess all the necessary pre-requisites for quality schooling while cherishing traditional values that keep them in harmony with their culture and society. Abundant and precious cultural diversity together with rapid change across generations represents a unique challenge to African school systems to put in place new educational strategies. These strategies need to preserve the socio-cultural values of the continent while concurrently enabling children to perform at academic levels that match or exceed international achievement norms, thereby permitting them to participate fully as global citizens.

This chapter explores a traditional parental curriculum in Senegal, also found in similar forms in other African countries. While not previously formalized in writing, these curricula are widely used in the care of children and their formation of distinct cultural identities in an African context. We will analyze and study traditional curriculum content to consider how to adapt it to the demands and perspectives of scholastic education in Africa and to international norms. This chapter supports the view that only with a strategy of cross-generational learning, including grandparents, parents, youth and young children, will the continent fully develop its human resources and create a generation competent in scientific and technical knowledge, while still anchored in the values of an intrinsically African culture.

The information presented in this chapter was obtained through surveys and experiments carried out in Senegal, and Lagos State of Nigeria, utilizing the approaches of positive deviance and trials of improved behaviors. The results in the two countries were similar.

GOALS OF CHAPTER

This chapter is designed to:

- 1) Contribute to understanding of the importance of infant and toddler learning activities linked to children's developmental stages during the first years of life,
- 2) Reveal the existence of a systematic, well articulated African early education "curriculum" preparing children for their roles in traditional African society,
- 3) Describe the content of this local early childhood curriculum from research based in Senegal and Nigeria,
- 4) Suggest how, by integrating the content of modern and traditional early childhood education (ECE), it is possible to improve the practices of stimulation and awakening to better prepare children for future schooling, and

- 5) Show the need for educating parents, as “first educators” who prepare young children for school.

DEFINITION OF CONCEPTS

Parental Education: Ensuring that knowledge of culturally and scientifically-based best ECE practices are available to parents, and that parents receive the guided practice they need to master specific new verbal and behavioral competencies needed to interact with their infants and young children.

Early Childhood: the period of life from birth until the age 6. It is often broken down into:

The first half, infancy and toddler years, which last from 0 to 3, during which the child is still taken care of by his or her mother or a substitute within a family setting in most African cultures, whereas in the West children of this age are often sent to nursery or daycare centers.

And, the second half, preschool age, from 3 to 6 years, when children systematically attend preschools or kindergartens in the Western system to gain the pre-requisites for future schooling. In Africa today, this culture is becoming more and more present in cities and is beginning to become a reality in certain villages or rural communities.

Early Childhood Education (ECE): all practices with the goal of encouraging and enabling the young child to increase his or her psychomotor, intellectual, psycho-affective, and socio-adaptive capacities and skills. These skills integrate motor, cognitive, and psychosocial behaviors.

Child Development: the process in which the child physically grows and progressively acquires motor, linguistic, cognitive, and psychosocial competences which permit him or her to adapt and live adequately within the demands of his or her physical and social environment.

Curriculum: “education that prepares definitely and adequately for the specific activities needed for life in a particular social class, [culture, environment, technology and economy]: the abilities, attitudes, habits, appreciations and forms of knowledge. These will be the objectives of the curriculum [which] will then be that series of experiences which children and youth must have by way of obtaining those objectives.” This fundamental meaning of curriculum from Bobbit (1918) includes the narrower academic uses of the term curriculum.

Local or traditional African ECE curriculum: The coherent set of traditional ECE practices, that meet the above criteria for preparing a child definitely and adequately for life under traditional African cultural, environmental, technological and economic conditions.

Modern ECE Curriculum: similarly the ensemble of modern ECE activities and practices that prepare a child definitively and adequately for life under modern, global cultural, environmental, technological and economic conditions.

Positive deviance: a process derived from the observation that the solutions to most community's problems can be found hidden within the community itself. Thus, all societies possess individuals who, thanks to their little-known but beneficial habits, practices, and behaviors, can help to avoid or resolve most prevalent problems, by sharing their realities and resources with their neighbors. These individuals are called Positive Models.

Trial of Improved Practices (TIPS): this strategy consists of engaging representative members of a population in the trial of practices that are known to be more effective in achieving the population's own goals than the practices they currently follow. A trial, for instance, might ask a mother or a father to name pictures in a book with her/his 10-month-old infant for 10 minutes one time per day.

Trials normally take place over a week, during which the researcher visits the family, observes the test practice, asks for the parent's comments and demonstration of the practice, and how the trial behavior could be improved, and re-orientes the parent's performance accordingly. In this way the parent's performance style and suggestions are used to modify the pedagogical lesson. For example, the parent might hold the book awkwardly and pictures in the book might not be recognizable to the parent. The pedagogical modifications would then be to practice how to position the infant and the book and to select or create better pictures. TIPS combine local concepts with scientifically recommended practices.

For the purposes of this research, TIPS was used first to obtain fuller understanding of existing traditional methods, before testing improved methods. The behaviors presented for trial constitute the closely linked sequence of motor and task training activities commonly recommended and practiced in many rural traditional African homes. Previous researchers had noted this focus on motor development and useful tasks, but not explored or documented it in detail as a systematic logical training sequence constituting a "curriculum," as defined above.

As shown in tables 1 and 2 below, the mothers of infants of each age (column 1) were asked to try out the researchers' understanding of their own cultural practices (column 2), give their impressions of the practice and its difficulties and dangers (columns 3 and 4, and suggest adaptations (column 5).

The positive ratings in the impressions column confirm the importance of each practice, whereas the difficulties and dangers column and the suggested modifications columns provide additional information on the timing of the age progression and the ways in which the mothers strive to train their children.

DESCRIPTION OF THE ABILITIES CREATED BY THE TRADITIONAL LOCAL CURRICULUM

From prior research using semi-structured observations and questions to mothers, the immediate abilities for which the 0-30 month curriculum below prepares the children in traditional rural families were identified and listed as tasks that in the 0-3 year old age were mastering progressively (see Figure 1). Thus the information presented in this figure presents observations and mothers' reports of the levels of acquisition of these skills by children living in rural areas. This set of abilities marks the beginning of children's participation in household maintenance, errands and personal care. This research is not exhaustive, as these children also mastered tasks related to collecting firewood, animal care, farming, food processing, crafts, etc.

In order to master all of these skills, the child undergoes a traditional curriculum that contains the components shown in Tables 1 and 2. These tables summarize the TIPS results from 40 children in the format of the recording sheets used by a TIPS facilitator who visited each mother to negotiate with her to try for one week the behaviors corresponding to the age of her child. The facilitator then returned at the end of the week to collect her evaluations, comments and further detailed information and suggestions based on conscious trials of her traditional practices.

DESCRIPTION OF THE FIRST TWO AND A HALF YEARS OF THE TRADITIONAL LOCAL CURRICULUM

Table 1: Motor curriculum 0-12 months and TIPS feedback from mothers

1. Age Months	2. Tested Behavior	3. Mother's impression after trial	4. Difficulties and Dangers	5. Adaptations
0,5	Stretching arms and legs	Advances motor development	The child can't yet do it alone	Facilitation
1	Massage	Advances motor development	The child cries	Facilitation, need to train certain mothers
2	Massage		The child doesn't like it	Lessen frequency
3 - 5	Vertical position, sitting between the legs of an adult or in a tub with cushions	Advances motor development, "the child who sits early walks early, and the child that walks early lessens the load of work and helps his mother."	None	Lessen frequency
4			Requires surveillance	Modification
5 - 6	Move on his stomach towards a desired object	Interests the child Advances motor development	At first, difficult for the child, requires surveillance, The ground must be down	Diversify the toys
6 - 9	Crawl to obtain objects, comes when called			clean
9 - 12	Stand up straight; walk with help by holding both hands. The child walks with help by holding 1 hand. He/She walks alone and is introduced to dance rhythms.	Advances motor development	Dangerous and requires surveillance, scares the child	Supervision, progression
12-14	Walks with help, and then independently. Starts to follow orders	Autonomy, becomes more useful because child begins taking orders	Difficult for the child	Don't push the child if s/he is scared, give him/her more time
+14	Stages of motor development are integrated into instructions and orders- see the next section			

Table 2: Errands and chores curriculum 6-30 months with TIPS feedback

1. Age in Months	2. Behavior tested	3. Mother's impression	4. Difficulties and dangers	5. Adaptations
6 - 12	First commands : "take," "give," and "come" (these were not suggested by the interviewer, but later explained by the mother)	Other children teach these to the baby	None	Children also crawl to show baby how to do it
12 -14	Walk alone Begins tasks and errands	Useful to his mother	Child is afraid	Make the tasks easier, show him how to do them
15 - 17	Obey 2 step commands/tasks-errands	Not easy	Child's independence sometimes dangerous	Socialization, have her do things with other children
17 - 18	2-step tasks/errands Self care	Not easy Teach child to put away her own things Independence starting 17 mo	Walking in the sun tiring for the child	Take it easy on child Follow-up starting to make child responsible, gradual progression
19 - 20	Tasks/errands, self-care	Independence increases	Still can't do certain things	Do tasks with other children, practice by repetition
21 - 24		Parent's pride in child starts at 21 mo		
25	Tasks using water Buys things by himself Self-care advances	Useful to his family	Sometimes refuses to do things	Socialization by other children

DISCUSSION OF FINDINGS OF RESEARCH ON THE TRADITIONAL MOTOR AND TASK CURRICULUM

Teaching and learning the steps of motor development: The mother appears conscious of each emerging motor skill and those that should follow and tends to encourage these developments. In encouragement and scaffolding, mothers are sometimes one or two steps ahead of the real skills of their babies. They often comment on these moments, as one mother said, "I would like him to be able to do what I try to teach him, but for the moment he can't, he's certainly not ready to take

on the next step, he still needs a little time, but personally I would like it to go a little quicker.”

Until the age of 4 months, the baby remains mostly in the arms or on the back of adults who, through manipulations, frequent movements, and culturally prescribed massage, try to accustom his or her body to the practice of physical and motor exercises. Practically all mothers recognize that these activities, done correctly, permit a significant advance in physical and motor development of a child. Mothers and other family members begin, at 3-4 months, to give gestural and verbal instructions to babies, helping babies to succeed in grasping, sitting etc.

Contrary to the first year, where learning focuses mainly on gross and fine motor capacities, the second year consists of a more practical goal of integrated motor performance, task performance, and language and role development. Simple commands (for example: bring me the bowl) simultaneously teach body and hand coordination, task performance, word recognition, and the role of the child as mother's helper. The usefulness to the mother of the child's task performance increases with each successive age, along with his increasing mastery of complex messages, (such as: “soak the dishes in the tub”). Thus, the child begins to carry out messages that require greater independence, such as fetching water, and purchasing items outside of the house.

In an environment without maids and modern appliances, African parents actively facilitate the children's first motor skills, at all phases of development, enabling the child to reach early motor autonomy. The parent molds the child's use of each new skill as it emerges. This molding process teaches the child to perform appropriate social greetings and household tasks. A key part of the molding procedure is teaching the words that specify the social greetings and practical tasks to be performed. In this way, the fundamental role of parents as “first educators” is to ensure that their young children acquire the “abilities, attitudes, habits, and other knowledge” required to succeed in their cultural and technological environment. Mothers do understand and explain the dangers of shaping the use of motor skills when they first appear. It must be done with much attention and precaution, and without too many expectations so as to avoid discouraging or shaming the child who is not yet ready.

TIPS trials in the traditional domain of Cultural Values and Good Manners

The Cultural Values TIPS resembled the motor and task skills TIPS in clarifying the existing traditional curriculum. However, apart from the hand-shaking begun at 4-6 months, this curriculum is not age-specific enough to present in finely age-graded tables during the first and second years of life. Of mothers participating in our operational research study of 3-year-olds, 75% responded positively to a question whether they taught their child good manners and values, and this teaching often was observed within and outside of the TIPS (see Tangwa: Chapter 7, This Volume). At 6 months, babies learn, “reaching out one's hand” to greet others.

By 9 months, the rules of what is permissible and what is forbidden are taught and enforced. From about 16 months teaching and reinforcing greetings and taboos begins and remains habitual during childhood. Caretakers often encourage and praise the child in order to reinforce new, positive attitudes that s/he acquires. From about 3 years values-training introduces and stresses respect for the seniority rules set by the child's date of birth, and teaching later-birth-date children to submit to those born first. Meals around the family bowl teach these values non-verbally, but through quality of food offered the child and through "eye language." By 4 or 5, children may also be told it is their duty to hold and stabilize the family bowl during the meal, or to share at a children's bowl.

As the child starts speaking, or before, mothers begin to sing traditional nursery rhymes, to talk about the benefits of respecting others, and to introduce values related to glory and pride by reciting and teaching the child his/her genealogy. Grandparents, older siblings and other family members participate in teaching values and manners, since child care and education involves the extended family and other community members.

Other tips analyses

Similar TIPS investigated the same types of information relating to language and critical analytic skills. The language and analytic TIPS ("teaches your child to speak" and "teach your child to think"), however, went beyond traditional skills. They were classic TIPS attempts to explore parents' capacity, and willingness to adopt new behaviors. The traditional curriculum, which dates from the preindustrial era, does not introduce the full set of abilities in the modern curriculum, because these abilities prepare the child for post-industrial technologies.

SUMMARY AND DISCUSSION OF THE RESULTS OF THE TIPS TRIALS IN THE LANGUAGE AND ANALYTIC SKILLS

We are continuing this research, and are exploring with parents and other caretakers how they can best successfully integrate the traditional and modern domains in order to prepare children to succeed in both worlds, or in the modern world while improving it with traditional values.

We summarize here only basic distinctions learned from TIPS language and critical thinking trials. Mothers were very agreeable while listening to the "improved practices" they were asked to try, and some appeared to understand the concepts. However no spontaneous practice of new recommended language or technical learning behaviors was seen during the researchers' visits. In fact mothers of 0-2 months olds told researchers that the family ridiculed them so much when they talked to the newborn infant, that they couldn't continue.

"Teach your child to talk" TIPS: Bringing children's language skills up to international norms, requires expanding children's vocabulary both through speech

and by pre-literacy reading activities teaching image and symbol recognition. Inducing reflection and critical thinking enables infants starting at birth to discover scientific relationships as they develop eye-hand coordination, and logical analytic capacity in observing moving objects and patterns and manipulating technical toys. These essential domains of language and cognition need early and continuous development to prepare a child to succeed the world of high technology.

Parents already actively teach the names of family members to young children, sometimes naming them from photo albums. However, learning the names of objects is perceived to be a very different exercise. It still now is carried out by embedding the names of objects into the messages and commands that adults use to teach errands, chores and obedience together, noted above. All but the most educated members of the population were found to refuse to teach their children the names of objects outside of the context of commands, even if they understood the importance of teaching vocabulary.

Remaining locked in the old way of using instructions and orders to teach vocabulary requires much time and energy from the mother, and often she is the only one invested in carrying out these activities with her own child. As a consequence, African children tend to develop a smaller vocabulary than children in other countries whose parents start before the baby talks, to directly teach them the names of all the objects around them. Recent research by Ortolano (in press) found that American mothers of 3 year olds responded 70% of the time to the things their children said and sounds they made, whereas mothers of 3 year olds in Yoff Dakar, responded to less than 3% of their children's utterances. This deficit in the number of words to which children are exposed places them at high risk of not meeting the international norms currently in force. According to these norms a child of 3 should passively recognize 1000 words.

Learning critical thinking by manipulating objects through play: TIPS for the youngest consisted of proposing to mothers to hang fabrics with vivid motifs and small toys above the place where the baby lies, looks up and can touch or try to touch them. In industrialized countries this "play," keeps the baby happy and lets her mother work nearby. The sitting or crawling baby is on the floor, on a clean, safe surface, manipulating toys. The mother works freely while verbally encouraging the infant in his/her play.

The TIPS uncovered the fact that babies often are held or carried on the back because mothers do not know how to make safe surfaces and toys available for them to play on the ground, and don't have time to play with them directly. The mothers also did not know that they had the responsibility for creating a safe environment and providing learning toys to their babies to manipulate.

What 21st century parents must learn in order to prepare their infants and young children to succeed in school and in their future livelihoods?

1. Parents must learn how to add frequent spoken language, verbal explanations and verbal discipline to the old methods of physical demonstrations and commands that prepare children for their social and economic roles. The old, silent ways tend to train children in obedience and in learning by observing and imitating correct behavior without explanation. But modern life, particularly in the cities, has too many places where a child can wander away from home and too much information to make it safe to continue in this way.
2. Parents must learn from modern scientific research to make safe, inexpensive educational toys always available to their infants and toddlers, since infants learn like “scientists” by exploring shapes, weights, textures, and the movements of objects with their hands and mouths. This exploration prepares the baby’s brain to succeed in mathematics and science.
3. Most importantly: Parents must learn to clearly recognize and operate from two separate seniority systems or ladders, the new based on literary and scientific learning, while the old is the ancient seniority system, based on life experience, adult wisdom and years of managing the younger generation. Modern children everywhere climb higher on the new ladder than their parents. From a young age, for example, they use a cell phone more easily than their parents. For parents to maintain protective control of their children until adulthood, their age-based wisdom must always remain senior to their children’s’ “sprouting wings” of book-based or technical knowledge. Children must remain obedient to their parents in order to succeed in life. Parents must learn to control their children, using explanations and modern forms of punishment. Like traditional parents, modern parents must take full responsibility for forcing their children to work and obey them. Modern parents make young infants “work” by stimulating them to “speak” and by keeping educational toys and pictures always in the baby’s vision and in her or his hands. Children can only rise to their highest potential in school, when parents control their child’s study hours at home. Parents assure that the child obeying her teachers by completing daily homework, and make sure the child goes to sleep early enough to learn well at school the next day.

CONCLUSION

The data collected in this study show that a curriculum of endogenous knowledge and practices exist, which essentially relies on learning through orders and observation. However, it is possible to improve and enrich these practices by adding the knowledge and products of modern science. In this way, adults and children are able to embrace important technical capacities and educational achievements adapted to the current context of the contemporary world.

These considerations allow us to position the parental education as a key transversal element of education systems in Africa. The contents of this parent

education should focus on preserving the wise practices that parents already know while using competency-based teaching methods to instruct them in each of the new skills required to participate in modern global communications and meet technical and scientific standards. They should also take into account cultural, linguistic and socioeconomic identities and focus on children with special needs.

EXERCISES

1. Engage family members and friends to discuss the differences in seniority systems between having a high education vs. having life experience in social customs, business practices, good values and managing people. Are less educated parents responsible for the control of more educated children and for forcing them to practice good values?
2. Conduct a survey in your immediate environment (family or community) to:
 - Identify the skills a child should have at 3 years, distinguishing, dividing them into 3 categories (mostly traditional, both modern and traditional, and mostly modern):
 - Identify, among the practices you have listed, those that stimulate the motor, language, cognitive and social development of young children (0-3 years);
3. Based on knowledge that you have pertaining to the characteristics of child development, indicate how can we enrich certain practices that you consider beneficial;
4. Submit an education program for parents of children 0 to 3 years which includes both the content of traditional and modern curricula for early childhood.

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Chapter 10

**PROMOTING CHILDREN'S DEVELOPMENT AND RIGHTS:
LESSONS FOR TEACHERS IN SOUTHERN AFRICA**

Roderick F. Zimba

OBJECTIVES OF THE CHAPTER

This chapter intends to enhance Southern African primary and secondary school teachers' capacities to:

- 1) relate teaching and learning to their learners' developmental needs and rights;
- 2) apply strategies of how to meet learners' needs from the Southern African social-cultural perspective; and
- 3) demonstrate how to stimulate learners' overall psychosocial development and well-being from the contemporary African perspective and belief systems.

Based on lived and contextualized circumstances, the chapter is organized into the 7-13 years learner developmental group and the 14-19 years learner developmental group. The chapter's content is presented in a manner that informs and advises teachers on what learners developmentally need during the two developmental phases and on what they can concretely do to meet the needs. Moreover, the chapter presents in one of the sections below teacher education implications arising from the developmental, pedagogical and learning needs of primary and secondary school learners. These implications are sourced from educational reform policies being pursued by countries in the Southern African region.

THE NEEDS OF LEARNERS AGED 7-13 YEARS

In general, primary school learners need love and affection, new experiences, praise and recognition for their accomplishments (Woodhead, 1996). The needs manifest themselves in intellectual, social-emotional and moral areas of development. Development in these areas is influenced by the social-cultural environment (Ohuche and Otaala, 1981; Otaala, 1995).

In the intellectual development area, learners aged 7-13 years need to learn, explore and use language to interact with their parents, siblings, peers and teachers and gather information from the physical and social environments in more sophisticated ways than they used to in pre-school. For instance, they need not only to learn language further but to use it to learn number and reasoning concepts and how to read and write. As they learn these things, it is critical that the language of the home and the language of the school is the same. If this is not the case, primary school learners should be supported by teachers, parents and other caregivers to learn the language of school instruction. Teachers in Southern Africa should use available community resources to support the learning of the language of school instruction such as English. It should be acknowledged that in most Southern African countries, this suggestion, although reasonable, would be difficult to implement due to the fact that the language of the school is usually not used in the family, in church, the peer group and the general community. To complicate matters, even if a local language or a group of local languages are used as media of instruction, a

number of teachers and learners are not necessarily conversant with these languages. The cases of Namibia (Ashton, Matengu and Kalenga, 2008) and South Africa (Donald, Lazarus and Lolwana, 2010) *Educational psychology in social context: Ecosystemic applications in southern Africa. 4th Edition*. Cape Town:Oxford University Press. Illustrate this situation. Suggestions on how to handle the language issue in education are provided in the next section.

A second aspect of intellectual development at this stage is that learners are now less egocentric (i.e. self-centred) than they were during the pre-school years. They can now separate their views from those of others. They also can make logical deductions and inferences about causes of events. Their limitation is that they mainly engage in this reasoning in concrete ways (Mwamwenda, 1995; Mwamwenda, T.S. and Mwamwenda, B. B., 1989). This is particularly the case for learners aged 7-11 years. To effectively communicate and interact with them, teachers and other adults should use methods that benefit from all sensory information. Examples of such methods are simulation, role play, modeling and the use of interactive audio-visual aids in the form of puppets to communicate teaching points. Doing this is important because primary school learners need to use both their minds and hands to touch and feel things, see concretely what is being talked about and hear sounds to appreciate them. They learn, understand and remember better when they can do things, are guided to solve problems and not have problems solved for them and when they actively participate in their own learning.

In indigenous African education, this was easily promoted by employing the principle of reciprocity as a medium of development and learning. Through direct teaching, demonstration, observation, exposition, reflection and mentoring, families and communities, in a pastoral and corporate way, stimulated and promoted children's development. By using all these strategies, children were encouraged to participate in their own development (Zimba, 2002; Nsamenang, 2008; Ocitti, 1973, Worthman, 2010). Although not well applied, this mode of learning is translated into the learner-centred education approach by education systems in Southern Africa.

Social-emotionally, learners aged 7-13 years need to understand who they are, what they perceive to be responsible for their successes and failures, what abilities they have, what they are able to achieve and to appreciate their own worth and how others value them as persons. They also need to know what schooling requires of them.

To understand who they are, learners come to realize that others have views on their personal characteristics. For example, they can be viewed as persons who are kind, helpful and cooperative. From this, they build a view of themselves. In addition, they come to understand feelings of shame, guilt, rejection, being unwanted and hated by others. To form viable and positive images of who they are, learners need support from parents, other care givers, teachers and peers. For many communities in Southern Africa, this process of personality development is anchored

onto the ethic of human solidarity and oneness. In this ethic, corporate existence in envelopes of related, interdependent and linked persons is emphasized. In this way of existence, people become people with others and not as individual entities (Zimba, 2002). Primary school teachers should take this into account when supporting their learners' personality formation and development. How this principle can be used is explained in the next section.

Primary school learners experience success and failure in varying degrees. From this experience, they can learn either that they are responsible for their own success or failure or that external factors are responsible or that they are not in control of their achievements. Learners need guidance and direction from teachers, parents and other caregivers to develop confidence in their own efforts, abilities and perseverance to succeed.

From the corporate existence point of view, learners should not only be helped to develop the belief that they are in control and that they have the ability to succeed but also to believe that they can do this in cooperation with other learners. The Southern African spirit of human solidarity and oneness should permeate teachers' support of their learners' 'personhood' formation. They can do this by using teaching methods that encourage learners to cooperate and collaborate with each other when tackling learning tasks. The challenge is to balance this delicately with the principle of and requirement for individual achievement and progress in life.

A sense of self-worth and the perception that one is valued by others develop from feelings of competence, earned achievements and successes. One can experience academic, athletic, social and aesthetic competence. A low sense of self-worth can arise from feelings of incompetence and repeated exposure to failure. To develop realistic senses of self worth, learners in primary school need to experience some amount of success and learn to understand that they are in charge of accomplishing tasks (Zimba, 2003). To foster this, teachers should assess learners' work in a manner that encourages self appraisal and self-reinforcement. Teachers could also use the principle of scaffolding (i.e. providing learners with means of how to learn on their own) when promoting the development of self-worth amongst learners.

Morally, learners aged 7-13 years need to understand what is right and what is wrong. They need to understand that rules are established to coordinate social interactions, govern behavior, avoid confusion and prevent harm. Teachers should note that learners aged 7-9 years understand actions to be wrong when those in authority say they are wrong and when they do not satisfy the learners' needs. Older learners view actions to be wrong when they do not please or help others. This understanding of rightness and wrongness of actions is inadequate because a number of actions can be wrong irrespective of whether those in authority say they are right, whether or not they meet the individual interests of learners who commit them or are pleasing and helpful to others. For instance, stealing, lying, cheating,

bullying others and cruelty to others are inherently wrong (see Tangwa, Chapter 7, this Volume). They cannot be made right by a teacher, parent, or caregiver declaring that they are right. However, most primary school learners do not understand the concept of wrongness in this way. They should be guided to acquire higher levels of moral thinking through role-play, perspective taking and conflict resolution discussions amongst learners and their caregivers (Zimba, 1994).

Another aspect of moral development to consider is the evolution of the understanding that other people can feel pain, hurt, grief, sadness, negative effects of unfairness and any other forms of distress (i.e. the development of empathy). This is also about appreciating and caring enough to relieve others from the distressing and discomforting circumstances. What primary school teachers should realize is that this empathy does not come naturally to learners at this stage of development. Although they have the ability to take others' perspectives (i.e. be in other people's shoes), they need to be placed in situations where they would be required to care for or worry and get concerned about individuals in distress.

In Southern Africa, where a large number of primary school learners live in difficult circumstances emanating from poverty, HIV/AIDS and other diseases, teachers need not go too far to find individuals in distress. What the learners require is to learn how to help those in need. For them to model the caring stance, primary school teachers should be helpful to and concerned about individuals in distress at school and in the classrooms. This has always been the African way.

SUGGESTED STRATEGIES FOR MEETING DEVELOPMENTAL AND LEARNING NEEDS FOR LEARNERS AGED 7-13 YEARS

When teaching learners at this level of development, primary school teachers could enhance their work by taking actions that follow.

I. Learners in the early grades of primary school learn more effectively by being instructed in their home languages/mother tongues. When this cannot be enforced, steps should be taken to ensure that learners master the unfamiliar language of instruction well enough to learn how to read and write in it. To see to it that this is done, teachers should monitor the reading and writing progress of junior primary school learners. To prevent the development of reading and writing difficulties, problems identified should be dealt with promptly. However, teachers should have the capacity to do this. The situation in most Southern African countries is that several primary school teachers are not sufficiently prepared in teacher education institutions to support learners from different language backgrounds. In Namibia, for example, many primary school teachers are not trained to teach in the mother tongue and there is a lack of teaching materials in the mother tongue (Ashton, et al., 2008). Educational systems in the region can only effectively promote primary school instruction in the mother tongue if teacher education institutions are enabled to provide training in teaching in the languages.

II. To take advantage of learners' tendency to think concretely, teachers should encourage parents to foster development and responsibility in the learners by asking them to perform household chores. These may for instance include washing dishes, doing the laundry, cleaning their bedrooms, cleaning the yard, watching and caring for infants and toddlers and running errands. In rural areas, learners could also be asked to tend their families' livestock. Learners could perform these chores either individually, in groups under the supervision of parents or work cooperatively in groups of peers (Mwamwenda, 1995). From the indigenous African perspective, this would be applying the principle of reciprocity that was discussed earlier in this chapter. The chores should be used as a developmental and learning tool. This is the African view on this process (Ocitti, 1973; Zimba, 2002).

To help learners develop feelings of self worth, primary school teachers should:

1. praise the learners' achievements and desired behaviors of not giving up early but completing challenging homework assignments;
2. encourage learners to communicate openly so that problems can be solved;
3. encourage learners to accept consequences of their unacceptable behavior and mistakes so that they can fail on tasks and in behaving appropriately without feeling too much stress or fear of loss of approval and love;
4. empathize, support and encourage learners to flexibly face and confront difficult situations and problems by seeking help instead of continuing alone and by sharing feelings with friends instead of continuing to suffer alone in anger or fear.

To facilitate learners' development of the understanding of the inherent wrongness of undesirable behavior, primary school teachers should:

1. clarify the basis for rules and expectations of acceptable behavior;
2. behave in such a way that they model consistent behaviors that communicate values of the need for acceptable behavior and respect for rule-governed behavior;
3. encourage learners to care and be concerned for those who grieve, innocently suffer pain and harm, the poor and hungry, the displaced, the homeless by discussing their situations, participating in benevolence activities of, for instance, volunteering to help distribute donations to the needy and publicizing their adverse conditions to the public and comforting younger learners and peers in distress;
4. develop internal self control in learners by expecting them to monitor and avoid unacceptable behavior and by consistently and fairly approving desirable behavior and disapproving undesirable behavior.

THE NEEDS OF ADOLESCENT LEARNERS: PROMOTING AND STIMULATING DEVELOPMENT AMONGST ADO-LESCENTS AGED 14-19

The adolescent period is a transition period in which the child evolves from childhood to adulthood. During the period, the child's social-cultural context, his or her developing body and mind interact to produce needs and adjustment problems some of which follow.

1. One of the main developmental tasks during adolescence is identity. All adolescents, including those in Africa (Nsamenang, 2002), grapple with the development of the understanding of who they are and on the basis of this work towards what they would like to become. They spend a lot of time questioning, exploring and reflecting on who they are or who they would like to become as persons, men or women and members of particular ethnic, political, professional and religious groups. To work through all this and to avoid being confused and developing into maladjusted persons, adolescents need guidance, help and support from secondary school teachers and other adults. This support must be informed by, in our case, the Southern African world views which are not uniform. Notwithstanding this, the African philosophical position of: "I am because we are" can be applied to the development of adolescents in Southern Africa (Mbiti, 1990; Nsamenang, 2002; Zimba, 2002; Mbeki, 2005)

2. Physical changes of puberty during adolescence include menarche (i.e. first menstrual flow) in girls and spermarche (i.e. first experience with ejaculation) in boys. For a number of adolescents these experiences can be frightening and worrying. Adolescents need support and information from teachers to understand the meaning of the experiences. Teachers should also realize that adolescents may have difficulties with arriving at these milestones either too early or too late. In Southern Africa, adolescents undergoing these developments have the added hassles of contending with initiation ceremonies of different kinds. In Malawi and Zambia for example, girls who reach puberty are, in a number of Tumbuka, Chewa and Nsenga families, required to undergo chinamwali initiation ceremonies. In South Africa, the Xhosa require that boys attend traditional youth camps after which they are entitled to be called men. Because there are positive and negative aspects of these rites of passage, teachers should be familiar with controversies associated with them in order to guide their adolescent learners adequately (Zimba, 2002; Phiri, 1998).

3. Adolescents tend to express mood swings by sometimes shifting quickly from being angry, irritable, sad and depressed to being happy. Although in the past this was mainly associated with heightened hormonal activity during adolescence, it is now understood that the shift in moods relates, in addition, to the adolescents' social experiences and the speed with which they move from one activity to another (Berk, 2000). For instance, it has been shown that adolescents expressing negative moods tended to be going through negative life events such as difficulties in getting

along with parents and teachers, disciplinary problems at school and difficulties in relationships with peers of the opposite sex. Because of this, adolescents need teachers to understand challenges of life they are going through. Moreover, there are particular adolescent related issues that teachers in Southern Africa should be sensitive to. For Namibia and other countries in the region, these issues include teenage suicide, alcohol and drug abuse, HIV infection and AIDS amongst adolescents and orphanhood. In order to sufficiently support adolescents going through these problems, secondary school teachers should be proficient in counseling and guidance that is informed by the region's ways of understanding these problems (Wessells and Monteiro, 2000; Harkness and Super, 1994).

4. A major problem that adolescents experience is understanding and handling their sexuality. Issues of forming and holding attitudes towards sexual activity, understanding relationships between love and sex, peer acceptance or rejection and sex, fitting in groups and sex, popularity and sex become complex and difficult to handle during adolescence (Zimba and Mostert, 1993; Zimba and Likando, 2010). The situation is exacerbated by the observed link between frequent sexual activity and early physical maturation, relational problems in the family (e.g. parental divorce or family instability) pressure from sexually active peers and older siblings, poor school performance, delinquency, alcohol and drug abuse and lack of understanding of consequences of unplanned sexual activity. All these things may challenge the adolescents to such an extent that they become confused, anxious, depressed, and pressurized to engage in acts that are ordinarily unacceptable to them. As a result, they become vulnerable to sexually transmitted diseases such as HIV/AIDS.

5. In the Southern African region, teachers should base their support on the indigenous and prevailing cultural conceptions of sexuality. Malawian and Zambian teachers, for instance, should make informed judgments about whether or not sexual activity during some sessions of initiation ceremonies for Chewa adolescent girls constitutes sexual abuse (Phiri, 1998). In a similar way, Namibian teachers should carefully counsel adolescent girls who may be forced by some ethnic tradition to engage in sexual activity (Talavera, 2002).

6. To test boundaries and to experience independence from adults, a small number of adolescents may behave aggressively and engage in delinquent acts of drug and alcohol misuse, defiance and disobedience, vandalism and impulsive sexual activity. Others may direct their conflicts and problems with others and society in general inwardly and become withdrawn, depressed and anxious. Teachers need to understand how to work with adolescents displaying these varied responses to problems of growing up in Southern Africa where social-political instability (e.g. in Zimbabwe), economic hardships and poverty create conditions in which thriving developmentally is difficult to attain.

SUGGESTED STRATEGIES FOR SUPPORTING THE DEVELOPMENT AND LEARNING OF ADOLESCENTS IN SOUTHERN AFRICAN SECONDARY SCHOOLS

1. Teachers should patiently discuss educational, career or vocational, social relational and personal goals adolescents may contemplate while exploring ways of who they would like to become. As they provide the advice, teachers should warn adolescents against engaging in actions that would frustrate their plans. For example, they should warn adolescents against the misuse of alcohol and drugs, engaging in sex for recreational purposes, not paying adequate attention to school work and spending too much time on rather addictive habits of playing video/TV games, endlessly sending cellular phone messages and listening to purposeless music, chatting on face book and aimlessly roaming around. For Southern African secondary school teachers to do this adequately, they need to be in tune not only with the social cultural milieu where the behavior of adolescents is displayed, but also be alert to effects of globalization and the IT revolution on the youth.

2. Teachers should give adolescents space and time to work through their social-emotional problems that may cause irritability, anger, and psychological remoteness. They should only intervene when the adolescents wish to discuss issues that bother them.

3. To prevent the development of improper sexual activity, teachers should allow adolescents to openly ask questions about sexual matters. Such questions should be frankly answered and act as a starting point for ongoing dialogue about the proper conduct of sexual relations amongst men and women. One constraint in the Southern African context is that according to most cultural traditions, adolescents are not expected to discuss sexual matters openly with adults who are not their uncles, nieces or grandparents. In the past when values that supported these traditions were in place, adolescents obtained all the information they needed on sexual matters. In most communities this value safety net has broken down. Teachers should now act in loco parentis (in the place of parents and guardians).

4. Adolescent victims of sexual abuse should be gently counseled by teachers. The counseling process should help the adolescents involved realize that they are not the guilty party but the perpetrator of the abuse is. It should also free the victims from feeling helpless. In most Southern African countries, institutions have been set up to protect women and children from all forms of abuse, including sexual abuse. In addition, laws have been promulgated on rape and how to support victims of rape. Such laws exist, for instance, in Namibia, South Africa and Zambia. Teachers should refer sexually abused students to services that are available in their communities.

5. When improper conduct of sexual activity leads to teenage pregnancy, teachers should enable adolescents involved to have access to antenatal care and to education on how to care for young children. They should also be introduced to ongoing social services for adolescent parents to be. To ensure that teenage parents

continue with their education after giving birth, teachers should refer them to appropriate educational authorities.

IMPLICATIONS FOR TEACHER EDUCATION

A number of suggestions that have been made in this chapter assume that primary and secondary school teachers have capacities, competences, skills, expertise, experience and knowledge to enable them interact with their learners in supportive, caring, pastoral and empathetic ways that are informed by particular social-cultural contexts. In Southern Africa, this assumption is not warranted in several cases because teacher education institutions are not largely organized to prepare teachers who are informed about the indigenous ways of thinking, acting and relating to others (Otaala, 1995, Zimba, 2005). To begin ameliorating the situation, this chapter offers the insights that follow for teacher education.

1. To deal with the complex language situation that prevails in Southern African schools, pre-service and in-service primary school teachers should learn at teacher education institutions to teach in at least one mother tongue as a medium of instruction. In addition, they should learn to co-teach in multi-lingual classrooms. Teacher educational institutions in the region should be transformed in such a way that they can produce teachers who can function in this way. To ensure that this takes place, Universities and Colleges of Education in the region should undertake to produce and publish teaching and learning materials in the mother tongue.

2. The ethic of human solidarity and oneness that permeates childrearing practices in several communities of the Southern African region should be used in teacher education institutions as the basis of collaborative learning. Emanating from the philosophical position of "I am because we are", this ethic could also be a basic principle in education foundation courses in teacher education programmes.

3. African folklore in the Southern African region communicates moral reasoning through proverbs, riddles, puzzles, role play, perspective taking and simulation of conflict resolution discussions (Kumakanga, 1975; Ocitti, 1973). I propose that teacher education institutions in the region incorporate this type of reasoning in educational psychology, philosophy of education, life skills and social studies courses.

4. The ethic of empathy and care would be developed amongst teachers if Southern African teacher education institutions can include in their programmes content on communalism-an African way of reasoning in which aspects of benevolence, pro-social behaviour and concern for the welfare of those who grieve, hurt and suffer are applied with the common good in mind (Zimba, 2000, 2002).

5. One of the main messages of this chapter is that problems of growing up in adolescence should be understood from the Southern African social-cultural perspective. The understanding of this perspective should be based on particular

communities' world views and the prevailing youth culture. Teacher Education Institutions must foster this contextualized understanding in their programmes and staff research (Zimba, 2009).

AFRICAN CHILD RIGHTS ISSUES, CHILD DEVELOPMENT AND EDUCATION

According to Zimba (2002), the *African Charter* on the rights and welfare of the child communicates the message that culture is dynamic and should be sensitive to changing conceptions of harm. In upholding the integrity of the African conceptions of being, the charter, in articles 5, 11 and 31 mandates African nations to ensure the survival, protection and development of the child, the preservation and strengthening of positive African morals, traditional values and conventions and to raise every child in such a way that he or she has responsibilities towards his or her family and society (Naldi, 1992). The teacher educational principles that were presented in the preceding section should also be viewed from this perspective on African children's rights. From this perspective, African children's best interests are both individualized and group based. This is consistent with the human solidarity and oneness ethic that was discussed earlier in the chapter. This position should be captured in Southern African teacher education programmes.

CONCLUSION

Zimba (2004) expresses the view that the modern African school is home to teachers and learners with diverse needs, problems and backgrounds (Donald, Dawes and Louw, 2000). A number of learners do not leave their problems at home when they go to school. For them to adequately attend to diverse needs of their learners, teachers would need to be flexible, innovative and adaptable to dynamic and fluid circumstances. To do this, they would need to be open to new ways of practicing their craft. This cannot be done when tradition, custom and conformity are uncritically used as guiding principles for action and for responding to change (Hargreaves, 1997). In addition, Information and Technology (IT) and globalization have transformed the job of the teacher into a highly dynamic one. The teacher and the school no longer have monopoly on knowledge and learning. To be effective, the teacher has to keep up with rapid changes in IT and knowledge production, dissemination and consumption. Whether s/he likes it or not, the teacher has to confront inevitable change and with a sense of vocation, keep up with it. To do so, he or she must employ and be guided by values which promote change, renewal and transformation (Goma, 1997).

The current chapter goes beyond this position and illustrates how indigenous Southern African perspectives and educational principles can be incorporated in teacher education programmes in a manner that allows pre-service and in-service primary and secondary school teachers to view their work from their communities'

fund of cultural wisdom, lived experiences and circumstances. Moreover, educational reforms in the region should make use of this fund of wisdom. What should be avoided is the reification of this wisdom without adapting it to be in tune with the contemporary educational scene in the region.

EXERCISES FOR SCHOOL TEACHERS

1. Imagine that an end of the school term report for one of your learners indicates that he or she is performing very poorly in reading, writing and number work. How would you apply the learning principle of reciprocity to enhance the learner's performance?
2. How would you apply the principle of human solidarity and oneness to develop a sense of responsibility amongst your learners?
3. Imagine that a 17-year old adolescent has approached you to ask for advice on how to handle a friend who was pressurizing her to experiment with sex. By taking into account her level of development and her Southern African social cultural background, what advice would you give her?
4. Based on your country's social-cultural context and educational policy, what support would you give to a teenage mother wishing to combine caring for her child with going to school?

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Part IV

**FRAMEWORKS OF LEARNING
AND INTELLIGENCE**

How does learning occur and what is intelligence? If explanatory frameworks for learning and intelligence are not universal, then, Africa truly faces an education challenge of meshing African views on learning and intelligence with the mainstream theories of dominant Western narratives. In actual fact, African teachers and teacher trainers depend a lot on textbooks of education, child development, and intelligence that are based on Western theories and research. Until there are truly African textbooks on these and other concepts in education, some elements of cross-cultural research should still be used, because cross-cultural research or comparative education examines, on the basis of research findings, what is universal and what is culture-specific. The chapters in this section endeavour to present Africa-centric perspectives on intelligence, child development and educational practices or to, more than ever before, adapt and fine-tune established Western theories to the “facts” of African educational ideas and practices.

Accordingly, in chapter Eleven, Pierre Dasen presents an “integrated theoretical framework” by combining various Western concepts he has encountered over the years and African perspectives presented in several chapters of the Handbook. The main focus of his chapter is on culture, cognition and learning. It is integrative in having incorporated the perspectives of many Handbook authors on learning and intelligence with his research on Jean Piaget’s tasks with African children and adolescents. He reported African findings similar to those obtained by Jean Piaget and research elsewhere but there were some cultural differences. Ivorian babies, for example, showed a significantly faster development than French norms on some of the tasks; those babies had cultural opportunities to practice the skill as they were allowed to play with whatever was within their reach. This conclusion applies to well-nourished babies only; moderate malnutrition had a significant effect in slowing down the rate of development.

Chapter Twelve by Therese Tchombe identifies and discusses some theories of learning and attempts to show how they influence teaching and learning in African contexts. Given the essence of teaching as endeavouring to bring about quality learning, the author believes that teachers will find the chapter useful for classroom pedagogy. The author further expects that her chapter will better orient not only classroom teaching but also assessment of learning and the sustainability of quality assurance in pedagogic practices. She positions Benjamin Bloom’s (1956) pyramid of instructional objectives as the framework for the evaluation of learning outcomes and elaborates the contours and theories of human memory.

The disposition to cooperate with one’s peers is highly valued in many African cultures, including the rural Zambian community where Robert Serpell (Chapter Thirteen) studied intelligence and socialisation from the 1970s and ongoing, and the small town where he studied the Child-to-Child approach to basic schooling in the 1990s. His chapter explores its connection with socially responsible intelligence, health education and education for social responsibility. The author articulates the chapter to inspire and guide other teachers into designing and delivering much needed effective education for social responsibility in rural and urban African sociocultural settings.

Research into learning in indigenous African settings can shake up the many assumptions about learning, intelligence and cognitive stimulation. In Chapter Fourteen Therese Tchombe presents the cultural strategies for cognitive enrichment among the Bamiléké of Cameroon. The author identifies key strategies and practices in the Bamiléké culture for cognitive enrichment for sustainable

learning. She illustrates how educating children in the Bamiléké culture is interest-driven, revealing the forms of mediation strategies used to enrich children's reflective and creative thinking abilities and to encourage knowledge transfer. She points out the lessons to be learnt from the Bamiléké strategies for cognitive enrichment for the school system.

Chapter 11

CULTURE, COGNITION AND LEARNING

Pierre R. Dasen

INTRODUCTION

While teachers and teacher trainers may not be expected to have a full training as psychologists, they should have a good understanding of human development. Since most textbooks of developmental psychology are based on Western theories and research, it is difficult to decide what is and what is not appropriate in Africa. Until there are truly African textbooks of psychology, some elements of cross-cultural psychology should be useful, because cross-cultural psychology examines, on the basis of research data, what is universal and what is culturally diverse.

“There is nothing more practical than a good theory”, as the saying goes. The best teacher training consists of providing a good understanding of theory, and some basics in research methods, which will enable the teachers to develop their own implications, appropriate to their particular context. In this chapter, I will therefore start with a general theoretical framework, particularly designed for the study of human development in cultural context. This framework is illustrated by some research findings on cognitive development and on learning processes. Along the way, I point out how teachers can quite easily collect their own observations to link these general conclusions to their particular contexts.

AN INTEGRATED THEORETICAL FRAMEWORK

The theoretical framework is presented in Figure 1. I call it “integrated” because it is itself a combination of various frameworks I have encountered over the years, and found useful in a variety of contexts (Dasen, 2003).

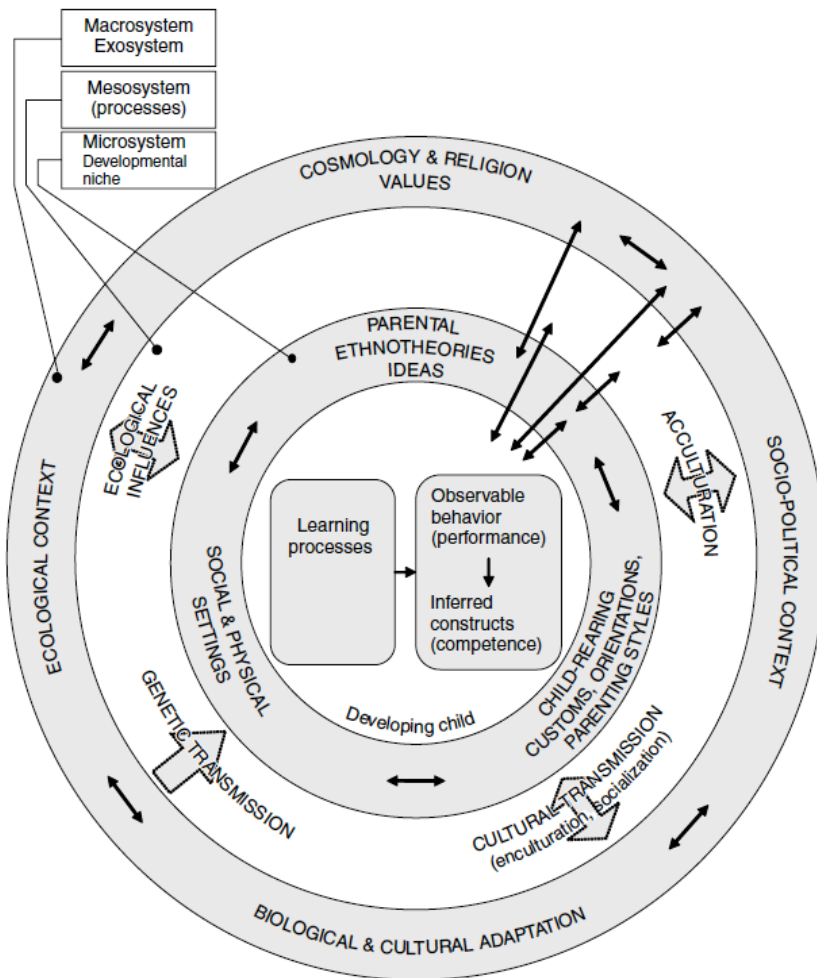
At the centre of the framework is the individual child, with his or her particular set of inherited and acquired dispositions. Surrounding the child, there is the micro-context in which development occurs, also called the “developmental niche”, a concept first formulated by Super and Harkness (1997) on the basis of their research carried out in Kenya. The niche has three components:

- 1) The settings, or physical and social contexts in which the child lives;
- 2) The customs, or culturally-determined rearing and educational practices;
- 3) The social representations or parental “ethnotheories” of child development. These are the ideas parents or other caretakers, or indeed all adults have about what they consider to be important in the development of their children (to be illustrated below).

The developmental niche is a system in which the component parts interact and function in coordinated fashion. Typically there is consonance among the elements of the niche, especially under conditions of stability in the society, but sometimes there are also inconsistencies, especially under the impact of social change and acculturation. Moreover, it is an open system where each component is linked with other aspects of the more general environment. The latter is represented in

the outer circle of the macro-system, which includes the ecological and socio-historical contexts to which each society adapts both biologically and culturally. The processes that link the phenomena at the group level to those at the individual level are shown in the meso-system. Among these, as educators, we are most interested in the processes of cultural transmission, notably enculturation and socialisation. In fact, this is how we can define education, not only as schooling but as the totality of cultural transmission (Dasen, 2008).

Figure 1: An integrated theoretical framework for (cross-)cultural human development. Adapted from Dasen (2003).



It would take many pages and even several chapters to go into the details of each of the components, and the research connected to these. Many examples mentioned in this handbook can serve as illustration of this theoretical framework, and in particular of the developmental niche. For example, there are the various child-rearing customs and practices: the use of narratives, conversation and storytelling, songs and dance, sayings, riddles and proverbs (see Akinsola; Esere, Omotosho and Idowu ; Gwanfogbe; Mweru; Tchombe, This Volume), or the importance of performing chores and errands (Barry and Zeitlin; Mweru; Nsamenang; Tchombe), while play and games are mentioned less often (but see Mweru). A very important aspect of African child-rearing, sibling caretaking (Nsamenang; Mweru), illustrates all three components of the developmental niche: this practice provides a particular social setting (contact with peers of different ages more than with adults) and reflects the parental ethnotheory that children are able to be nurturant and responsible at an early age (Barry and Zeitlin; Serpell).

The framework points out the importance of situating the child's development and education in a wider macro-context, which contains, for example, the cosmologies, religions and values that prevail in any particular society (Akinsola). These in turn are linked to the particular ethnotheories or social representations that caretakers, teachers and parents tend to share in particular social groups. The Shona, Ndebele, Xhosa and Zulu concept of *Ubuntu* (or equivalent terms) is mentioned in several chapters (Maunganidze, Kasayria and Mudhovozi; Mhaka-Mutepfa and Seabi; Phasha and Moichela) as reflecting compassion, reciprocity, dignity, harmony and humanity in the interest of building and maintaining community, conforming to standards and expectations of significant others, and placing personal desires below needs of the society. It is a moral principle of humanness, that promotes social responsibility and solidarity, sensitivity, selflessness, devotion to duty, and a vision of society founded on justice and equality. *Ubugabo* (being human, accepting responsibilities, respecting promises) and *Umubano* (social relations, belonging to group, solidarity, sharing) mentioned by Gakuba and Passini for Rwanda reflect very similar values, and so does *Omoluwabi* in Yoruba, which Akinsola mentions as a main goal of education, namely to form a complete human person and to be of good character, as shown by the respect of old age, loyalty to parents and local traditions, as well as by honesty, duty, sociability, courage and to be ready to assist and to work.

There are many publications on traditional education and child development as related to African cosmology and values (e.g. Santerre and Mercier-Tremblay, 1982). One author who deserves to be mentioned is Pierre Erny, writing mainly in French (but see Erny, 1973, 1981). He perhaps comes closest, as a non-African writer, to trying to understand African concepts of conception, childhood and the life cycle. For example, he explores at some length the implications of the belief in reincarnation.

For teachers, it is important to know about these various components of the developmental niche and about the overarching values that are linked to prevalent cosmologies and religions. Several of these are quite wide-spread over Africa, but others may be particular to specific settings, or may take on different forms. It is not very difficult to find out about these: one only needs to spend some time observing child-rearing practices, and talk to the parents about what they consider to be important for a child's development. When using such ethnographic methods, one should carry out these enquiries in different social settings (for example, there will no doubt be differences between urban and rural contexts), and with as many people as possible (there may be large individual differences), and one should do it with an open mind. This means that one has to take what anthropologists call "cultural relativism" as a basic principle, i.e. one has to make these observations without judging them as good or bad. Teachers may find this difficult, because they are used to telling others what to do, they often believe that they know the truth, about which they have to teach. It is indeed difficult to set aside one's own beliefs and values. One way to achieve this is to start with analysing one's own implicit values and ethnotheories (see Sall and Nsamenang, this volume).

Teachers and prospective teachers may at first feel overwhelmed by the complexity of such a theoretical framework, and find it too abstract. That is why it is important to try a hands-on approach, to take any one of the components, and start one's own reflections and enquiries about it. Take, for example, the physical and social settings component of the developmental niche. You can start with your own life history: what were the settings where you grew up? What was there to be experienced and learned? Who was around to be learned from? How does this compare to the settings your pupils experience nowadays? And are these settings homogeneous for all your pupils, or are there large variations in the families they come from? How are these variations likely to influence them in different ways?

You can ask such questions about each of the parts of the framework, and go out and ask questions, observe and find out more if you feel you don't have the answers. You can then start to think about possible relationships between the components. For example, from what you know about child rearing practices, how do these fit in with the physical and social settings? And how do these change (or not change) when the settings change?

As you familiarize yourself with the framework, it should help you to gain a better understanding of child development in context. The fact that the components are somewhat abstract will prove to be an advantage, because you can fill in the abstract concepts with the particular examples that are appropriate in your particular setting. In this way, the very fact that the framework is abstract and theoretical is what increases the likelihood that it will, in fact, fit everywhere. The overall structure remains the same, while the particular content may vary.

CULTURE AND COGNITION

When developing a psychological theory, most authors will assume that their theory is generally valid, even universal, and this quite often without any empirical test. This was true of Jean Piaget, possibly one of the most influential theorists of cognitive development (see, for example, Piaget, 1970). It is also true of the more recent neo-Piagetian theories, of the social constructivist theories based on Vygotsky, and even more so of the current trends in cognitive science and neuro-psychology. One advantage of Piaget's theory is that, for a couple of decades, it was put to empirical test on every continent, including Africa. This is why I choose to concentrate here on this theory (see Tchombe's chapter in this volume for a wider coverage).

Infancy: Sensori-Motor Intelligence

My research team and I started our own research in Africa with a longitudinal study of sensori-motor intelligence among Baoulé babies in Côte d'Ivoire (Dasen, Inhelder, Lavallée, and Retschitzki, 1978). What we found was that the development of the sub-stages that Piaget had observed in his own three children was essentially the same in the village of Kpouebo as they are in Switzerland or in France. Other research in Africa and elsewhere came to the same conclusion.

However we did find some cultural differences as well. Baoulé babies showed a significantly faster development than French norms on some of the tasks. [This conclusion applies to well-nourished babies; moderate malnutrition had a significant effect in slowing down the rate of development. See Dawes and Biersteker in this book for a discussion of the impact of poverty and malnutrition and Brannen for the effect of health status on the school progress of learners.] This was the case notably with the use of an instrument to reach for a distant object. In this situation, the baby sits on the mother's lap in front of a table, and an interesting object is placed on the table out of reach. Instruments such as a toy rake and a ruler are provided, should the baby wish to use them for pulling on the object (with the rake) or pushing it in a circular motion (with the ruler).

When we carried out behaviour observations of the daily activities of the same babies, we observed that they often had an opportunity to practice this skill; they were allowed to play with whatever was within their reach, including objects that Western mothers would consider as too dangerous, tools such as a knife or a cutlass, and they often used these as instruments. On the other hand, Baoulé babies often showed frustration when their mothers were prevented from reaching for the desired object to give it to them immediately, and some babies even pushed the mother's arm as if it were a (social) instrument.

Other studies on psychological development in infancy similarly show a direct link between the rate of motor development and the opportunity for practice, and this in relationship to parental ethnotheories and childrearing practices. For example, in many parts of Africa (cf. Barry and Zeitlin in this volume), sitting alone and walking are considered to be important developmental landmarks, are actively

encouraged, and occur on the average three months earlier than in France, while crawling is usually discouraged and is hence developed later.

Middle Childhood: Concrete Operations

In Côte d'Ivoire and in Kenya, we studied another aspect of Piaget's theory, the development of concrete operations. In one study (Dasen, 1984), we used 19 Piagetian tasks in three domains of thinking: conservation, elementary logic and space, in a study with 47 Baoulé children aged 8 and 9 years. Conservation tasks refer to quantification (of length, number, substance, weight, volume, and so on), and to the understanding that there is invariance behind apparent transformations. For example, given two glasses of the same shape with equal amounts of liquid, if one of them is poured into a glass of a different shape, is there still the same amount to drink or not? Elementary logic refers to relationships between objects, such as how they can be ordered (e.g. sticks of different lengths) or classified (e.g. so-called class inclusion: if you have five oranges and two bananas, are there more oranges or more fruit?). In the area of spatial concepts, Piagetian tasks deal with so-called topological space (e.g. the understanding of the relationships between objects as being inside, on, near, next to, etc.), projective space (taking into account angles and points of view), and Euclidean space (e.g. using a grid to locate objects, including the distance between them). In one such task, the child is asked about the level of water in a non-transparent container that is tilted in various positions; young children think that the water sticks to the bottom, slightly older ones think that it moves but don't know how, until finally the concept of horizontality is achieved.

The contents of the tasks were partly adapted so as to be familiar to village children, and the testing was performed in the local language. A principal component factor analysis showed a three factor structure, according to theoretical expectation, which is a clear indication of universality of the structure of concrete operational thinking.

The results also showed variations in the rate of development of different conceptual areas, according to which concepts are more valued in any given environment. For example, nomadic hunting and gathering people value spatial concepts more than quantification, while practicing agriculture, because goods are stored, exchanged and sold, seems to be linked to a more rapid development of concepts of conservation. Thus, Inuit children in northern Canada demonstrated a very rapid development of the concept of horizontality compared to the conservation of liquids, and for the sedentary, agricultural Baoulé children of Côte d'Ivoire, the opposite was found (for more details, see Segall, Dasen, Berry and Poortinga, 1999). In an eco-cultural perspective, these results are not surprising. Obviously, people value and foster those concepts and skills that are adaptive, and this is reflected in child development.

In this comparative research, cultural differences were maximised by choosing such vastly different groups as the Inuit and the Baoulé, but the conclusions are no

doubt valid for much smaller cultural or social differences. In other words, children come to school with previous knowledge that has been learned in their home environment, which may differ depending on what was available to be learned, and what was considered to be important. This knowledge is not necessarily the one that is valued in the school setting, and so it often gets ignored or is even despised. Teachers should try to be sensitive to this local knowledge, and build subsequent learning on it. For example, counting on the fingers in a base five (or a base twenty) number system is fairly common and natural; base ten has now achieved universal status, but it is not the only possible system. In fact, the understanding that different base systems are possible is important in mathematics.

Another important finding in these studies, important for teachers and the way they assess their pupils, is the fact that some children may actually have a particular understanding, but are unable to use it in a classroom situation. This is referred to technically as the competence-performance distinction in the framework of Figure 1. A child may have a competence, but be unable to demonstrate it in performance.

This important conclusion comes from several studies using so-called operational training techniques: children are given the opportunity to discover a concept through handling objects (similar to test materials) and interacting with the experimenter. Of course they are never told the “right” answer, which would be uninteresting, but they are challenged in their pre-operational thinking, and induced to discover the various dimensions of a task. We used training procedures for conservation, class inclusion and horizontality among 7 to 14 year-old Baoulé children in Côte d’Ivoire and with 12 to 14 year-old Kikuyu children in Kenya. The results showed a statistically significant training effect in each training group for each concept. In most cases where there was initially a “time lag” (an apparently slow development of a particular concept), training was sufficient to reduce or completely eliminate these lags. We found that training in one concept would generalize to other concepts, either in the same domain (e.g. training conservation of liquids to conservation of number or substance) or across some domains (conservation to class inclusion and vice-versa, but not to horizontality).

In some cases, training was very fast with the older children (12-14 years), leading to the conclusion that these children must have had the competence for the concept being tested, but were initially unable to display this in their performance on the task. The training situation helped them to “actualize” their underlying competence.

I conclude from this very brief summary of my own results (but I know of no other research, in Africa or elsewhere, that contradicts this), that Piaget’s theory of sensori-motor intelligence and concrete operations is indeed universal at the structural level. What I mean by this is that the sub-stages described by Piaget, and the type of reasoning these represent, are found everywhere and in the same succession. On the other hand, there are cultural differences in the speed of development of

particular concepts, depending on whether these are valued and fostered or not in any particular setting. These differences can be compensated by appropriate operational training procedures, which show that they are not permanent but in fact quite malleable. In some cases, children have the underlying competence for a particular concept, but cannot display it without some help.

These conclusions have important implications for teachers. Teachers can assume that all normal children have the possibility to acquire all basic cognitive processes, even though some children, depending on their socio-cultural background and previous experiences, may not necessarily be able to use them spontaneously in school tasks. The challenge for teachers and caretakers is to find the appropriate ways to help these children to either actualize their underlying competence, or to discover and acquire the relevant concepts through interactions with their physical and social surroundings.

The conclusions about Piaget's stage of formal operations are more controversial. Most research shows that formal schooling at the secondary level is necessary (but not sufficient) for this type of reasoning to develop; however there may be a methodological problem, in so far as the assessment tasks are very school like. There are a few studies that found formal operations in out of school situations, notably in the use of the African board game called variously *Awélé*, *Wari* or *Solo*. Tapé (1994) research will be discussed below.

Other research on everyday cognition (reviewed in Segall *et al.*, 1999), particularly on ethnomathematics (Dasen, Gajardo and Ngeng, 2005), shows that mathematical procedures acquired outside of school can be quite sophisticated, but they tend to be restricted to specific contexts, i.e. transfer to unfamiliar situations may be limited. Implications for teachers are that they should not only look for the knowledge children bring to school and value this knowledge even if it is different from what is usually taught at school, but they should also actively train the pupils to apply their knowledge to a large set of contents.

AFRICAN DEFINITIONS OF INTELLIGENCE

While we were studying the group of 8 to 9 year old Baoulé children mentioned in the previous section using Piagetian tasks and behaviour observations, we decided to also interview their parents on how they describe an intelligent child (Dasen, 1984; Dasen, Dembélé, Ettien, Kabran, Kamagate, Koffi, and N'Guessan, 1985). The Baoulé say that one can tell from a number of behaviours whether a child is likely to have *n'glouèlé* as s/he becomes an adult. A content analysis of these interviews produced the typology presented in Table 1.

Table 1: Components of *n'glouèlé*, the Baoulé definition of intelligence

Social intelligence		Technological intelligence	
O ti kpa	Willingness to help, responsibility, initiative, know-how	I gni ti klé klé	« His/her eyes follow everything » Observation, attention, speed of learning
Agyiè	Politeness, obedience, respect	I sa si ngoulèlé	Manual dexterity
O si hidjo	Speaking in public, Using proverbs	I ti ti kpa	«S/he has a good mind» Memory, luck
Angundan	Wisdom	O si floua	«S/he knows paper» Reading and writing, To be schooled

Each component could be illustrated by various examples and anecdotes. For example, a child who is *o ti kpa* could be a girl who gets home alone from the fields, finds that the dishes have not yet been washed, takes the initiative to wash them, and then competently starts to prepare the vegetables for the next meal. In Table 1, the components are subdivided into two groups, social and technological aspects, according to a suggestion by Alastair Mundy-Castle who was teaching in Nigeria at the time. Within each group, the components are listed in order of importance (frequency of occurrence). The social components represent 63% of the total, which shows that Baoulé parents value a child who fits in with community norms somewhat like an adult. This does not exclude the importance of more cognitive components, but these should be used in favour of the social ones, which is illustrated by the discussion some parents had about whether school intelligence was part of *n'glouèlé* or not. Most of them considered successful learning at school as part of *n'glouèlé* as long as the child would not use it for individual promotion but to further community goals.

Several other studies on emic definitions of intelligence have been carried out in Africa, and they all show some similarity, and notably the importance of social components. While there are local variations in the details, the overall phenomenon seems to be pan-African. In this book, Serpell deals with the concept of *Nzèlu* in Zambia, and Gakuba and Passini mention the Kinyarwanda concept of *Ubwenge* (intelligence, faculty of knowing, problem-solving, cleverness, know how) as well as *Umubano* (social relations, belonging to group, solidarity, sharing) and *Ukwibangama* (self-control, patience, perseverance, self-esteem). The concepts of *Omoluwabi*

(Akinsola) and *Ubuntu* (Maunganidze *et al.*, Kasayria and Mudhovozi and Brown and Shumba) relate to the same idea. Maunganidze *et al.* also mention research by Sternberg and Grigorenko in Kenya, with the Luo concepts of *Rieko* (academic intelligence) as part of *Luoro* (social qualities, respect, responsibility, consideration), *Paro* (practical thinking) and *Winjo* (comprehension).

The implications for teachers are that it is important to document in their own social setting the various “parental ethnotheories”, and in particular which indicators can be used to assess children’s development (see Gwanfogbe; Nsamenang; Maunganidze *et al.*, Kasayria and Mudhovozi). Such investigations do not need any complicated apparatus or research procedures, they only need care in avoiding some biases in interviewing because of what psychologists call social desirability, i.e. the tendency to guess what the interviewer likely wants to hear. In parents’ minds, teachers are prone to be associated with the “modernity” associated with school as an institution, and it is difficult to avoid this bias.

COGNITIVE STYLES

An extensive research program on culture and cognition, based mainly on adapting laboratory experiments to make them culturally more appropriate, was carried out by Cole, Gay, Glick and Sharp in Liberia (for a review, see Segall *et al.*, 1999). The authors came to the following conclusion: “Cultural differences in cognition reside more in the situations to which particular cognitive processes are applied than in the existence of a process in one cultural group and its absence in another.” Dasen and Mishra (2010, p.13-14) have recently reformulated this conclusion in terms of cognitive styles: “Cultural differences in cognition reside more in cognitive styles than in the existence of a process in one cultural group and its absence in another.” We speak of a cognitive style when a set of cognitive processes are all potentially available, but some are preferentially used rather than others. An important aspect of cognitive styles is that there is no value judgment attached, i.e. it is not inherently “better” to choose one style rather than another. This “choice” may of course be quite unconscious, and is influenced by many eco-cultural variables (as illustrated in Figure 1).

One example of an African cognitive style comes from Tapé’s (1994) research in Côte d’Ivoire. He starts with analysing the African traditional cosmology in which humankind is part of nature, as opposed to the Western conception (exemplified by Christian religion, but also by Islam) in which humankind is above nature and is thus allowed to conquer and control it. This leads to two types of reasoning, global and symbolic on the one hand, based on experience and geared to explaining the final goal of events, analytical and experimental on the other hand, geared to explaining causal effects.

In the empirical parts, Tapé presented schooled and unschooled informants with a number of Piaget’s tasks of formal operational reasoning. For example, in one such task, the problem is to determine which variables (length, section, thickness,

material, weight put at the end, etc.) influence the flexibility of rods. To carry out a proper experiment, one has to test one factor at a time, keeping all others constant. While about a third of the (14 to 16 year old) school children could perform the task, illiterate adults basically refused to deal with it, saying that, when they build traps in the forest, much depends on whether the sticks remain flexible for several days or not. Tapé (1994) formulates this in terms of a plural model of intelligence.

According to this model, each individual in every culture has at his or her disposal at least two ways of dealing with information with the help of two forms of intelligence: the analogical mode for a global, immediate processing, which is economical but lacks precision, and the conceptual mode for an analytical, precise but costly processing. Culture, through the impact of schooling and the contexts of learning can value one mode rather than the other. Rural adults show thought processes based on experience different from experimental procedures, that they develop in a particular spatio-temporal context, which limits their application to known reality. Schooling hence appears to be the environment most favourable for the development of formal and experimental reasoning, while the traditional illiterate environment is more favourable for the development of analogical and experienced reasoning. (p.208, athour's translation)

Another example is the research carried out by Scribner (1979) in Liberia on syllogistic reasoning. What she found was that illiterate adults could use this form of logic perfectly well, but would only apply it to premises in line with their social reality; if the premises were unfamiliar, they would either change them to fit reality, or refuse to answer. This is what Scribner called the empiric mode, as opposed to schooled informants, who accept to reason with any even unfamiliar premises in the so-called theoretic mode. In school, pupils get a lot of practice of dealing with unfamiliar and even hypothetical situations. Schooling does not produce new cognitive processes, but provides the training to generalize (transfer) existing processes to a wide range of situations. In other words, it produces a theoretic cognitive style.

The general conclusion that cultural differences reside in cognitive styles has important implications for teachers. For example, it means that there is not one type of cognitive functioning only (the one sponsored by schooling) but that other modes are equally valuable and adaptive in their contexts. Pupils who use these other styles should not be discouraged from doing so, but should be shown the alternatives, so as to foster flexibility in thinking.

CULTURE AND LEARNING PROCESSES

The theoretical framework presented in Figure 1 draws special attention to the need to study learning/teaching processes as they occur in different cultural settings (Ngeng et al. in this volume; Dasen, 2008). In informal or traditional education, for example, much of the learning occurs through incidental observation and imitation

(as described by Esere et al. in this volume) or through guided participation, where an adult (or older sibling) draws attention to what is to be learned. Rote learning (rehearsal and chanting) is to be found more often in traditional institutions such as Koranic schools (see Gwanfogbe), and sometimes as part of initiation (see Nsamenang). However there is also individual trial and error learning through self-guided activity (Dawes and Biersteker; Nsamenang).

It could be very interesting for teachers to find out more about how children learn in their everyday environment, particularly when they learn about specific skills such as weaving or pottery (as mentioned in the chapter by Ngeng et al.), and more generally in the domain labelled ethnomathematics (cf. Dasen, Gajardo and Ngeng, 2005). Learning in school is likely to be facilitated if teachers draw upon knowledge acquired out of school. This does not mean that such knowledge is sufficient, because it is often linked to particular contexts, and does not transfer easily to new situations. It is therefore important for teachers to practice explicitly the generalisation of knowledge, showing how the same process can be applied to many different contents.

CONCLUSIONS

To sum up some of the core take-home messages of this chapter:

1. Teachers may assume that all normal children will eventually have all of the basic cognitive processes available at the competence level. Some children may develop these somewhat later than others, and some may not be able to display these skills in school situations. Knowing that the potential is there, teachers should be encouraging the pupils to use these skills to their full.

2. There are socio-cultural differences in which cognitive styles are favoured or not. All of these styles are adaptive in some contexts even if they are different from those usually taught in school. Teachers should be encouraged to find out about the social and cultural backgrounds of the children they teach.

3. One does not need to be a specialised scientist to carry out “research” (see Roer-Strier and Strier; Oburu, and Tchombe and Nsamenang in this volume). Teachers should be given some training in how to interview parents and other adults in order to document the “developmental niches” in which their pupils have been growing up and continue to grow up. This includes the physical and social settings, the child-rearing customs and the parental ethnotheories, including values and cosmologies. The training should also include some observational methods, so as to explore the children’s skills and knowledge (such as mathematical concepts) they bring into school from their daily lives.

4. Child development occurs in a very complex eco-cultural system, in which some parts are common to a social group and others vary individually. The challenge is to understand and accept this complexity.

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Chapter 12

THEORIES OF LEARNING

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CHAPTER OBJECTIVES

At the end of this chapter you are expected to be able to:

- 1) Understand the value of classroom learning,
- 2) Know principles in theories and types of learning and what they mean for different learners,
- 3) Explain how learning takes place in classroom teaching and factors that affect it, and
- 4) Analyze the nature and the effects of individual differences in learning.

INTRODUCTION

This chapter addresses some of the different theories of learning and how these influence teaching and learning. Since the whole essence of teaching is to bring about quality learning, I am hoping that teachers will find this chapter useful for their pedagogical activities. I am also hoping that this knowledge will better orient not only classroom teaching but also assessment of learning and the sustainability of quality assurance in pedagogic practices. When learning is viewed in terms of Bloom's (1956) pyramid of learning that identifies the lowest level of learning as recall and the highest as evaluation, then teachers will make great effort to use this pyramid.

Diversity in classrooms should remind teachers that there are different types of learners and each learner or group of learners learn in different ways. So as we reflect on these learning theories together, be thinking about how the theories permit meaningful teaching and learning. Teachers are expected therefore to understand the scientific basis of classroom activities (Tchombe, 2006). If teachers did, they would be curious to know what goes on in pupils'/students' minds as they work on specific learning tasks or engage in specific activities.

What actually takes place in a learning act? Every teacher should endeavor to know the importance of school learning; that there are different types of learners and learning styles. Learners have been categorized as field-dependent (concrete) learners, field-independence (abstract) learners, imagery learners (learn more through images), and verbalizers (learn more through the spoken word). In the act of learning three processes take place; acquisition of new information, transformation of knowledge acquired and evaluation of the learning process (Bruner, 1980). To describe these processes may not be easy due to the difficulty of saying what the internal processes involved really are although we can observe their manifestations in learners' external behaviour.

WHAT IS LEARNING?

Psychologists differ about the concept of learning because they tend to explain different facets of learning. Learning is a complex activity that is situated between thinking as a capacity and development as a process (Cullingford, 1993). Learning is a function of the age and psychological state of the learner. However, what is learnt through the curriculum depends largely on how learning takes place or how pupils/students learn. Learning seems to have a very central position interacting with thinking and development. In this position how is it a change in behavior or a process or a product? So many theories give different orientations but the notion of learning, that teachers should remember is from the reflections of Carl Rogers (1983: 18-19). He raises different notions of learning such as learning that is done through cramming. He describes such knowledge as (1) lifeless, sterile, futile and quickly forgotten. Furthermore he describes learning as (2) the insatiable curiosity that drives one to absorb everything one can see, hear or read, about to create and invent. He went on to talk about learning whereby (3) the experience of the learner progresses and learning is transformative because of the need to want to know more. These views give different ways you and I can portray learning in our classrooms. So, it is essential that teachers know the nature of learning in the education process.

Teachers' understanding of learning guides and situates their work. When learning is seen as an outcome or product, teaching will be very didactic and concrete leaving learning at the surface level. The focus on learning as a process brings together interaction between mental or cognitive abilities, emotional and environmental influences and experiences encouraging participative teaching and learning. The interactive process that engages these factors enables the acquisition and enhancement of learners' knowledge, skills, values, and world views. Learning as a process focuses on deeper structures than learning as a product.

Learning is either a simple change in behavior or a relatively permanent change in behaviour that is brought about by experience and the interaction of other factors (Fontana, 1988). Change here is not as a result of maturation. It is change in potential behaviour not in performance. The distinction between performance and learning is critical. It permits teachers to distinguish between short-term changes in behaviour that are due to other factors other than learning, where decline in performance in classroom learning can be caused by factors such as fatigue, ill health, hunger and lack of effort.

Learning is also defined as a relatively permanent change in behaviour with no emphasis on experience (Burn 1995, p. 99). Behaviour as perceived here includes both observable activity and internal processes such as thinking, attitudes, and emotions. Motivation, both extrinsic and intrinsic is important to learning in this definition. Memory is an important factor, as you know during the act of learning information is gotten through seeing, hearing or using the other senses. The learning journey starts with the sensory memory. So you see that the outcome of learning

therefore cannot be immediate thus the product/ process view about learning is critical. According to Hill (2002), theories of learning have two main values for teachers. First, they provide teachers with the vocabulary and a conceptual framework for interpreting the examples of learning that they observe in classrooms. Second, they provide directions to those factors that are important to provide solutions to practical problems in classrooms.

TEACHER'S PERCEPTIONS OF LEARNING

Learning usually is an activity, which teachers believe takes place more often in the schools and classrooms. We are all aware that more learning takes place also outside the schools, for example, at home, in the play ground and cyber cafes. In which case, we are saying that learning can be incidental, which is informal and can be formal, which is deliberate and schools and classrooms are concerned more with the latter. Because of this, teachers relate learning more to curriculum content and academic achievement. They relate learning more to sequencing and readiness and also to the importance of transferring learning to new situations for problem solving. If this happen teaching is validated. Teachers' perception about learning look only at the rituals and routines that ensure effective learning is taking place. This attitude is worsened when the school system is examination dominated because it conditions teachers' classroom behaviours to teach for examinations and not for lifelong living. When learning is too dependent on the curriculum, it becomes narrow for quality life-related learning outcomes and flexibility in teaching. Teachers would agree that for most of the time learning is equated more with academic achievements (products). With access to the internet, students learn more these days. This is why too much focusing of learning on prescribed curriculum content limits the scope of classroom discussions. The focus is on teachers' insistence on learning concentration for pupils and students and teacher-directed teaching that is concrete. To make learning a conscious and deliberate activity requires effort from both teachers and pupils as co-constructors of knowledge.

Usually what is taught in classrooms is not what pupils learn most of the time because of individual differences in pupils' capacity to learning and their different rates of absorbing information. Not all what teachers teach is assimilated by all students or the meaning transmitted understood and retained. The issue of educational readiness must be given serious consideration by teachers. Learning readiness is not only meant for pre-school children but for pupils and students at all levels. Even teachers' adjustment to students/ pupils and vice versa is vitally important for effective learning. In classrooms where there is diversity or pupils with special needs, and learning barriers, teachers have to adjust to students' learning needs. All these denote learning preparedness.

Focusing also on the concept of classroom learning has implications for transfer that is valuable. The essence of teaching is to ensure learning that is transferable to any context. Teachers should learn to make learning useful and enjoyable. Teachers

must change their ways of thinking about learning as a process that is done for one, to learning as a process one engages in. Education, therefore, is less about teaching and more about learning because it should not be mechanical but set students on a creative and action-oriented path.

TYPES OF LEARNING AND LEARNING THEORIES

This section discusses two main groups of learning theories: behaviourism and cognitivism.

Behaviourist Learning Theories

Generally behaviourism is based on three assumptions common to most of the theorists (Pavlov, Thorndike, Skinner, Bandura and others). The three assumptions central to explaining the learning process hold that (1) learning is a change in behaviour; (2) the environment (stimulus) shapes behavior; and (3) the closeness in time for occurrence of event creates a firm bond. Behaviourism focuses mainly on the objectively observable aspects of learning. For behaviourists, when behaviour is reinforced, it increases the likelihood of it recurring. If the behaviour is punished it may never recur. It also encourages connections to be made and creates opportunities for associations. In all of these memory is seldom addressed.

Pavlov Ivan Petrovich (1849-1936): Classical Conditioning – Associationism

Classical conditioning deals with involuntary behaviour. The associative learning that the process evokes is a process by which an element is learned through association with a separate, pre-occurring element (Ormrod, 1999). Association learning requires simply, the acquisition of new associations. Association learning is important because it is motivational. It helps the learner learn through small steps that leads to mastery of new skills or new concepts. Association learning does not have to be based on previous knowledge. For example you can teach vocabulary through plays by attempting to supply interest and stimulation to association learning, using flash cards and mnemonics devices. Another association is learning to associate letters with shapes.

Pavlov's experiments with dogs based on the Stimulus-Response theory, identified principles of associations where behaviour can be conditioned by pairing stimulus with different responses. For Pavlov, all learned behaviour can be a long chain of conditioned reflexes. Reflex learning is stimulus and response process. From his experiment he came out with laws of timing; reinforcement; extinction; generalisation and discrimination.

Teachers must present instructions with very specific activity or problem for association to occur. Teachers will come to realize that simple conditional reflex has relatively little application in the classroom. Pupils in your classroom may learn to associate things but the reason for the occurrence of association is what is important

in learning. It is important for you to lead the learners into those associations, especially those that connect school learning to the real world.

B.F. Skinner (1905-1990): Instrumental (Operant) Conditioning

Operant conditioning, involves the use of reinforcement to encourage behaviours (Skinner, 1954). The operant (e.g., a gift, “good girl”, “good boy”) is the reinforcement. This theory sees behaviour as a function of its consequences. What this means is that the learner will repeat behaviour that is reinforced, especially positively. Reinforcement (operant) can be verbal or material. Teachers should not forget that negative reinforcement does strengthen behaviour particularly when misbehaviour is being controlled. But punishment can also weaken behaviour. Learning by repetition such as learning the times-table and alphabets requires practices. In instrumental (operant) conditioning the learner is active not passive as in the case of classical conditioning. Operant conditioning is the use of consequences to modify the occurrence and form behaviour. Discrimination learning is a major form of operant conditioning.

Skinner scheduled the presentation of reinforcers; the food followed an interval or ratio pattern that was fixed or variable. There are several kinds of reinforcers and reinforcers may vary from student to student. Reinforcement has great implications for classroom activities. When a child gives a correct answer in class, the consequences of that behaviour which is a “correct answer” are reinforcing. This becomes more effective if the teacher asks the child to write the good answer on the board for all to see and read aloud. The reaction in the reinforcement process is circular because reinforcement is based on the fact that there is repeated behaviour.

Teachers’ scheduling reinforcements are very central to the management of effective learning. Reinforcement for the purpose of encouraging learning must be well sequenced taking it out of the realms of disciplining or control to the promotion of learning. At the same time, classrooms where teachers always withdraw reinforcement lead to the extinction of participating behaviours.

Reinforcement is very important in learning and influences the actual acquisition process. Teachers should remember that giving feedback should not be delayed irrespective of the nature of the feedback. Teachers should teach systematically and reinforce behaviours in the learners that they wish to be repeated. The establishment of connections depends on their following one another in time (contiguity). Teachers must know the complexity of the nature of the learner such as health and alertness. Behaviourists tell us more about how learning occurs but not about how to make learning occur. Teachers should try always to sequence in a graduated manner and arrange the difficulty levels of the questions so that responses are cumulative leading to correct responses that can receive positive reinforcement. Teachers should try to make sure that good performance in the lesson is paired with secondary reinforcers such as verbal praise, prizes and good grades. The reasons for these pedagogic orientations are because of the following: Behaviour is effective when it

is reinforced intermittently. Knowledge presentation in classrooms should be in small chunks so that responses can be easily reinforced. Generalisation of knowledge is easier in such circumstances. Teachers should reduce the time spent on punishing misbehaviors and spend it more on reinforcing positive responses. Skinner himself urged educators to focus on reinforcement and student successes rather than on punishing students' failures.

Social learning theory: Albert Bandura (1925-): – Reciprocal Determinism

Observational learning is also vicarious learning (Bandura, 1977). Bandura calls the process of social learning, modelling and provided four conditions, namely, attention, retention, motor reproduction, and motivation. The theory's central concept is reciprocal determinism, whereby the interacting factors in learning are both cognitive and environmental, acting on the learner's behaviour (Bandura, 1977). These determine not only the learner's emotional reactions but also the learner's beliefs, expectations and behavioural manifestations. To Bandura, learning is copying, modeling, observing and imitating but with some awareness of what is involved. The observational learning requires continuous reciprocal interaction between cognitive, behavioural and environmental factors (Bandura, 1977). Observation is very important in childhood and is critical for children's stimulation.

Bandura (1977) states that in observational learning, the learner learns by observing the behaviours of others. The potentials and power of observational learning was advocated by Dewey (1997). As we observe the external, we also engage in self-observation which is internal to us. Bandura (1997) refers to this self-efficacy appraisal if this is done against set standards or established goals, such as lesson objectives. Two sources of self-efficacy appraisal are common amongst students; awareness of one's actual performance and when students are influenced vicariously as they see peers reinforced in their successful task performance. Social learning theory demands teacher-guided facilitation of students' interaction in cooperative learning. In this way students' ability to retain information through social interaction is strengthened as they engage in cooperative learning with peers. In this light the teacher should capitalize on the commonplace expression of "I am poor or good in this or that subject" to set students on interactive learning from peers.

Take for example; a student is asked to go up to the board and correct an identified problem in an assignment, while the rest of the class observes. Teachers should highlight when the student uses correctly the rules and steps to be followed. The teacher can increase the difficulty level of the problem if necessary. In doing this and encouraging the learner the teacher is shaping the student's ability to solve for example mathematical problem, while the rest of the class learns by observing, following and perhaps interacting with the student and teacher. The apparent lesson here is that the teacher is making the learners responsible for their learning and

encouraging peer tutoring. The teacher should always sustain pupils/students attention, focus on the specific behaviour for retention and put in place strategies to help students perform what they observed. Teachers should motivate the learner because they expect this.

Cognitive Theories

Cognitive theories are more concerned with internal processes as the learner makes meaning of his/her world, particularly her or his interaction with the learning materials. For this reason cognitivists address more how memory works to promote learning particularly through the processes of sorting and encoding information and events in memory systems – sensory, short-term and long-term memories. The cognitivists see this as very important for teachers. Cognitive theories had its origin with the Gestalt theorists (Wertheimer, K^hler and Koffa); whose main position was that learning was influenced by perception of patterns and relationships. Much of their work influenced Jean Piaget's cognitive learning theory (Piaget, 2008). Cognitive theories are also seen as constructivism, where learning is a process by which the learner actively constructs or builds new knowledge and ideas based upon current and past knowledge or experiences.

Constructivism can be categorized as “cognitive” or “psychological” constructivism and “social” constructivism. The main proponent of cognitive or psychological constructivism is Jean Piaget (Piaget, 1978), who states that the individual learns through the manipulation of materials in his/her physical environment in terms of developmental stages and learning styles. Other constructivists are John Dewey (1859-1952) and Jerome Bruner (1915-). Social constructivists, whose main proponent is Vygotsky (1978, Lave, 1988) hold that knowledge is constructed when the individual engages socially in interaction and activity with others on shared problems. The cognitive theories as a whole differ from behaviourism because they recognise the importance of memory processes that create meaning from making sense of the learning materials. That is, cognitive theories emphasize the meaningfulness of the materials students are expected to learn.

Cognitive Constructivism: Jean Piaget (1896-1980)

Piaget's “cognitive” or “psychological” constructivism focuses on development, whereby the mechanisms of accommodation, assimilation and equilibrium are key to the developmental process that is based on adaptation (Piaget, 2008). It is through these processes that individuals construct new knowledge from their experiences. When pupils or students in class assimilate or learn new knowledge, it means they have incorporated the new experiences into their existing scheme or framework without changing that framework. This occurs when there is harmony in what has been learnt with the existing knowledge. Disharmony which is also disequilibrium is when there is lack of understanding. Harmony that signifies understanding is equilibration. When this occurs there is cognitive advancement. Because of lack of understanding, which can be resolved by equilibration to bring harmony and cognitive

advancement. Accommodation that occurs is the process of reframing one's mental representations of the external world to fit new experiences. Let us take the example of a child seeing birds fly always. One day, s/he hears a great sound in the sky from a structure that flies like a bird. To learn about the differences and similarities between the bird and the airplane s/he has to go through the process of assimilation then accommodation and equilibration for adaptation to take place with this new adjustment to new knowledge.

Constructivism describes how learning takes place. Constructivism is associated with pedagogic approaches that promote active learning. Real learning for Piaget comes from experiences that arouse children's curiosity and give them the chances to work out their own solutions. Piaget's central position as regards learning is discovery learning, where the learner learns from actions than from passive observations. Teachers should know that the richness of direct firsthand experience is vitally important. To facilitate learning, the learning environment must be organised in a way that will allow pupils to develop concepts and skills themselves, at their own pace according to their individual aptitude. Engagement in such active learning process leads to deep structured learning. To address deep structured learning therefore the teacher has to do the following, among others:

Tailor tasks to the needs and interests of the learner to stimulate intrinsic motivation

Provide learning opportunities that will enable advancement in cognitive abilities

Focus on learning rather than on the end product through encouraging the learner to ask and answer questions, manipulate and explore the environment.

Encourage peer/peer tutoring and a triangular classroom interaction where pupils/students can initiate questions to peers and teachers as well as teachers to pupils.

Teachers are therefore expected to be concerned with the mediating mental processes because learning takes place within the broader process of development that entails a series of progressive intellectual interaction and cumulative organisation of what has been learned.

Enactive, Iconic and Symbolic Learning: Jerome Bruner, 1915-)

In his book the *Process of Education*, Bruner (1978) argued that students should be helped to understand the structure of a field of study or the discipline. Bruner believed that if students are helped to grasp the overall pattern of a field of study, they are more likely to remember what they learn, and understand the principles that can be applied in a variety of situations. He insisted on discovery learning in his book "*Beyond the Information Given*" (Bruner, 1980) which must guide teaching in classrooms, where school learning takes too much the form of step by step presentation of knowledge which are applicable only in the classroom. His concern for structure ties with the views of the Gestalt psychologists. Bruner's theory presents three modes of representation: enactive (based on physical actions and experiences),

iconic (use of mental images based on visual, auditory, olfactory or tactile senses), and symbolic (use of language, number, music, etc).

Bruner's theory demonstrates a degree of transitions from enactive, iconic and symbolic modes of representations that impacts learning. Bruner's theory addresses learning process based on his mental bridge being the role of perception in cognitive learning. Perception is an interpretative mechanism that enables the establishment of meaning through sensory stimulations. Traditional sensory stimulation theory has as its basic premise that effective learning occurs when the senses are stimulated (Laird, 1985). Teachers have to learn to stimulate the senses because the bulk of learning is through the senses: seeing, hearing, touching, smelling and tasting. By stimulating the senses, especially the visual and auditory senses, learning is enhanced. Learning is perceived as a cognitive process involving the acquisition and transformation of knowledge and its potentials for responding to new situations. Bruner's theory advocates discovery learning (Bruner, 1961). Bruner insists on intrinsic motivation to move towards higher order learning with focus on diversity of learning.

Teachers have a lot to learn from Bruner's theory regarding classroom activities. Teachers should challenge students by making them not to be too dependent on dictated notes by insisting they make their own notes. Teachers should desist from making students to think that learning must always earn a reward. Confront students with problem and help them look for solutions either independently or in interactive group work. This approach highlights the importance of student-directed learning. Teachers should give students much opportunity for practice so that they can acquire confidence in their own learning abilities. Give students opportunity to make individual or small group discoveries in form of projects or term papers. Make them learn how to learn, especially how to create and generate a new knowledge.

Perception of patterns and relationships: Gestalt Theory

The main proponent of this theory is Wertheimer (1880-1943), along with Koffka (1886-1941) and Köhler (1887-1967). The German word "Gestalt" is translated as form or pattern and sometimes as configuration (Hunt, 1993). The word calls attention to the significance of relationships. For Gestaltists, learning is influenced by perception of patterns and relationships. Insight refers to sudden awareness of association between several stimuli.

Gestaltists stress learning through insight from the perception of new relationships or building of connections between different stimuli, such as what is currently being learned with what was learned earlier, and what happens in real life. Many things are learned when stimuli or ideas are arranged into patterns (Wertheimer, 1959). Learning resulting to insight can be characterized by sudden identification of a solution to a problem that has bothered one for long. The acquisition and retention of insight form the core of the learning behaviour. For Gestaltists, learning is made up of changes in skills and attitudes which are internal and which are not necessarily

reflected in overt behaviour. They do not advocate learning by doing but are more concerned with learning that is creative and productive. In thinking, the learner should grasp the essential relationships within a problem, grouping them into meaningful wholes that restrict and shed light on the problem (Wertheimer, 1922;)

Perceptions are governed by a field and influenced by experiences and interests. Gestalt theory emphasized higher-order cognitive processes that focus on “grouping” or structuring. By this, it means that the characteristics of stimuli make individuals to structure or interpret a problem in a particular way. The way stimuli are arranged influences perception. Four factors that enable patterning are: (a) proximity, (b) similarity, (c) closure (d) and simplicity. These constitute laws of organization that facilitate groupings because of completeness of the entity, simplicity according to symmetry, regularity and smoothness.

To promote insight in learners therefore, the teacher should ensure that the learner discovers the underlying nature of what is being learnt. Challenges should be seen as stimulus to learning. Gestalt recommends effective structuring of learning and organization of learning materials because the primary focus of Gestalt is on structure not associations. Gestalt approach to learning requires well arranged lesson structures because this will ease understanding, and consequently learning. Well structured lesson plans enable learners to discover the patterns and relationships. Through this discovery, retention and transfer can be facilitated.

Social constructivism: Lev Vygotsky (1896-1934)

Vygotsky’s model of constructivism is “social” constructivism that illustrates the interaction between social and practical elements in learning through speech and practical activities (Vygotsky 1978). By this model the learner functions at two levels; firstly as s/he constructs meaning through practical activity at an intrapersonal level and secondly as s/he interacts with others using speech and cultural tools to connect the meaning of the interpersonal world s/he shares with others. The model advocates collaborative learning with peers and other adults. The social constructivist model emphasizes the importance of the relationship between student/pupils and teachers in learning processes.

The teacher’s role is of special significance in Vygotsky’s Zone of Proximal Development (ZPD), which is the centerpiece of the theory. The ZPD refers to the difference between what a child can achieve unaided in problem solving and what s/he can achieve with the help of adults/ teachers or peer mentors. Vygotsky therefore sees the child as an apprentice who acquires knowledge and skills through help from those who already possess such knowledge and skills using scaffolding. Scaffolding is pedagogical techniques, for example, questioning, illustrations, etc., that can enable the learner to learn better. However, the capacity to learn is based on the more competent person’s didactic role. In Africa, peer mentors are quite useful in children’s learning in the ZPD.

Vygotsky does not advocate procedural learning but more intellectual development through collaborative learning and cooperative learning in group work and project. These are valuable at all levels of the school system. The development of language and the articulation of ideas are central to learning. The role of the teacher and peers is to enter into dialogue with the learner to enable understanding of meaning and help the learner to refine such understanding with the use of language. The major premise of Vygotsky's theory is the role of social interaction in cognitive learning. Human memory is central to learning.

HUMAN MEMORY

Studies of memory began in the field of philosophy. Memory studies include techniques of artificially enhancing memory, which is sometimes called artificial intelligence. In psychology, memory entails an organism's ability to receive, store, retain, and recall or retrieve information and experiences. Memory is a key topic in cognitive psychology, and in recent decades, it has become one of the principal pillars of cognitive neuroscience, a sub-discipline which links cognitive psychology and neuroscience.

Memory processes and Stages

There are three main processes or stages in memory functioning: encoding or registration (receiving, processing and combining of received information), storage (creation of a permanent record of the encoded information), and retrieval, recall or recollection (calling back the stored information in response to some cue for use in a process or activity)

Sensory memory

Sensory memory is for a flash moment; it instantly forms an impression of whatever information strikes a sensory organ. The ability to look at an item, and recall what it looked like with just a second of observation is an example of sensory memory. With very brief exposure to stimuli people often report that they seem to "see" more than they can actually report. Because this form of memory degrades so quickly, participants would see the display, but be unable to report all of the items before they decayed from sensory memory. This type of memory cannot be prolonged through rehearsal.

Short-term

Short-term memory allows recall for a period of several seconds to a minute without rehearsal. Its capacity is also very limited. Short-term memory capacity can be increased through a process called chunking. For example, in recalling a ten-digit phone number a person could chunk the digits into three groups: first, the country code (such as 237), then a chunk of the city code of three-digits (123) and lastly a four-digit chunk (4567). This method of remembering telephone numbers is far more effective than attempting to remember a string of 10 digits; this is because we

are able to chunk the information into meaningful groups of numbers. Short-term memory is believed to rely mostly on an acoustic code for storing information, and to a lesser extent a visual code.

Long-term

The storage in sensory memory and short-term memory generally have a strictly limited capacity and duration, which means that information is available only for a certain period of time, but is not retained indefinitely. By contrast, long-term memory can store much larger quantities of information for potentially unlimited duration (sometimes a whole life span). Its capacity is immeasurably large. For example, given a random seven-digit number we may remember it for only a few seconds before forgetting, suggesting it was stored in our short-term memory. On the other hand, we can remember telephone numbers for many years through repetition; this information is said to be stored in long-term memory. While short-term memory encodes information acoustically, long-term memory encodes it semantically. One of the primary functions of is thought to be improving consolidation of information, as several studies have demonstrated that memory depends on getting sufficient sleep between training and test.

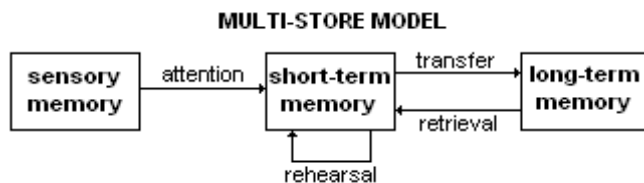
Memory Models

Models of memory provide abstract representations of how memory is believed to work. Below are three examples of several models psychologists have proposed, although there is some controversy as to whether there are several memory structures or only one memory structure.

Atkinson-Shiffrin Memory Model

Retrieved from <http://en.wikipedia.org/wiki/Memory> on 20/10/10

The multi-store model has been criticised for being too simplistic. For instance, long-term memory is believed to be actually made up of multiple subcomponents, such as episodic and procedural memory. It also proposes that rehearsal is the only mechanism by which information eventually reaches long-term storage, but evidence



shows humans capable of remembering things without rehearsal. The model also shows all the memory stores as being a single unit whereas research into this shows differently. For example, short-term memory can be broken up into different units such as visual information and acoustic information. It also shows the sensory store as a single unit whilst we know that the sensory store is split up into several different parts such as taste, vision, and hearing.

Working memory

Working memory consists of three basic stores: the central executive, the phonological loop and the visuo-spatial sketchpad. The central executive essentially acts as attention. It channels information to the three component processes: the phonological loop, the visuo-spatial sketchpad, and the episodic buffer. The phonological loop stores auditory information by silently rehearsing sounds or words in a continuous loop: the articulatory process (for example the repetition of a telephone number over and over again), then, a short list of data is easier to remember. The visuospatial sketchpad stores visual and spatial information. It is engaged when performing spatial tasks (such as judging distances) or visual ones (such as counting given set of items or imagining images). The episodic buffer is dedicated to linking information across domains to form integrated units of visual, spatial, and verbal information and chronological ordering (e.g., the memory of a story or a movie scene). The episodic buffer is also assumed to have links to long-term memory and semantical meaning.

Classification longterm memory by information type

The two types of long-term memory are declarative or explicit and procedural or implicit memories. Declarative memory requires conscious recall, in that some conscious process must activate or trigger and call back the information from the memory store. It is sometimes called explicit memory, since it consists of information that is explicitly stored, sought and retrieved

Declarative memory can be further sub-divided into semantic memory, which concerns facts independent of the context; and episodic memory, which concerns information specific to a particular context, such as time and place. Semantic memory allows the encoding of abstract knowledge about the world, such as “the earth rotates around the sun”. Episodic memory, on the other hand, is used for more personal memories, such as the sensations, emotions, and personal associations of a particular place or time. Autobiographical memory – memory for particular events within one’s own life – is generally viewed as either equivalent to, or a subset of, episodic memory. Visual memory is part of memory preserving some characteristics of our senses pertaining to visual experience – what we see. One is able to place in memory information that resembles objects, places, animals or people in sort of a mental image. Visual memory can result in priming and it is assumed some kind of perceptual representational system underlies this phenomenon.

In contrast, procedural or implicit memory is **not** based on the conscious recall of information, but on implicit learning. Procedural memory is primarily employed in learning motor skills and should be considered a subset of implicit memory. It is revealed when one does better in a given task due only to repetition - no new explicit memories have been formed, but one is unconsciously accessing aspects of those previous experiences. Procedural memory involved in motor learning depends on the cerebellum and basal ganglia. **Topographic memory** is the ability

to orient oneself in space, to recognize and follow an itinerary, or to recognize familiar places. Getting lost when one is traveling alone is an example of the failure of topographic memory.

Information Processing

Information processing theory has become a general theory of human cognition; the phenomenon of chunking has been verified at all levels of cognitive processing. The theory addresses short term memory where the attention span is limited and states that planning is fundamental to cognitive process. Information processing (Miller, 1956) explains how learning is influenced by cognitive processes of organization and elaboration leading to meaningful learning. Information processing is likened to the computer whereby memory receives information, stores it, manipulates it, retrieves it and responds. Clearly memory activity and process are vitally important to understand the progressive manner in which pupils and students process what they learn. With this knowledge teachers will begin to understand why children at certain ages cannot memorise and read. Teachers have to sensitize children to their own learning through developing their meta-cognitive skills, that is, awareness of how they reason and think, for example. With increasing age children do acquire greater information processing capabilities and greater insight to how they use their memory.

Levels of processing

The method and depth of processing affect how an experience is stored in memory, rather than rehearsal.

Organization

Students were given a pack of word cards and asked to sort them into any number of piles using any system of categorisation they liked. When they were later asked to recall as many of the words as they could, those who used more categories remembered more words. This study suggests that the act of organising information makes it more memorable.

Distinctiveness

Other students were asked to say words in a distinctive way, e.g. spell the words out loud. Such participants recalled the words better than those who simply read them off a list.

Effort

A set of students were tasked to solve a series of anagrams, some easy (FAHTER) and some difficult (HREFAT). The participants recalled the difficult anagrams better, presumably because they put more effort into them.

Elaboration

Students were given descriptive paragraphs of a fictitious African nation. There were some short paragraphs and some with extra sentences elaborating the main idea. Recall was higher for the ideas in the elaborated paragraphs.

Special attention is given to memory as a learning system (Riding 1983; Sweller, 1988) with three interrelated stages:

- (1) Sensory memory (SM) especially from auditory and visual sense),
- (2) Primary or short term memory (STM) and
- (3) Secondary or long term memory (LTM). Concretely, let us take the example of the statement, "Cameroon is situated in Central Africa." When this is presented to a class, the learner receives the information through the SM. The patterning is transferred to the STM where the meaning of the new information being assimilated takes its cue from what is already known. The STM is like a mental workplace space where the information is encoded and a decision is made as where or into which memory compartment to store it. Rehearsal strategy is used to store the information temporarily in STM which is later transferred to LTM.

The working memory model explains many practical observations, such as why it is easier to do two different tasks (one verbal and one visual) than two similar tasks (e.g., two visual). However, the concept of a central executive as noted here has been criticised as inadequate and vague.

For information to be learned well, time and spacing of information are crucial (Tchombe. 2004). Teachers should remember that some pupils/students are slower than others in analysing the meaning of teachers' instructions. Such pupils may not understand a lesson thus losing part of the knowledge in the STM processing exercise perhaps because the teacher was also too fast and did not speak clearly. Doing assignments or participating in class discussions will be difficult for such students. Teachers must check the rate of lesson presentation in terms of pacing, sequencing, transition and linkages because all influences learning ability and performance. To enhance learning, presentation of the material to be learnt should be slow and with clear and fluent language. Slowing on presentation rate necessitates the use of repetition. Repetition here is to ensure understanding and filling in of gaps, not for memorisation. When ideas are poorly organised in memory, there is bound to be an absence of understanding, thus retention would be difficult. LTM is subject to fading which is forgetting, and many factors affect this.

QUESTIONS FOR LEARNERS

1. What specific lessons can classroom teachers draw from behaviourism, Constructivism, Social Constructivism to motivate their teaching for deep structured learning?
2. List different types of learning.
3. Discuss the constituents of the learning act.
4. Distinguish between learning as a product and learning as a process.
5. Identify and discuss all the factors that influence learners' memory and forgetting
6. Research:
 - a. Find out and explain as many techniques or methods as you can of improving human memor.
 - b. Why do learners forget?
 - c. What strategies can the (i) teacher and (ii) learner use to minimize forgetting?

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Chapter 13

**PEER GROUP COOPERATION AS A RESOURCE FOR
PROMOTING SOCIALLY RESPONSIBLE INTELLIGENCE:
KU-GWIRIZANA NDI ANZACHE**

Robert Serpell

INTRODUCTION

This chapter sets out to explain how peer group cooperation (*ku gwirizana ndi anzache*) is conceptualized in Chewa culture as an essential ingredient of socially responsible intelligence (*nzeli*), a developmental goal for the children and youth that is widely valued among parents in Chewa and other African societies.

A case study is presented of how peer group cooperation was actively promoted in the Child-to-Child approach to health education adopted by a group of innovative Bemba-speaking teachers at a Government primary school in Zambia's Northern Province in the 1990s. By studying the chapter, it is hoped that other teachers will derive inspiration and guidance for the design and delivery of effective education for social responsibility in rural and urban African sociocultural settings.

PEER- GROUP COOPERATION

Kugwirizana ndi anzache, in Chi-Chewa means to cooperate with one's peers. It is a highly valued dimension of behavior in many societies around the world, especially in Africa. Chi-Chewa is a Bantu language spoken as a mother-tongue by more than ten million people in Zambia, Malawi and Mozambique, and is the urban lingua franca of Lusaka (where it is known as Chi-Nyanja - the language of the lake). To work together in harmony towards a shared goal is the dynamic relationship that enables individuals to pool their efforts for the benefit of a group. Without such organized, goal-directed liaison, a social group is unable to rise above the parallel lives of a set of individuals.

In some animal species such as ants and cattle, social cooperation is ensured through biological instinct. But in humans it depends on voluntary, learned behaviour. Despite the logically obvious benefits of social cooperation, we see many instances of isolation or even antisocial behavior. A child who finds a ripe mango hanging from a tree may sometimes hide it from others and sneak away to eat it alone in a private place. An adult who hears about a bargain sale at a local supermarket may rush there in order to be first in the queue and accumulate as much as possible of the bargain price goods on sale, with a view to later re-selling them at a higher price to his or her neighbours or workmates. And those of us who hear a rumor that the value of a commodity on the stock exchange is about to fall may decide to sell our shares fast rather than warning others to do likewise. Yet as we contemplate these possible courses of action, most of us recognize that better alternatives exist. The child who finds a fruit could invite her friends to share it, the adult who learns of a bargain sale could recruit some neighbours to go to the supermarket together and share the benefits, and the investor who learns that the stock exchange value of a commodity is at risk could warn his friends or even try to mobilize a group effort to protect the industry producing it from collapse.

In the human species, motivation is primarily directed towards survival of the individual and often towards getting ahead of others, rather than towards maximizing

the general good of society. Yet moral values and norms favour prosocial behavior over selfishness. So how can society moderate these selfish tendencies and organize individuals to cooperate for the collective good? The disciplines of sociology and of political science have one set of answers to this time-honoured challenge. The psychology of human development offers insights into the ways in which children's orientation towards others can develop over time, and how it is influenced by adults and peers in various social contexts. Such contexts may involve the socialization practices of caregivers, family routines, play activities, or formal educational programmes.

Formal education is often organized in terms of institutionalised public basic schooling (IPBS), a model that became standardized around the world in the twentieth century. Within this model, school teachers have many opportunities to influence the growth of pro-social motivation in their pupils. This chapter seeks to explain why this is important, drawing on ideas expressed by African parents and teachers and reported in the research literature on African child development and education. African schools are often perceived as agents of progressive social change (sometimes called national development, or modernization) and many teachers regard themselves as leaders with a mandate to promote new standards that will enable their students to attain higher levels of achievement than their parents. But in most African basic schools the majority of students commute daily between the school and homes where they receive the greater part of their socialisation. Thus a school teacher who aspires to promote progressive, prosocial behavior in his or her students needs to be aware of the values and norms of their homes and communities. In many respects those values are compatible with those of the modernization agenda of public schooling. Building on those compatibilities is likely to be a more productive strategy than focusing on the points of disagreement.

The practices of IPBS are supposed to facilitate the learning and development of the students enrolled in school. Many of them are well grounded in research on the nature of human cognition, methods of instructions and curriculum development. But some are not. The widespread emphasis in IPBS on competitive grading of student performance ('who scored highest on the test?'; 'who is top of the class?') derives its rationale from an individualistic perspective on social behavior rather than from any evidence of instructional efficiency. Controlled studies of different forms of instruction have shown that classroom learning can be very effectively promoted through cooperative learning arrangements (Forman and McPhail, 1993; Slavin, 1990). Moreover, such arrangements appear to be especially well attuned to the sociocultural dispositions of African-American school children (Boykin and Allen, 2004).

SOCIALLY RESPONSIBLE INTELLIGENCE

What constitutes a person of high intelligence? Different cultures look at this matter differently. We conducted an extended study of the question in a rural Chewa community of Zambia's Eastern Province (Serpell, 1993). In order to engage selected elders in discussion, we focused each one's attention on a panel of 4-7 children of the same sex and age-group well-known to him or her in the village. Then we presented the informant with a set of imaginary, but ecologically plausible, problem situations, such as the following: a house catches fire, the place where laundry is usually spread to dry has been soiled, a house repair job requires a makeshift tool for completion, a message needs to be conveyed to a neighbor, etc. In each case the informant was asked which child she or he would choose for assigning responsibility, and then to explain her choice.

The terminology that emerged from our inquiries centered on the concept of *nzeli*, a broad concept that encompasses the range of meanings of the English terms skill, cleverness, intelligence and wisdom. Within *nzeli* two main sub-categories are defined as *ku-chenjela* (cleverness, cognitive alacrity) and *ku-tumikila* (social responsibility). The root of this latter word is *-tuma* (to send). A person who is *wo-tumikila* is fit to be assigned responsibility because of understanding. The root form *-mva* means to hear, and *ku-mvela* means to understand, but also to obey, while *ku-mwana* means to understand each other. Peers who understand one another are also able to cooperate (*ku-gwilizana*). When asked which of these facets of *nzeli* is more important, many of our informants have insisted that they are complementary and of equal importance. A person who is lacking on the *chenjela* dimension is less reliable than one who is smart. But a person who is *wo-chenjela* and lacking on the *tumikila* dimension is socially dangerous - "a clever Dick," we might say in English, or even a thief who uses his cognitive alacrity for selfish purposes. Thus an ideally intelligent person in this traditional Chewa perspective is one who is both *wo-chenjela* and *wo-tumikila*, endowed with cognitive skills and insight, and socially responsible.

Similar views have been expressed by parents in several other African societies in East and West Africa, and even among adults in the USA and Switzerland. Yet the tradition of purely cognitive intelligence testing has continued to dominate educational selection practices, both in Western industrialized societies and in many parts of Africa. Some authors have sought to justify this on the grounds that such tests are highly predictive of academic performance in contemporary African secondary and tertiary education, and that educational attainment is a highly valued life goal among many Africans. In my view, however, the form and content of many African educational curricula have changed too little since the end of colonial rule, and many stakeholders in African societies might prefer, if given a choice, to see a public school system geared to the promotion of socially responsible intelligence.

HEALTH EDUCATION AND THE CHILD-TO-CHILD APPROACH

The promotion of health is universally endorsed across nations as a priority goal of progressive social change. The dramatic advances achieved by bio-medical science over the past two centuries have generated a powerful body of knowledge for the treatment and prevention of many diseases that cause widespread suffering in Africa. The Primary Health Care declaration of WHO in 1978 emphasised that much of that knowledge can be effectively applied by laypersons rather than relying on specialised services by technically trained professionals. The Child to Child (CtC) movement is built on this foundation to promote awareness that children can be effective agents of child health promotion in their communities. This insight was inspired for the British paediatrician, David Morley and educationist, Hugh Hawes by their observations, in Africa and elsewhere in the majority world, of the widespread family practice of entrusting the care of young children to their older, preadolescent siblings. What was new about CtC was to formally acknowledge this principle as an explicit method of health promotion and education (Pridmore and Stephens, 2000).

This CtC approach was appropriated in the 1980s by a group of creative teachers working at several different Government Primary Schools in the Northern Province of Zambia: Patrick Kangwa, Paul Mumba (2000) and Clement Mumbo, who eventually all converged on Kabale Basic School in the small town of Mpika. Some of the activities we observed there were as follows:

1. Plotting growth curves in mathematics classes
2. Discussing health and nutrition in science classes
3. Monitoring the growth of a younger child
4. Community surveys in social studies
5. Reflective writing about CtC projects in English
6. Cooperative learning in study groups

Growth charts have become a standard feature of maternal and child health clinics all over the world. As Gibbs and Mutunga (1991) have explained, these charts can also be excellent teaching resources for basic mathematics. In the CtC curriculum developed at Kabale school, teachers not only used growth charts as an example of how to plot a graph, but also discussed their significance as a measure of biological health and nutrition. Because at least one growth-chart was already in use in most schoolchildren's homes, it served as an entry-point for students to connect their science lessons at school with the realities of their daily lives. In CtC manuals, this type of home-school bridging curriculum is referred to as the "zigzag method". Students were assigned "homework" projects that included weighing their younger siblings, escorting under-5 children to the clinic, interviewing local health centre

staff about their practices, conducting community surveys of the prevalence of under-weight infants, and intervention to treat diarrheal disease with home-made oral rehydration solution (ORS). The Child-to-Child Trust has published a wide range of user-friendly resource materials, including charts and checklists, that are accessible free of charge in sub-Saharan Africa from their web-site at <http://www.child-to-child.org>.

Many of these assignments were undertaken at Kabale in teams who later presented their findings to the rest of the class for discussion. Study teams afford opportunities for cooperative learning, where different members of a peer group variously assist or challenge one another. In Paul Mumba's classes, the teams were always composed of a mix of girls and boys and of academically stronger and weaker students. Vying for the teacher's approval was thus restricted to competition between groups rather than between individuals. Moreover, the membership of groups was rotated so as to prevent the creation of lasting conflict between groups. These group instructional arrangements afforded opportunities for students to learn the value of cooperation while striving for excellence, and of assisting less mature persons to improve their intellectual performance.

Following our introduction to the Kabale school teachers, the University of Zambia (UNZA) research team invited a sample of indigenous Zambian teachers who had been exposed to the CtC approach while serving in rural Zambian primary schools to cite some examples of child behaviour that for them illustrated key educational objectives of the CtC approach. In the case of cooperation, teachers cited the following:

1. A child who is very cooperative is one who fits in well in group work and does the group tasks cheerfully; shares his or her ideas with others without hesitation; appreciates the initiatives of others and tries out other people's ideas; creates an atmosphere of reconciliation in times of crisis; asks others to meet together and make joint decisions about how to deal with problems.
2. A child who is relatively uncooperative is one who tries to show that his or her work is the best and was responsible for the group's achievements; tends to work in isolation from others; complains about others not being hardworking; is reluctant to share his or her ideas with others; refuses to contribute even when he or she can; prefers to be seen as a champion rather than part of the group.

These concise behavioural indicators of cooperativeness have since been used as a Glossary to explain the concept to other teachers with less experience of the CtC approach, whom we have invited to assess the children enrolled in their classes. We have used the same approach to share the experience and insights of Zambian CtC teachers with assessing other significant dimensions of pupil behaviour: practical problem-solving, self-confidence, healthy lifestyle, taking responsibility and nurturance. Follow-up studies have found enduring benefits on several of these dimensions among several of the children who completed their primary schooling

in CtC classes at Kabale, both those who went on to complete further formal education and those who started raising families of their own (Serpell, 2008).

EDUCATION FOR SOCIAL RESPONSIBILITY

The Child-to-Child approach to education may appear to some teachers to be an evasion of their pedagogical responsibilities. This is because they have been used to think of teaching as mainly a process of direct instruction. But the best, tried and tested methods of tuition require providing assistance to the learner in what Vygotsky (1978) termed the individual's zone of proximal development. A single teacher cannot aspire to do this much of the time for any one of his or her students if s/he is responsible for the education of a class of 40 to 60 students concurrently, and indeed class size in many African schools is larger than this. In addition to providing such, hands-on guidance intermittently to individual students, a class teacher must aspire to promote learning by students outside the reach of his or her direct immediate guidance. For this purpose, the teacher's role becomes that of organising opportunities for learning. By assigning students judiciously to groups and setting the groups appropriate tasks and guidelines for addressing them the teacher can try to maximise the affordances of the curriculum for each student to learn at his or her own pace.

Assessing the outcomes of group study projects is often difficult at the individual level, because some members of the group tend to play a stronger role in defining the direction of the activity than others. But it is not necessary for all school assignments to be graded for individual effort and achievement. In the real world, outside the walls of the academy, cognitive work is often socially distributed. For example, a rural African school might receive recognition from the Ministry of Education for cooperative community service projects such as the following:

A team of school pupils builds a new chicken hutch or grain storage bin for an elderly member of the community, whose previous structure was destroyed by pests.

A group of students mounts a local performance of an entertaining drama with illuminating connotations for a significant social issue.

If the approved curriculum were geared to encourage such activities, schooling would be seen to be making a positive impact on the local community rather than only recruiting a minority of individuals and extracting them from the community to participate in the remote world of the dominant urban society.

CONCLUSION

I have argued in this chapter that the value placed in indigenous Chewa culture on *nzeli*, a socially responsible form of intelligence, is intimately connected with the value of cooperation (*kugwirizana ndi anzache*), and that the emphasis placed on peer-group cooperation by the Child-to-Child (CtC) approach to education for health reflects that same cluster of values in the indigenous Bemba culture. The practices of CtC that we observed in Mpika were low-cost, practical strategies for ensuring that social responsibility was promoted in preadolescent school pupils in the course of their learning basic academic skills and knowledge in mathematics, science, language, and social studies. These practices were grounded in enduring African patterns of family organization, whereby parents expect their children to take a nurturant interest in the health and development of their younger siblings and other relatives. Thus the CtC curriculum developed at Kabale reflects a widely endorsed theoretical principle that one of the universal standards for effective pedagogy is contextualisation, or “Making Meaning—Connecting School to Students’ Lives: *Embed curricular instruction in the interests, experiences and skills of students’ families and communities*” (Tharp and Dalton, 2006, 57).

In the USA, a growing body of empirical research supports the contention that cooperative learning arrangements are especially effective for school pupils from low-income African-American families. Boykin and Allen (2004) contend that this reflects a cultural theme of communalism inherited by African-American communities from their ancestral cultures in Africa. The idea of a family cultural theme favouring cooperative communalism over competitive individualism seems even more plausible for African societies, especially the subsistence agricultural communities that include a large proportion of the continent’s population. Thus, although the particular studies reported in this chapter were located in just one of Africa’s many nations, they appear relevant to the optimization of educational curricula and instructional practices in many parts of the continent.

LEARNERS’ EXERCISES

Interview a sample of parents of the pupils in your class about their hopes and expectations for their child’s education, and make a checklist of their goals, paying special attention to those relating to prosocial behaviour.

Convene a discussion group of parents and teachers to consider how relevant cooperation and social responsibility are as educational goals in rural and urban areas of your country.

Analyse the prescribed curriculum at your school, and consider to what extent it affords opportunities for students to learn through practice how to cooperate with peers and how to take on social responsibility.

Rate each of the pupils in your class on a ten-point scale from very weak to very strong on the dimension of cooperativeness. What steps can you take as a teacher to enable those who are weak to learn from those who are strong in this respect?

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Chapter 14

**CULTURAL STRATEGIES FOR COGNITIVE ENRICHMENT
OF LEARNING AMONG THE BAMILÉKÉ OF THE WEST
REGION OF CAMEROON**

Therese M. S. Tchombe

CHAPTER OBJECTIVES

It is hoped at the end of this chapter that the reader will be able to: 1) identify key indigenous strategies and practices for cognitive enrichment for sustainable learning in the Bamiléké culture, 2) illustrate how educating children in the Bamiléké culture is interest-driven, 3) identify forms of mediation strategies used to enrich children's reflective and creative thinking abilities and to enhance knowledge transfer, and 4) provide lessons from Bamiléké cognitive enrichment for school learning.

INTRODUCTION

Amongst the Bamiléké cultural group found in the West Region of Cameroon, children are introduced very early to activities that are age-related based on cultural beliefs and principles that foster the child's cognitive development from a holistic framework. The holistic nature stems from the fact that the Bamiléké people have clear perception of the expected profile of a growing child as regards the qualities of character and intellect which are interrelated. Since parents are aware of these tacit norms during socialization, they appraise children's performance, assess their progress and understand their actions and verbal behaviours. Parents also discern their children's motives, emotions and are able to encourage, correct and sanction when and where necessary. Bamiléké parenting is not limited only to the biological parents. Whoever is involved with this responsibility does so according to the set down Bamiléké precepts. The main goal in socialization is to develop a socially competent person who is also morally upright. The perception of social competence is having an open spirit that is positive, progressive, supportive, creative, productive, imaginative, collaborative and cooperative. The concept of open spirit implies a theory of mind that is governed by solidarity, tolerance and team work. Bamiléké parents influence the minds of their children through involving them in activities and actions that are relevant, endearing and engaging.

In an ongoing ethnographic research in Foungali, the author's natal village in Bafang, we are working with twenty traditional parents on the strategies they use for the cognitive enrichment of their children. Our preliminary findings from observations and discussions with parents and children in family situations particularly during evening gatherings in the main house, the compound and on the farms, the enrichment of children's cognitive skills employs strategies that are interest-driven and communicative, such as storytelling, narratives and errands. The activities through which these strategies are used are preparing and sharing of the evening meal, bathing younger siblings, fetching water, firewood, family talk after church service, traditional festivals and so on. The village new church house now provides a meeting ground for children of different age groups.

ACTIVITY, INTERACTION AND ACTION-BASED LEARNING

The Bamiléké child engages very early in various forms of interaction with persons and with the available rich, meaningful physical and material resources. These experiences are meaningful, sustainable and transferable. The adolescent is already the owner of a farm or a petty business and a member of “thrift and loan” or *Njangi* group, which is an avenue to raise capital through loans to start or sustain an existing business. The activities and abilities to participate are fostered by the inculcation of the values of endurance, patience, persistence, honesty, respect and hard work, which are indelible characteristics of the Bamiléké people. Perseverance, according to the people is a key to success. In this culture, socio-affective development is the basis for development of the spirit of being socially competent. These abilities, skills and values are learnt through farming and trading; the main economic activities of the people. As they develop, children participate in these economic activities depending on the nature and difficulty level of such tasks as selling and participating in the bargaining and negotiation of the prices of commercial wares.

Farming and trading

Through accompanying mothers to the farm at a very early age, Bamiléké children move from actively observing and running errands of bringing water, food, and collecting hoes and carrying the harvest to actual tilling, planting, weeding and harvesting. Where the farming is for cash crops like cocoa, coffee and banana, they are also involved in the weeding, pruning and harvesting, drying, weighing, bagging and selling of these crops. What this means is that the children from Bamiléké farming families engage very early in trading and selling activities that consist of rich cognitive engagements. Bamiléké children are also expected to learn to take care of animals or birds like chicken by nurturing them, until they are ready for sale. Through these actions, the processes are explained, the reasons for such involvement as stated and the children’s caring skills assessed. The social competence skills are also determined in the caring of animals and birds. The skills, concepts, strategies and processes are learnt informally. The continuous interactions between parent and child on animal farming provide a very rich language encounter that illustrates the values and degree of children’s participation. From my experience, growing up in very large Bamiléké family networks, all our parents gave their children the rationale for hard work: “We can have enough food to feed you all, buy medicine, buy clothes and pay your fees and buy books”. The unsaid sanction is that if you do not work you will not share in these facilities.

Storytelling/Dialogue

Storytelling provides lessons of bravery and values that are cognitive and moral. My father told us stories about tribal wars between our village and a neighboring village and how the king makers had to hide the young Chief for a number of years before he was enthroned. This story and other issues were the main themes of conversations and dialogues among my siblings and peers in collective settings during

meals, cleaning the courtyard, neighbourhood and farms. They promoted individual argumentation and the development of communicative competence and language skills. Dialogues and conversations employ good structures such as complete sentences with clear meaning, interesting details, adoption of values and attitudes and appropriate language models. These acted as models, provoked and encouraged inputs from the child that drew the attention of others, enabling them to develop listening skills and vocabulary and turn-taking skills during conversation. All of the aforementioned are valuable for sustainable learning strategies that focus on group-oriented activities and increase knowledge about the homeland and its ancestors. The Bamiléké parents always begin and end any talk by “listen” and “have you heard?” or “you have heard well”. This is ensuring attentiveness and reinforcing understanding.

CULTURAL STRATEGIES FOR COGNITIVE ENRICHMENT

The participative process of the cognitive enrichment strategies is holistic as it encompasses motivation from the perspective of needs and interests, talk, action, activity and learning at the same time. Children's active involvement in family activities begins very early through cooperation, engagement, collaboration and being committed. The child as an apprentice very early is also and always the central figure in the nuclear and extended family cycles because s/he is a gift from the ancestral gods. On this account s/he is an element for the continuation of the cultural traditions of the people.

Interest-driven strategy is known in the Bamiléké language as *piifak wen*. This strategy stems from parental belief that children must actively be part of all family activities. The importance is not only that children are actively engaged in these activities but that the activities are of interest to the children. Children are made to see the relevance, meaningfulness and value of the activities in which they engage as they collaborate and generate new knowledge through the participative process. The interest-driven strategy implies that children are motivated to be involved in whatever learning that the activities encourage because of the usefulness of the knowledge. The underlying principle in the interest-driven strategy is learning that applies to the child's everyday life as s/he relates to others, enabling him/her to be able to understand and solve life problems. It is not only indicating the central role of the child in learning but that s/he is the focus of that learning process. In this case the child-centered principles prevail.

The strategy of communication in forms of storytelling, narratives, dialogues and conversations is known in the Bamiléké language as *sok nu-sok cwe-sab nu*. The principle postulated here is that for children to know and have an open spirit, they must be informed through different forms of communication/interactions using the Bamiléké language to engage their interests in activities warranting their collaboration or cooperation in group work. These verbal engagements inform and create opportunities for the children to also offer their views and opinions when

requested. These occur during interesting activities such as doing house chores, cooking, taking care of younger siblings, working in farms for subsistence and for cultivating and processing cash crops such as coffee and cocoa. It also occurs during evening meals and evening fireside folktales particularly during the rainy season when fresh maize is roasted on open fire with everyone seated around. The holistic approach is also exemplified in these practices where actions demonstrate social, cognitive, moral and affective activities. These activities are sharing things and ideas while roasting maize and storytelling. As they eat the roasted maize, they share folktales bringing out moral lessons and values. In addition to all of these, parents may tune traditional songs and ask younger children to dance to the rhythm. The parents in this process expect the children to sing with them, their steps and rhythm as they dance must synchronize. The communications in these situations are social and cognitive as well as entertaining.

The strategy of mediated mutual reciprocity known in the Bamiléké language as *faksi zhi'si-bi* is based on the principle that ensures a match rather than a mismatch between children's knowledge and the expectations of the cultural context of learning. Children's behaviours are in response to parental input and expectations. It is a kind of giving and receiving with an expression of mutuality in the relationship. Every evening, children know they are expected to fetch water or prepare the evening dinner, depending on their age and competence. So, knowing this they carry out this responsibility without parental reminders. Both parents and children provide signals that provoke certain types of expected reactions. Progress is experienced through awareness and execution of these expectations and the recurring reactions for acknowledgement are recognition and praise. Parental and other caretakers' inputs provoke the child's behavioural reactions just as those of the child, also provoke reactions from parents and other caregivers. This process enhances and enriches meaning-making, which can change everything about how children look at their physical, cultural and social environment and establish positive interpersonal relationships and understanding. These experiences ensure learning that is sustainable because the learning situations consist of diversified meaningful activities, agents and material resources that motivate involvements. The interest-driven, sustained interactions and differential invariant reactions during these activities are interrelated and embedded in the Bamiléké participative processes. Giving these children opportunities to learn many new experiences and assume responsibilities is significant in the Bamiléké socialization of their children.

THE CENTRALITY OF THE CHILD WITHIN A PARTICIPATIVE MODEL OF LEARNING

Early childhood is from 0-6 years. The cognitive enrichment process employs activities and strategies that match the child's age. The child's interests are attracted more by the objects in their environment, which generates much talk, storytelling, singing and conversations with the caregivers who usually is an older sibling. The

emphasis on using the Bamiléké language very early is of great importance for continuity, transfer of cultural values and enhancement of the Bamiléké spirit. These verbal activities (“good morning”, “Have you messed up the floor? or the bed?”, “Say thank you”, “Clean up”, “Good girl”) are intensified during feeding, toilet training and bathing of the child. Actions and activities characterize what goes on in the child’s life and family.

Mothers are very concerned about feeding their children with a balanced meal as this for them has implications for the child’s intellectual development. So we see the awareness of parents about the importance of nutrition. Another activity attracting talk is the attribution of name to the child which has cognitive as well as personality significance. Fathers usually will talk to the child about the importance and value of the name s/he bears and family expectations regarding the name. Parental talk on this issue begins very early even before the child starts to talk in mother/child dyads. This enrichment process depends much on language, gestures and actions that engage and stimulate the child’s perceptions and cognitive skills. In these circumstances education is less authoritarian because teaching is more children centered. The actions indicated above occur in a rich language environment because of the multiplicity of persons talking to the child. The communal nature of the socialization process as many persons are sharing in the process, enable the child to speak early thus marking the stage in the development of language with precocity. The importance of this early stage is laying the foundation for insertion into the culture. This transition has important implications for later enculturation of the child as s/he transits to childhood which is a period for cultural immersion and transition to adolescence.

Childhood is from 6-12 years and the transition to this stage is very crucial because of the importance of this stage for the inculcation of cultural knowledge and skills for sustenance and continuity. During this period, the enrichment strategies are complex because of the increasing demands made on the child. Though the approach becomes increasingly authoritarian, interactions occur as the child is made to remember the names, functions of the family members and their importance. Storytelling focuses on family tree and lineage with various forms of initiations such as initiation into family business, property, age group, family group and farmer’s group, traditional dance groups and cultural choir group. These are characterized by engagement in practical activities that are approved by elders and older siblings which are of importance to the child’s cognitive development. Implicated peer mentors and adults observe, advice, counsel and initiate the child. The role of siblings and peers are very significant as they play together, dance, share family stories, sing, and hold conversations on topical upcoming traditional events. This knowledge transfer and sharing, demonstrates the degree of motivation and interest in cultural issues. It also demonstrates the importance of family evening gatherings and knowledge transmitted with regards to trading, initiation in appearances and acceptable conduct of behaviour based on gender defined roles and functions. During

this period, children are made responsible for major family businesses such as farming, trading and record keeping. Such engagements constitute enrichment activities, stimulating children's thinking and demonstrating trust and sense of responsibility.

The enrichment strategies make the child more responsible particularly when they are expected to engage in sharing, organizing, planning, monitoring and even mentoring younger siblings. Employing these skills strengthens their meta-cognitive development. Leadership skills are employed and all of these also enhance meta-cognitive skills accompanied by narratives, performance and actions. Transition to adolescence is a prelude to preparing for adulthood. Adolescence stretches from 12-19 years (Tchombe, 2007) and has a definite role, with regards to the transition to adulthood. The enrichment strategies are not only more complex and dynamic but make demands on the adolescent to be more responsible, mature and creative. The parenting style used can be described as falling within a continuum from authoritarian to being authoritative. Stories told are family oriented, on bravery, tribal wars and family history of how the family came to settle where it is. The narratives are more analytic and critical, highlighting values and models for emulation. During these important sittings, the adolescents are encouraged to ask questions to demonstrate their understanding, awareness and the possibility of sharing acquired knowledge. Such actions demonstrate a sense of responsibility, which is evidence of growing maturity, social competence and implied growing into an intelligent person from a Bamiléké perspective.

Major activities are initiation to cultivation of the farm and trading, construction of bridges with the use of bamboos or tree-trunks and construction of houses with traditional materials and engaging in other traditional activities such as traditional meetings and age-group membership. This basically illustrates how the Bamiléké people define the developmental stages and socialization for cognitive development.

THEORETICAL ISSUES AND IMPLICATIONS FOR SCHOOLING

Clearly, from the foregoing discussion, before contemporary theorists (Piaget, 1959, Bruner 1976, Vygotsky, 1978; Bandura, 1977; Rogoff, 1990; Cole, 1998; and Dewey, 1935) espoused their narratives of child-centered learning in participative pedagogies based on constructivist and socio-constructivist frameworks, the Bamiléké participative process had existed through the principles of interest-driven (*piifak wen*), oral tradition of storytelling, dialogue, narratives and conversation (*sok nu-sok cwe-sab nu*) and the mediated mutual reciprocity for generative learning (*faksi z'hi'si-bi*). The interest-driven strategy in cognitive enrichment has shown that the process is not a simple process of information transfer from the parents, siblings, peers to the developing child. It is the child's total engagement in learning through participation and interaction in activities that form family life and its functioning. The strategies enable the child to experiment, create, discover, investigate and communicate using

cognitive skills of explaining, questioning, narrating, describing, manipulating and engaging in cognitive activities that generate new knowledge or transfer of knowledge.

The child's context of learning is intellectual, physical, emotional and social. The socio-emotional and cognitive influences and oral tradition on learning are of prime importance for generating and facilitating new ideas. The implications for schooling today, call for the organization of a learning environment that encourages participatory pedagogy through group and individual work. In this orientation, children and their peers and teachers can engage in group work to develop the capacity to negotiate solutions, establish relations, and develop a culture of empathy and collaboration. In short, they will go beyond the given by developing social competence that will be seen in various dimensions of intelligence: social, cognitive, emotional, interpersonal and moral. These can be included in curriculum design. This notion of what intelligence means to the Bamiléké culture is a true picture of the holistic approach to education. Even Vygotsky's and also Bruner's postulation of the notion of a zone of proximal development (ZPD) which defines the difference between the child's independent learning accomplishments, and accomplishments under the guidance of a person who is more competent at the specific task is not new to the Bamiléké strategies of cognitive enrichment. In the Bamiléké culture not only more competent persons can accompany the child in the zone of proximal development; most of the time siblings' tutoring is what accompanies children through the ZPD. In fact, Nsamenang (2008) and Pence and Nsamenang (2008) have amply demonstrated that in African child development, mentors in the ZPD are elder siblings and peers and not adults alone. The challenge, then, is to organize school curricula to permit child-to-child mentoring.

The concern in the Bamiléké cultural teaching for cognitive enrichment is on the "how" (the process) rather than the "what" (the content). Emphasis in participation in farming, trading, storytelling, dancing, and singing and other such activities and actions is in process and not the end product. The Bamiléké provide the basis for learning that provokes self-review which is also self validating; providing occasions for the evaluation that will help accelerate learning. In the Bamiléké setting therefore, learning is both interest-driven and need-driven. It is interest driven because the activities are of particular interest to the children and need driven because they respond to children's needs such as the need for recognition, love, being responsible and feeling a sense of security.

The Bamiléké cognitive enrichment strategies though learner-centered are communal-centered or family-centered, sibling-centered because children's participation is not isolated. Children are encouraged to work together and are held accountable for one another's degree of participation and involvement. What is encouraged is cooperation rather than competition. Clearly the child's activities employ various forms of cultural materials, tools and local technologies, for example, the weighing of cocoa or coffee; the bangles worn on the ankles and legs during traditional dances provide the basis for determining rhythm, synchrony. When

activities engage children's interest and excitement these spill over to other activities provoking questioning and developing a sense of responsibility for one's learning and ensuring transferability. Children's enthusiasm and achievements are motivated and sustained.

SOME LESSONS TO BE LEARNT

African education is developmental as illustrated by the Bamiléké culture and has the advantage of enabling the child to live intensively across all symbolic situations and rituals so that they experience all what society expects of them. Thus the Bamiléké enrichment strategies are diffused, mutual and employing sustainable learning techniques such as facilitating child's cognitive monitoring through oral traditions with emphasis on the use of more explicit interactions. In such situation children learn to resolve cognitive conflict, use analogies, identify mistakes, practice, rehearsal, create, label and so on. The strategy of interest-driven is of value because of the focus on children's interest. Here the learning activities must attract the interest of children to ensure continuity in the use of learnt skills within culture. Parents' strategy of telling stories of events that are of interest implicitly is to stimulate children's imagination and curiosity. In adopting such motivational strategy parents are trying to be connected with their children so that they will learn. Bamiléké parents always ensure effective transitions and linkage such as "you remember", "like I said the other day" or "I had asked your brother to tell you or remind you". The principle embedded in interest-driven strategy is sustained by an enriched social interaction and tactics that are crucial in the learning process. Children are active in the learning as they collaborate with others. They assume responsibility in the exchanges.

Let us, for example, look at some implications for pedagogy. Remember that with no direct teaching, the child learns so much through focusing on activities that are of interest. The mutual reciprocal and mediated strategies motivate the child's behaviour and reactions which are being encouraged and supported by the reactions of the caregivers and the parents. Learning through activities is helpful as it makes learning to be meaningful. Learning should be accompanied by rich narratives to provide context for exchange where children can initiate the dialogue, conversation or tell a story. The enrichment strategies enable children to see thinking as a goal. Bamiléké parents present challenging problem solving opportunities to their children. They even create a safe, risk-taking environment. Learning as perceived is always a task. It is ongoing, concrete, challenging, immediate and confined to specific activities that are interest and need-driven and relevant.

In errands children's thinking process contained heuristics and skills that have been mastered through other activities such as preparing meals, cleaning up, bathing activities. Children in the Bamiléké culture learn to talk fluently with no special teacher. They are given many responsibilities whereby they perform without being overtly taught. Dewey (1938) reminds us that we do not learn from experience but

we learn from reflections on experience. This takes me back to the principles of the Bamiléké people about developing the spirit which is the mind.

Bamiléké encourage much group participation at all levels and ages. Children's enthusiasm and achievements are greatly motivated and sustained. The Bamiléké enrichment strategies are dynamic and are not characterized by routines and rituals. They are learner-centered whereby learning gives children much opportunity and activities to express themselves verbally or non-verbally. As concerns the case of the Bamiléké enrichment strategies the assessment of children is continuous and holistic based on the objective of the education and the underline principles. To assess is immediate and value judgments on children's performance are cumulative. Success is never based on onetime assessment on one specific skill.

CONCLUSIONS

The enrichment strategies have demonstrated that learning is a process of social participation in family activities, through collaboration, teamwork and cooperation than on instructive pedagogy that characterizes rote and routine learning, generating lower order cognitive processes and surface learning. An interactive and relevant learning environment that is natural exists all the time and with use of existing natural resources and tools to support the learning. The enrichment strategies have also shown how children are encouraged to create sustained knowledge and develop their meta-cognitive processes.

The uses of different interactive approaches such as storytelling based on themes driven learning exercises, allow children to relate learning to practice. Bamiléké enrichment strategies use heuristics because they address relevance, diversity and quality for meaningfulness and understanding, emphasizing the skills on learning how to learn that shift from regulated learning and didactic practices to challenging the child's cognitive processes.

EXERCISES

1. Draw a scheme of work for ten to twelve year old children in any given subject employing four of the indigenous pedagogic strategies for cognitive enrichment.
2. Create a responsive pedagogic environment where learners see thinking processes as a major task using indigenous strategies. Illustrate with list of challenging tasks.
3. Identify pedagogic practices used in your culture by parents and peers that can be used by teachers for cognitive enhancement.
4. Can the use of indigenous pedagogy in Teacher Education and Training make practicing Teachers more pedagogically accountable?

5. What kinds of indigenous pedagogic strategies would make a difference in cognitive enrichment in overcrowded classrooms and multi-grade teaching classrooms and multicultural contexts?

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Part V

DIDACTIC AND PARTICIPATIVE PEDAGOGIES

In every culture there is at least an epistemology or theory of knowledge that guides people's behaviour and the transmission of cultural knowledge across generations. In some cultures, children observe and participate in ongoing cultural activities with little or no instruction. In other cultures, children are instructed by adults outside the context of skilled activity. In Africa's education systems a mixture of local and imported pedagogies are apparent.

In Chapter Fifteen Esther Akinsola presents Omoluwabi as a holistic approach to education among the Yoruba of western Nigeria. Her chapter showcases a rich, well-rounded and all embracing Yoruba epistemology. It explains its complimentary potentials if integrated into the present western form of teacher education in Africa. The inclusion of Omoluwabi methods and precepts in teacher education would ease dissemination of knowledge to the African child within cultural and environmental contexts. This could serve as a platform that would expose African children to education that is relevant both to their cultural roots and global age requirements.

Bame Nsameng in Chapter Sixteen, explains what developmental processes, developmental learning, and child agency within Africa's theory of the universe entail. He indicates that participative learning in African family-based education begins early and what specifies the role of parents and siblings/peers in developmental learning. The author discusses which participatory learning processes can be integrated into the school curriculum today, explaining why this is necessary. In doing so, he analyzes the teacher's task vis-à-vis developmental learning. Chapter Seventeen by Maureen Mweru describes the role of sibling caregiving and sibling teaching in young Kenyan children's development. It reveals how older siblings during sibling caretaking use locally available materials and traditional games, songs, dances, and story telling to teach their younger siblings various concepts and skills. The chapter therefore argues that teachers just like older siblings should use culturally appropriate teaching methods. Mary Esere, Adeyemi Idowu and Joshua Omotosho, Chapter Eighteen, depict traditional Nigerian society wherein the child's education is effected through the acquisition of knowledge through various cultural techniques. These are taught the child by parents and community members. As highlighted in this chapter, the contents of education in African family tradition include every sphere of natural and human life of the society.

The classroom is the basic unit in the school setting, where different processes take place leading to learning and development. Classrooms vary in compositions and dynamics. The nature and tone of the classroom climate is determined by whether the classroom is teacher dominated or child-centered. Therese Tchombe, in Chapter Nineteen, examines various facets of classroom processes as psychosocial parameters. She endeavours to link the relationships between parameters and processes and to identify appropriate strategies for better management of psycho-socio-affective factors impacting pedagogy to effect quality learning. In Chapter Twenty, Bame Nsameng brings into focus didactic, participative or experiential pedagogies to which African children are subjected in school and out-of-school. He outlines the key features of each pedagogic technique identified and attempts to explain how African participative pedagogies can enrich school learning. The author insists that teaching strategies of the 21st century should go beyond knowledge transmission to facilitating the learning of overarching dispositions and technology-based skills required for informed and effective functioning in the global community. Experiential learning requires no teacher and relates solely to the meaning-making process of the individual's direct action or experience. An example of

experiential learning is going to the zoo and learning through observation and interaction with the zoo environment, as opposed to reading about the life of animals in a zoo. Experiential learning is learning through reflection on doing, which is often contrasted with rote or didactic learning. Thus, one makes discoveries and experiments with knowledge firsthand, instead of hearing or reading about others' experiences. Experiential learning focuses on the learning process for the individual, unlike instructional education, which focuses on the transactive process between teacher and learner.

Chapter 15

**OMOLUWABI'S APPROACH TO EDUCATING
THE AFRICAN CHILD**

Esther F. Akinsola

CHAPTER OBJECTIVES

After studying this chapter, the student-learner should be able to: 1) Explain African epistemology, 2) Gain insight into the centrality of oral traditions as the driving force in African theory of knowledge, 3) Master the role played by oral traditions in Yoruba traditional education, as exemplifying a holistic approach to education in African cultures, 4) Understand the comprehensive and holistic approach (the *Omolunabi Way*) to African education as represented by Yoruba traditional education, 5) Gain insight on how African epistemology should drive education in Nigeria/Africa, and 6) Comprehend how the positive elements of African education can be integrated into Africa's school curricula.

WHAT IS AFRICAN EPISTEMOLOGY?

Globally, there are many societies and every society has a set of peculiar ideas, beliefs, customs and values (aspects of culture) that guide the behaviour and practices of members of that society. Members of every society are also guided by sets of principles which they use to explain what they know and how they know it, what they do, how they do it and why they do it. These principles are called epistemology or theory of knowledge. The societies also have ways and methods by which they teach and pass on to their children their way of life and cultural knowledge in terms of ideas, beliefs, customs and values. This cultural knowledge is transmitted from generation to generation, albeit with some modifications. Africa is a continent of many societies and as such harbours many cultures. However, these societies although distinct, they share some similarities in their traditions, the way they see the world, describe the world and relate to the world in general: these are philosophies, worldviews or theories of world.

From this perspective and in this chapter, while epistemology in general is defined as dealing with the nature, origin, scope and limits of human knowledge (*Encyclopaedia Britannica*, 1990), African Epistemology in particular is defined in terms of African traditions, cultures, philosophies, and theories of the world. Understanding African epistemology therefore would require knowing about how African people derive and make meaning out of what they experience in their cultural environments, and the approaches or methods they use in sharing such experiences with their children and teaching them the benefits and gains from such experiences. It would also require knowing how the African mind thinks about and gives meaning to environmental experiences and how these experiences are fitted into a general worldview.

Africans combine the physical, the natural, and the spiritual aspects of the universe as well as moral principles to inform and explain what they know, how they know and why they know. This is what is called African theory of knowledge (Anyanwu, 1984) or African epistemology. Nasseem (2009) supported this view by stating that the classical African philosophy postulates that "man and nature" are

two entities but cannot be separated, and the united entities from which African epistemology is derived embraces the rational, the empirical and the mystical components of knowledge. African epistemology therefore views knowledge as the understanding of the hierarchical nature of forces and their cosmic interactions with possibly a supreme being at the helm of affairs. It might be of interest for the reader or student to compare and contrast this epistemological position with the existing theories of evolution and the religious accounts of human origin, existence and knowledge.

Another source of knowledge for Africans comes from the combination of experiences from all their senses and reasoning and this makes self experience to be central to and self development to be dominant in African epistemology. Due to the fact that African culture is creative and very rich in oral traditions Africans use oral literature as a means of gaining knowledge and as a tool that propels their theory of knowledge. African oral literature in which the oral traditions are explicitly expressed constitutes the most authentic expression of the creative intelligence and the worldview of African peoples (Akporobaro, 2001).

Oral traditions have been identified as an important source of knowledge acquisition in African societies. Oral tradition involves the transmission of facts, values and fiction through oral means. It is a tradition because it persists, it endures and is stable. When used adequately oral literature provides reliable and dependable knowledge about the history and culture of a people, and serves as a medium for cultural continuity (Gbadegesin, 2009). The reader or student might be interested in exploring the similarities, if any, between the Western forms of poems, proverbs, and metaphors and indigenous poems, proverbs and wise sayings in his/her local cultural community.

The focus of this chapter is to present the holistic, well-rounded and all-embracing view of African indigenous approach to educating the child and showcase its rich and complimentary potentials if incorporated into the present western form of teacher education in Africa. The inclusion of its methods and precepts in teacher education curriculum would place education in Africa within cultural and environmental contexts and render the education of African children relevant within and outside their cultural spheres.

The Yoruba people of Nigeria occupy the south western part of the country. They are bounded in the south by the Bight of Benin, in the west by Benin republic, in the east by the western territory of Benin Kingdom and in the north by the river Niger. Socially, the Yoruba people are gregarious in that they live together in family groups and are sociable. Wherever they live, whether in villages or towns, they form family compounds (*Agbo Ile* or flock of houses). These compounds are made up of apartments where individual families live. The apartments are surrounded by a general wall and common walls separate one apartment from another with a square in the middle of the compound. The families are guided by elaborate code of manners and etiquette that serve to reduce the strains and frustrations of interpersonal

relationships. Each compound is headed by a *Baale* (father of the house) who usually is the eldest male in the compound and the founder or his descendant. Greetings form an important part of Yoruba daily life and they have different greetings for different occasions, for juniors and for seniors. They use proverbs and adages everyday and extensively in all forms of communication either to bring out clearly the meaning of obscure points in arguments or as the driving force in a discussion.

The education of the young Yoruba in the codes of manners, conventions, customs, morals, superstitions and laws of the society is achieved through various members of the family usually living in the same compound as well as the neighbours. In this regard the seniors teach the juniors, the child observes and learns from the behaviours of age group peers, and those that are older. The child also learns from continuous exposure to lessons on morality and good manners consistently taught through the daily and frequent use of Yoruba proverbs employed to drive home some practical truths.

Due to their gregarious nature, the Yoruba people form associations and corporations which derive from the concept of organisation of people into family compounds. Associations such as Ogboni, league of traders, hunters' guild, *agbekoya* (farmer's club), and others are formed to promote and protect common interests in areas such as politics, economy, religion, recreation and enjoyment. Sometimes these associations dovetail into political parties, church societies and sport clubs. In a town that consists of a number of family compounds, there is usually an *Oba* (a king), and an *Ogboni* which is a council of notable elders in whom reside judicial, political, and legislative powers.

The Yoruba had their own religion before the advent of Islam and Christianity. They believed in their own deities which include god of iron (*Ogun*), god of thunder (*Sopona*) and which are regarded as intermediaries between an almighty God (*Olodumare*) and humans.

YORUBA TRADITIONAL EDUCATION: EXAMPLE OF AFRICAN EPISTEMOLOGY

The Yoruba system of child training is presented in this chapter, not as African epistemology, but as one example of it. This system of child training is driven by Yoruba oral traditions and philosophy. The oral traditions of Yoruba people consist of proverbs, poems, wise sayings, songs folktales and riddles. The Yoruba people use these oral literatures to teach and train their children how to grow up and become *omoluwabi*, which is the concept of a "person" that forms the central focus and the ultimate goal of Yoruba traditional education. The concept of *omoluwabi* is comprehensive, total, complete, and all embracing. To be an *omoluwabi* is to be a complete, total and well rounded person in all its ramifications. An *omoluwabi* is someone who has good character which in Yoruba language is called *iva*. A person of good character would show respect for old age and seniority by respecting those

that are older and those in higher classes or positions. A person of good character would be loyal to his/her parents and local traditions, would be honest in all public and private dealings, be devoted to duty, be ready to help the needy and the infirm, would be sympathetic, sociable, courageous, intelligent, energetic, and with burning desire for hard work, as well as possessing other desirable attributes.

Literarily, *omoluwabi* means *Omo ti o ni iwa' bi eni ti a ko ti o si gba eko*, meaning a person who behaves like someone who is properly and well nurtured and who lives by the precepts of the education s/he has received. Sayings such as *Iwa rere l'eso eniyan*, which means good character is an ornament for a person; *Oruko rere san ju wura ati jadaka lo* which means good name is more precious than gold and silver, and *Ise ni ogun ise* which means hard work is the antidote to poverty are part of the oral traditions that are used to train Yoruba children. These sayings reflect the importance attached to character building through the concept of *omoluwabi* by Yoruba people. At this point the reader might want to compare the concept of *omoluwabi* with self-actualization theories of Maslow (1967), and others, and compare its attributes as described in this chapter with the Western theories of social and technological intelligence.

In line with the 'life affirming' philosophy of the Yoruba, Yoruba traditional education is a lifetime process that starts with the unborn foetus in the womb and continues after birth until death. The Yoruba people believe that life begins from the womb and character building and grooming is a lifelong process. In pregnancy, the mothers are given guidelines about what to do, eat, and drink for the sake of their children, and are encouraged to talk, sing, and recite the family's praise names and sayings (called *oruko ati oriki idile*) to their unborn babies, with the hope that these practices would help to build and nurture good character in their children after birth. This aspect of Yoruba child training is comparable to some Western developmental theories especially those that address the pre-natal factors that affect the unborn child and can have lasting effect on the child after birth. In addition, some studies (e.g. Hepper, 2003) have established that foetuses are capable of learning through exposure by demonstrating preferences for their mothers' voices as opposed to unfamiliar female voices at birth. The reader might be interested in comparing these developmental theories with the prenatal aspect of Yoruba child training and explore similar practices in his/her cultural community. The reader/student might want to carry out studies to confirm or refute Hepper's findings in his/her community.

At birth the newborn baby is showered with love and affection by the child's entire extended family and community. The baby is given names on the eighth day according to the tradition of his/her household and as the baby grows the mother continues to talk to the baby and reminds her about the meaning of her name constantly instructs the child on how to live according to the meaning of her name and the precepts of the family, the community and the society. As part of the mother's instructions to the child, she recites the praise names and sayings of the child's family *oruko ati oriki idile* to the child regularly with the expectations that hearing

such sayings frequently would help in moulding the child's character and enhance his/her self esteem. This is an obvious example of "imprinting" impressions on the baby's brain.

As part of the family's training, the mother instructs the older siblings on how to look after the younger ones in her absence or when busy and also how to perform household chores. The reader might at this point reflect on the building blocks of self-esteem in Western theories of 'self' vis-à-vis the traditional building blocks as described here and explore what they are in the reader's culture.

As the child grows informal training in numbering and language usage is carried out by the grown-ups in the community. The child goes to the farm, as well as the play ground with the older people in the community. The child is taught how to work hard on the farm and how to play local games in the compound after retiring from work. In this way the productive capacity and the talents of the child are developed. Through the examples of elders in the community the child learns the virtues of endurance and courage, and through proverbs, wise sayings, and folktales, s/he learns the use of language and the art of responsible living. When the child is old enough to learn a trade such as tailoring or carpentry, or a craft such as sculpture making, cloth dyeing (tie and dye) or cloth weaving (called *aso oke*), the parents would guide and send the child to an apprentice for a period of time and get the child started in the new trade after graduation by equipping the graduate with the tools of the trade or the craft learnt. The Yoruba people cherish skill acquisition because they believe that it is a surety or insurance for the raining day and remedy for poverty. As such, they combine skill acquisition with formal schooling for their children by sending them to acquire one skill or another when the schooling systems are on holidays.

The *omoluwabi's* way of educating the Yoruba child engages parents, siblings, peers and communal components. Yoruba sayings such as: *Ile ni a ti nko eso lo si ode* (meaning "charity begins at home"); *Ile ni a n wo ki a to so omo ni oruko* (meaning the name you give to a child must reflect his/her family tradition); *Ranti omo eni ti iwo nse* (meaning remember the son of who you are) reflect the parental component in child training. Other sayings such as: *Egbe eiyi ni eye ntele* (meaning the bird follows its mates), which instructively inform the child to follow and learn from peers, is a reflection of peer input, and *Enikan ni o n bimo igba eniyan ni o nto o* (meaning it's one person that gives birth to a child but two hundred people train the child) reflects the communal input in child training. The essence and the goal of Yoruba traditional education therefore is the total actualization of the person which is reflected in the positive use of salient characteristic features of the person, namely, the mental, the social, the physical, the psychological and moral uprightness. It is the aggregate of these features that makes a being a person and hence an *omoluwabi* in the Yoruba cultural context. It is this "self-actualization" or the production of the "total person" in terms of "social competence" that is the ultimate goal of Yoruba traditional education. It is equally recognized that *omoluwabi* as an epistemological concept is

the ideal goal for Yoruba people which they believe is achievable but which may not be achieved if there are flaws in the realization process. This may be the reasons behind the questions usually asked when a child misbehaves. An example of such questions is: *a bi i ko ni tabi a ko o gba* (meaning was she not trained? or was she trained but did not imbibe the training?). The implication of this is that sometimes the trainers (parents, peers, community, etc.) may not perform their duties properly or the trainee has not imbibed the learning. In spite of these flaws it is still believed that many Yoruba children through this procedure develop to the *omoluwabi's* level and hence the goal is worth pursuing.

African education exemplified by Yoruba traditional education addresses all the developmental domains of the child ranging from physical to cognitive to social to emotional to psychological, to moral and productive capacity domains. In addition and with regards to developmental stages, African education as presented in this chapter addresses the prenatal, postnatal, childhood, school age level, and career developmental stages. This approach to the development of the child in my view is comprehensive, total, complete well rounded and holistic. This is the approach to the development of the child as a whole “person” which should be the ultimate goal of African education.

IMPLICATIONS FOR SCHOOLS AND TEACHERS

The knowledge derivable from the above illustration of Yoruba epistemology is that:

1. African education is holistic because it is centred on the development of the total person. It focuses on the training of all the faculties: physical, cognitive, social, emotional, psychological, moral, spiritual, and talent potentials and capacities within the child's cultural context, but with an outlook on to a common global village.

African education is developmental in orientation and implementation because it starts from conception, when human life begins and continues throughout life.

2. African education uses oral literature as a driving force in knowledge acquisition.
3. African education involves hearing, listening to, looking at, observing, doing and imitating cultural precepts in one's cultural community.
4. It is participatory and has parental, sibling, peer and community components. The teaching method is a collectivistic approach through demonstration, communal participation and cooperation.
5. African theories of knowledge acquisition are comparable to contemporary theories of knowledge acquisition developed in other cultures that currently feature in education curriculum in Africa.

6. African education can be integrated into teacher education by developing curricula on courses such as 'Child Development in African Contexts'; 'Comparative Developmental Psychology: a Worldview Perspective'; 'Comparative Education in Africa' and integrating them into African teacher education curricula.
7. Since oral literature is central in African education, curricula can be developed for courses on Language Studies. Under this title we can have course titles such as: African Oral literatures, African Poems and Metaphors and these can be integrated into teacher education curricula. The courses can be localized by having say: 'Nigerian Oral literatures' or globalized to the African continent by having: 'Comparative Oral Literatures in Africa'. All these titles including the developmental ones can come under an umbrella course name such as African studies. Concerning language studies African children are bilingual and bilingualism has been found to aid understanding and comprehension of tasks presented in English language (Akinsola, 1993). If African children are exposed to languages other than their own it will be beneficial to them.
8. For learners to benefit maximally from school learning, it is needful for such learning to be presented on a familiar platform. Such approach is like working from the known to the unknown, making learning interesting and easier for both the learner and the teacher. African children are exposed to traditional education and traditional ways of learning from the womb until when they are old enough to start formal schooling when they are now exposed to the Western education.

For ease of learning and for continuity it may be logical for the teacher to present the new learning material using the methods that are already familiar to the learner and drawing analogies from the materials with which the learner is familiar. For example, if a teacher in Nigeria is teaching hygiene under Health Science and needs to talk about cleaning the mouth using toothpaste, he can start by asking the students prior to class to find out from their parents what old people in those days were using to clean their teeth, and ask them in class to talk about their findings and then inform the students about chewing sticks. If their findings do not include this, show samples of chewing sticks and other teeth cleaning tools prior to the advent of toothpaste to the students and then present the toothpaste as the equivalent or substitute for these tools. The teacher can also teach the consequences of not cleaning the teeth with a traditional song like this: (*Akokoro ma ba eyin mi je, mo ji mo run rin, E yoro ma se ba mi ja mo ji mo yo nu, Ori fifo pelu e e bi ma se ya odo mi ya odo omo ti ko ba run rin*), meaning: (Tooth decay don't spoil my teeth for when I wake up I use chewing stick to clean my teeth! Mouth ulcers don't trouble me for when I wake up I wash my mouth with gaggle! Headache and vomiting don't trouble me; trouble those who don't clean their teeth). A Nigerian teacher who adopts this approach is using participatory method of teaching and oral tradition to drive home the lesson to be learnt from not cleaning the teeth.

For the teacher to be effective in teaching, he has to master the learning material and present it in a way familiar to the students so as to understand and effectively learn the material. This is where the need arises for the inclusion of African education into the teacher education curricula in Africa. The teacher needs to master African education for the following reasons which are not exhaustive. By mastering African education:

1. The teacher is able to know what traditional education is and what type of training is needed at each stage of a child's development.
2. It will give the teacher the opportunity to know how to give the necessary training at every stage of development using the appropriate tools and methods
3. The teacher will be able to understand the child's behaviour in context.
4. The teacher would be able to discover individual differences in the behaviour of children that may relate to developmental context and address them as appropriate.

In the current educational system in Africa the positive elements of African education are grossly lacking or non-existent, and that makes the educational system to be defective or at best incomplete (Akinsola, 2006). It therefore becomes imperative for modified education curricula for Africa to evolve, one that will incorporate these positive elements of African education into the schooling system. Teaching African children the positive elements of African education would complement the current educational knowledge they are receiving which at best helps them to find their feet in the world outside their cultural territory. However, as the saying goes "charity, they say begins at home". If African children cannot find their feet properly in their cultural environment it is doubtful if they will find their feet properly outside it. It is the inclusion of the positive elements of African education into the current education curricula that will provide avenues for them to have a balanced development and equip them to function appropriately within and outside their cultural world.

CONCLUSION

African epistemology as represented by Yoruba traditional education in this chapter is comprehensive, complete, total and holistic. It addresses the development of the total person in all developmental domains that would make the person to become a self actualized individual. The approach to knowledge acquisition in African epistemology also compares favourably with existing theories on human development and self-actualization theories. From the illustrations given in this chapter on African education it will be beneficial if teacher education curricula are packaged within the context of African epistemology.

Education as a process of enculturation is expected to produce a well-rounded individual whose contribution to his/her social environment shows respect for and

demonstration of cultural values, and acquisition of culturally relevant learning and character. In this respect the African traditional education achieves this for the African child. However, a well-rounded educated individual is also expected to acquire those intellectual qualities that would put him/her on a platform relevant to cultures and civilizations other than his/her own. These two expectations (acquisition of culturally relevant and internationally approved education), which can be regarded as primary and secondary expectations for African children are the main goals of education. The current educational system in Africa (Western education system) achieves the secondary goal of education for African children while the traditional education is not emphasized because of the neglect of such knowledge by policy makers and curriculum planners. This makes the education of African children defective or incomplete. It is the inclusion of African education through various traditional practices such as, for example the concept of *omoluwabi* into teacher education and school education curricula that would pave the way for achieving both the primary and secondary goals of education for African children.

LEARNERS' EXERCISES

1. Identify 3-5 indigenous/cultural learning and how they are transmitted in your (learner's) community
2. From your understanding of African oral traditions described in this chapter, list out and describe your (learner's) community's version of oral traditions
3. Identify the practices and processes in your community that make your own version of African education comprehensive and holistic.
4. Identify possible ways by which your (learner's) version of African education can be incorporated into the school curriculum in your community and country.
5. Through research explore, discover, and compare cultural epistemologies across nations in Africa possibly on collaborative/networking platforms.

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Chapter 16

**DEVELOPMENTAL LEARNING IN AFRICAN CULTURAL
CIRCUMSTANCES**

A. Bame Nsamenang

CHAPTER OBJECTIVES

After studying this chapter, you should be able to: 1) Explain what developmental processes, developmental learning, and child agency within Africa's theory of the universe are, 2) Indicate when participative learning begins and what it entails, 3) Specify the role of parents and siblings/peers in developmental learning, 4) Identify which participatory learning processes could be integrated into the school curriculum today, explaining why this is necessary, and 5) Analyze the teacher's task vis-à-vis developmental learning.

INTRODUCTION

Cultural communities the world over bear, protect and "educate" children to acquire productive and reproductive capacity and beyond. Indeed, throughout history all societies have educated their children into different status positions for various purposes. Although all cultures, including those of Africa, possess systems of education, in general, I surmise the world's systems of learning into two general models. One model is didactic or instructional – a primarily Western mode of public schooling – the one African teacher education institutions has so far prepared their graduates to follow. Why not the second model is the participatory model of learning, particularly the African, children develop and learn as "participants in their cultural communities" (Rogoff, 2003). In other words, children's development and learning can be understood only in the light of their cultural practices and livelihood circumstances, which have been drawn into the rapidly changing, competitive global community. Thus, local needs and global requirements carry important educational implications that require a delicate balancing act in teacher education and school curricula.

As the cradle of humanity, Africa has successfully practiced childrearing and education within the framework of African culture for centuries. Education in African family traditions is one in which older generations, especially parents, sought and still seek to pass on what they have learned or inherited to offspring. They also put in place culturally-appropriate strategies for children to acquire it by themselves. Learning in this sense translates into "coming into possession of;" this process of acquiring knowledge and skills, occurs everywhere. Much learning happens without the notion of "passing on" or "imparting", as when an infant comes into awareness of a specific woman as own mother; a girl and boy realize themselves as sister and brother or a toddler cherishes one food item and not others. Another instance is when someone experiences a friend as being more helpful to him or her than a relative. The western-type of education, especially schooling, that is being adopted with some difficulty in Africa applies narrowly to "deliberate passing on" or imparting of knowledge and skills. In this chapter, I use education in the broader African sense of learning as sketched above that is both a ubiquitous process and an outcome that happens with

every “normal” child across stages of life, hence the notion of developmental learning. All this implies that children have more to learn from than just the content the teacher endeavors to “transmit” or “pass on” from her or his “head”.

Africans tacitly recognize interaction with the environment as the foremost teacher. I am referring to “self-education”; a hitherto implied African positioning that children can learn without teaching or that children can learn content different from that which teachers and parents believe they are transmitting or imparting to them. For instance, as “active teaching” is going on, children may learn that their teacher is pleasant to some but not other children and that s/he encourages some but not others to master the content and skills being taught.

Thus, Africans view education broadly as a process and an outcome that seeks to and actually orient children to the universe and into gradual and systematic learning of the art and science of living and the responsibilities linked to developmental social statuses and their livelihoods. For example, a preadolescent is expected to demonstrate more maturity and evidence of accumulated learning than a toddler. Such learnings are cast in the social history, culture, language, institutions, and daily family routines and ethnic polity.

DEVELOPMENTAL PROCESSES AND OUTCOMES

Process is a series of operations, events, or steps that lead to the attainment of a specific outcome or result. Developmental processes refer to the combination of forces (e.g., genes, maturation) and factors (e.g., nutrition, mother’s health status, exposure to new knowledge or experiences, child’s living conditions, etc.) that are initiated or put in place at conception and thereafter and that operate in the course of a child’s life to produce the changes that can be observed and assessed in the child at various developmental stages by both caregivers and experts. Learning is an example of one outcome of developmental processes. We can infer that the interaction between the aforementioned forces produces or instigates developmental change in the child.

Two important developmental forces worth mentioning here are maturation and sociocultural factors. Maturation is built into heredity or the genetic make-up which is endowed by or inherited from the father and mother when a baby is conceived. This implies that genes prepare every child to grow and develop at a certain rate and to a certain body size, but this depends a lot on environmental inputs, such as the quality of the diet, care, physical safety, social and emotional security, play materials or stimulation in general and most importantly the nature of the learning experiences to which the child is exposed. Cultural identity is also an important factor because the way we make sense of who we are depends, in part, on the sociocultural circumstances in which we are raised or socialized. This ‘fact’ of human existence is often taken for granted until we confront people from other cultural backgrounds to notice basic differences in acceptable behavior and ways of functioning. For example, interpersonal

networks differ across cultures and social classes.

Every culture has at least one theory of the universe or worldview that reflects a silent or obvious philosophical outlook to what the universe is regarding the meaning and purpose of life and the development and place of the child in it. Theories of the universe make for variation in how different people see children and their development. Cultural scripts and various dimensions of the environment are the contents around which different cultures structure development and education. Every cultural and social context provides the cultural elements, in terms of knowledge, artifacts, tools and practices which people use to make sense of their experiences and to manage human relationships. All societies in Africa engage various cultural tools and practices and are adopting imported ones in processes of enculturation, socialization, and education of children to enable their acquisition of facts, beliefs, values, skills, competencies, demeanor, etc. My discussion of developmental learning implies living as connoting a form of learning.

WHAT IS DEVELOPMENTAL LEARNING?

Developmental learning refers to knowledge and skills acquisition that is vital to children's survival and development, which they do not possess at birth (Nsamenang et al, 2008). Children are not born with the knowledge and competencies with which to make sense of life and cope with the world but they are born ready to learn. Heredity, 50 percent of which every child inherits from each parent, prepares children to learn and transmit culture and to acquire knowledge and competencies in the course of development. Key elements of such learning can be achieved without the usual sense of classrooms and schools (Bruner, 1996). Every society makes the learning of survival knowledge and self-fulfilling accomplishments possible by conceiving of human nature within its cultural meaning systems and organizing development and learning according to that cultural image.

Nso parents in Cameroon, for instance, prepare their next generations from a positioning of keen awareness of children's maturation to "grow into" or to learn knowledge and skills. They, like most other African parents, actualize this belief in their parenting practices that assign household and other livelihood tasks to children from an early age (Nsamenang, 2008a). The Nso believe that children possess an inborn or natural ability to learn from what they see, hear or imagine. Nso folktales and riddles rouse children's imaginations and learning of moral values. Nso parents incorporate children as active participants and useful contributors to family life from their early years of life; this is a practice component of the African school-of-life (Moumouni, 1968). The definite strategies and mechanisms by which the children are raised into the acceptable ways of their societies or teach themselves and their siblings or peers the cultural ways of their communities and of the world vary across ethnic communities. The role of parents, other adults, and sibling or peer mentors in developmental education of the school-of-life is to:

Guide children to understand and accept the appropriate adult identity and models toward which they are being prepared.

Communicate standards of valued behavior and virtue.

Alert and sensitize children to prosocial attitudes and virtues and to guide and ensure their acquisition (Nsamenang, 2004).

SOME ORGANIZATIONAL AND PEDAGOGICAL PRINCIPLES OF DEVELOPMENTAL EDUCATION

The centerpiece of African developmental learning is participative engagement and gradual maturation and systematic responsabilization toward the adult status. Parental pedagogies permit toddlers and youngsters to learn in participatory processes at home, in the community, at social and religious events and in the peer cultures of the neighborhood and school, through ‘work-play’ activities, with little to no open didactic support. Local knowledge and beliefs, which teachers in the community should be aware of, hold that children possess an inborn capacity to be agents of their own developmental learning. A taken-for-granted example of such beliefs and expectations within education in African family traditions is the understanding of ‘child work’ by both parents and children as necessary for the family and for the children’s learning as they develop (Nsamenang, 2008b). Children’s learning occurs in families and multi-age peer groups in which parental values and wishes or admonitions remotely guide and promote “responsible intelligence” by permitting children to “assist” parents in chores and older siblings to serve as caregivers and peer mentors to younger ones. Young children learn from older sibs and more competent peers because they engage in activities during interactions that are within the scope of actions that the younger child is capable of reproducing immediately or a little after observation, and even from long-term memory. Children are often seen pretend-playing parental roles.

In Cameroon, most of children’s ‘work’ is undertaken with peers in child-to-child social networks and exchanges with older siblings and peer mentors as child protectors rather than with parents or teachers. This is more commonplace in rural settings and urban slums. The considerable learning that occurs in child-to-child socialization is noteworthy given that in a 24-hour period, most parents, like teachers, are only partially available to guide and supervise children’s development and learning. The peer culture offers opportunities for children to play, “work”, and learn together, free from parental supervision and adult control. The freedom of the peer culture promotes creativity and challenges children to cultivate prosocial values and altruism on their own terms, to defer to more competent peers, to address and resolve

conflicts, and to notice needs of younger ones and serve them (Nsamenang and Lamb, 1995).

What other abilities and skills do children gain from child-to-child interactions and how do children's time together support and influence learning and developmental outcomes? What other teaching and learning strategies are there in the communities in which you are living or working? How can the teacher and the school gain from them?

African ideas and practices about human development throughout the lifespan are driven by social, affective and spiritual values and agendas. Nevertheless, African cultures implicitly acknowledge the role of biology in reproduction and development but more actively invest on the dimensions of moral, social, affective and spiritual development. Accordingly, responsibility training, piety, and social competence are essential qualities that traverse all stages of the human lifespan; spiritual and social considerations begin from conception, if not earlier. Within Africa's cultural worlds responsibility is more valued than mentalistic abilities or intelligence of and by itself in that a child or youth cannot demonstrate a sense of responsibility without using mental abilities. Cultures vary in the importance they attach to certain skills, in the combination of intellectual and other human abilities that are called upon in any given context, or in the order in which specific skills are acquired and put into practical matters (Segall et al, 1999). Africans cherish intelligence not as an end in itself but as a means to social ends but as it is associated to serving human needs or as it improves people's social competences. Some children and youth are intellectually smart and high academic achievers but are not so responsible, which often worries their parents.

A teacher must try to understand what is in families and the community of her or his work that reasonably explains the high valuation of social functioning.

CHILDREN AS AGENTS OF THEIR OWN SOCIALIZATION AND DEVELOPMENTAL LEARNING

I use the concept "agent" as shorthand for 'agent of socialization'. An agent of socialization implies a force that acts upon the child causing him or her to adjust behaviors or modes of functioning. The active element of agency is "action", which sustains ongoing social engagement guided by past experience or future goals or aspirations. Child agency refers to social processes or situations in which the child is an initiating actor or willful force that drives experience, learning and development. In this sense, I see the child as both a "manager" and instigator of her or his own development. As explained above, African parents' values permit children to be agents of their own developmental learning.

Most African children are compelled by their impoverished circumstances to struggle to survive and make progress through their own agency. The evidence for

such agency is better sought within African traditional societies and peer cultures rather than in school settings or academic institutions, though versions of it are to be found therein. The peer group is a trigger and central support of “agency” in African children, but it has not been well analyzed or researched and remains a largely uncharted developmental space. The anchor of agency is theories and research that demonstrate how children construct knowledge through their own efforts and actions on the world and how child-to-child socialization plays out on developmental learning and personality outcomes.

Developmental education hinges on the principle that the knowledge, skills and competencies a person requires for effective functioning cannot be massed together and learned at once. Guided by social thought and socialization practices that value and dispense education as a graduated, systematic process, learning in African societies is organized in a sequential order within a hidden cultural curriculum and across the phases and stages of life. Another principle, partially referred to earlier, is that children are born with a disposition to become competent as they mature, learning to relate to and share with others, as well as to regulate their behavior and activities according to natural forces and cultural norms. Africa’s developmental education seeks, at every stage of development, to produce a functional member of a given cultural community; the emphasis is not on biological unfolding, per se, but on social development and functioning, so to speak.

PERIODS OF AFRICAN DEVELOPMENTAL EDUCATION

Ontogenesis refers to the development of an individual organism over its lifespan. An African theory of the universe posits social development in three phases of selfhood, namely, social selfhood or the existential self and two metaphysical phases of spiritual selfhood and ancestral selfhood. That is, an African theory of the universe labels the living or developing child, a *social selfhood* – the individual as s/he lives in the community with other humans. The theory identifies seven stages of social selfhood and two metaphysical phases to give a total of nine distinct stages of the human lifecycle. The reader or student may do well to compare and contrast the stages of social development within African worldviews with Western stage theories, such as the eight psychosocial stages by Erik Erikson, the five psychosexual stages by Sigmund Freud and the four stages of knowledge development by Jean Piaget.

The notion of social development draws on African realities and livelihoods to acknowledge the cultural transformation of the child into an acceptable “cultural agent” of a particular community, systematically through periods of an unbroken circle of existence in the sense of the indestructibility of energy – the human life force – as in physics. As children develop through these life stages, they gradually and are “deliberately” made to enter into and assume particular levels of being human as well as defining a personal identity, and ‘being’ connected or related to

others in the human community and the universe.

The stages of African social ontogeny are recognized, not on the criterion of chronological age, but on largely biology-based social markers, such as the birth cry, smiling, falling off of the umbilical stump, teething, walking, generosity, social connectedness, putting on a good face, marriage, etc. Stages are marked by distinctive developmental tasks, defined within the framework of the culture's integrative conception of children, family, and their welfare. Traditional birth attendants are aware of all these, hence many communities consider them competent, as they provide maternity services in culturally acceptable ways.

The first stage is the period of the newborn that is marked by celebration for the 'gift' of life and the safety of birth. This is accompanied by verbalizations about the kind of socialized adult the newborn should become. In some ethnic communities, such as the Nso of Cameroon, children are not named at birth but only after the umbilical stump falls off. Nso people believe that babies whose umbilical stumps have not detached belong more to the spirit than to the world of the living and could literally be 'taken away' (i.e., die) at any moment. "Just as the ancestors are thought to have gone from the land of the living, though not far, the newborn are regarded as not fully and securely with the living and are thought to have special links with the spirit world" (Ellis, 1978, p. 42). In fact, the separation of the umbilical stump is a decisive developmental indicator among the Nso that marks the end of the period of the neonate. Accordingly, soon after the umbilical stump cuts off a naming ceremony, symbolic today in many families, confers a name on the child to induct him or her into the community of the living. In general, Nso names situate a child in the family tree but more remarkably they carry autobiographical significance for the child's individuality regarding family circumstances at her or his birth. Regrettably, some names carry negative connotations or insinuate the child's parents had problems or were in a conflict situation.

The second period approximates the stage of infancy. It is pre-social in that the 'quality' of such biological markers or reflexes as crying, sucking, babbling, grasping, smiling, sitting and standing is used as indicators for normalcy. As precursors of social functioning, the absence of these biological pointers causes considerable apprehension, as when there is no birth cry or when a child fails to babble or vocalize as an expected milestone for talking. Such indicators point to endogenous awareness of notions of maturation and readiness.

The third stage is social apprenticeship (childhood) during which children are gradually and systematically inducted into the canonical ways of their family and culture. At various levels of social maturation, the child is expected, each according to sex and ability, to learn and to attempt to enact family or social roles. The principal developmental task is for the child to recognize, cognize, and rehearse social roles toward which s/he is being prepared. The peer culture plays a central role in this task because children interact and stimulate themselves, play, antagonize and defer

to others in their own terms.

The fourth stage, social entrée or puberty, is heralded by biological changes that become assessable in social functioning. Some societies practice initiation rites in organized settings in which intense, definitive cultural preparation for adulthood occurs, examples of which Gwanfogbe (This Volume) identifies different authors for Liberia, Benin, Botswana, and central and eastern African communities.

These developmental rituals transition children into the fifth stage, when a naïve novice begins to take on the status and roles of a socialized neophyte or proto-adult. It is a period of internment for social induction and definitive socialization for graduated entry into the status and roles of the adult world. By taking part in different tasks of family and social life, by observing his or her seniors and more capable peers, by listening to and later by joining adult conversations, the proto-adult acquires a sense of solidarity and responsibility as s/he completes her or his physical, intellectual and practical education in the family, community and various activity settings of the peer culture of different pre-adult stages of life. Such young persons are poised for adulthood, the most cherished social life stage.

Adulthood is the sixth stage. Adolescence or social interment ends when a young person is considered to have completed basic learning of the culture and its stage-wise modes of functioning. A normally developing person adjusts to the requirements of every milestone of development, and begins to take on responsibility in the adult world. But the end of adolescence does not automatically confer adult status, as “sufficient” adulthood is defined by marriage and parenthood. That is, an individual is not considered “man” or “woman” enough if he or she is unmarried and childless. Full adulthood is thus synonymous with marital parenthood. Indeed, as children grow they learn that infertility is the greatest of all tragedies and humiliations for both men and women and that men and women increase their seniority with the birth of each child. It is perhaps for this reason that Africans separate childcare skills from the life period of parenthood to position the learning of childcare skills as a familial commitment for children and adolescents to acquire as part of their family responsibility and preparation for future parenthood (Nsamenang, 2008b; Weisner, 1997).

The seventh stage of social selfhood is old age, with its ‘expected’ sense of integrity and wisdom; its ends in death. Old persons are expected to have fulfillment in being grandparents; they may be frail in physical health but are regarded as the epitome of integrity and wisdom. The confidence level with which ‘normal’ old people face impending death may be a function of inclusive fitness considerations such as the number of grandchildren who will survive them and social competence criteria like the cordiality and harmony of their connectedness to family, the human community and the universe. With these and more considerations, people may die as “good” or “bad” people and eventually attain the status of the “loving dead” or the “dreaded evil dead” in the ancestral and spirit worlds; thus the afterlife stages of ancestral and spiritual selfhoods complete the African human lifecycle.

THE TEACHER'S TASK IN DEVELOPMENTAL LEARNING

Teaching is not a single activity; teachers perform multiple tasks which should culminate not only to make learning possible but also to ease it and extend its knowledge base. Mastery of how to deliver the subject matter is only one of the teacher's tasks. Knowing the subject matter and being able to facilitate its learning by the learners are two different things. Learning and developing occur in the same person. The developing person has basic needs as well as learning and developmental needs. The teacher's alert responsiveness to how the various needs converge to influence development and learning is vital.

Developmental learning is essential to teacher education because practicing teachers need it. It has direct application in children's life in general and in particular in making sense of processes and behaviors in learning situations. The following is a list, which is by no means exhaustive, of some reasons why every practicing teacher should master developmental learning.

1. The teacher is aware of what growth and development entail and what to expect at any given developmental stage.
2. It helps the teacher to understand the learner's pattern of development and to understand what her or his behaviors mean in context.
3. The teacher is able to understand the student's behavior on the basis of what persons in that developmental age or stage would be and as such s/he knows what to expect from the learner of the developmental stage.
4. The teacher knows how to control and attend to individual differences in the learners from various cultural backgrounds. The teacher must be aware that every classroom is a multicultural context, even within the same ethnic community due to class differences and personal experiences.
5. Understanding the learners' pattern of development and the importance of individual differences enables the teacher to make wise decisions concerning the choice of teaching methods and culturally appropriate illustrative examples.
6. The teacher becomes well equipped to enhance the optimal development of the student – the cognitive, physical, socio-emotional, and moral-spiritual dimensions of the learner's personality and knows and is ready to expand the knowledge base of teaching and learning through research.

CONCLUSION

A significant amount of learning occurs outside the school, in homes, social settings, and in peer cultures. Participatory processes and self-education are common in African orientations to the acquisition of knowledge and skills. Incorporating

these processes into school curricula would make education more meaningful and culturally relevant to African children. However, education curricula in Africa today must take into account local realities as they blend with or are challenged by global requirements in science and technologies.

In the face of these tensions and apprehension, Africa requires transformational education in general and teacher education, which is best wedged to the developmental pathways in African cultures. However, such education must delicately balance the dire need for Africans to retain their cultural identities as well as to connect competently and competitively to the global community and its rapidly changing requirements. The teacher's main challenge is to understand those developmental pathways and which curricular content best suits what developmental stage.

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Chapter 17

**SIBLING CAREGIVING AND THE TEACHING ROLES
OF CHILDREN DURING EARLY CHILDHOOD YEARS
IN KENYA**

Maureen Mweru

CHAPTER OBJECTIVES:

By the end of this chapter, you should be able to:

- 1) Explain the role of sibling caregiving and sibling teaching in young children's development;
- 2) Demonstrate how teachers can exploit the positive elements inherent in sibling care-giving and sibling teaching;
- 3) Assess the implications of sibling caregiving and sibling teaching for school learning.

INTRODUCTION

There exist differing views as to who should be regarded as a sibling. In industrialized societies, siblings are identified by genealogical or biological criteria and the term sibling usually refers to brothers and sisters, that is, one of two or more individuals having one or both parents in common. In non-industrialized societies however, this is not the case and other distant relatives and blood kin such as cousins are viewed as siblings.

Siblings play a significant role in children's lives, for example, they provide comfort and support, companionship and help children learn many skills including social-cognitive skills. Siblings therefore have multiple influences on children's cognitive, social and emotional development. Older children in particular tend to have considerable influence on their younger siblings and this no doubt exerts an impact on the younger children's development.

This chapter is based on a review of literature and on research carried out by several researchers including the author. It draws examples of sibling caregiving practices from various ethnic communities in Kenya that is, the Agikuyu, Ameru, Gusii and Kalenjin who are all agrarian communities. The Agikuyu and Ameru people occupy the central province of Kenya and mostly cultivate coffee, potatoes, maize, beans and various vegetables. They are also involved in rearing of livestock such as cows, goats and sheep. The Gusii people are found in the western part of Kenya and they mostly cultivate food crops such as bananas, maize, beans and potatoes. The Kalenjin people on the other hand occupy the Rift valley province which straddles the Great Rift Valley and besides being engaged in cultivating staple foods such as maize, beans and potatoes, they are also involved in large scale wheat farming.

SIBLING CAREGIVING AND SIBLING TEACHING

Sibling caregiving means leaving young children under their older siblings' care while sibling teaching refers to instances when older children mentor their younger siblings on various skills, concepts or values. More girls seem to be assigned

the role of caring for younger children in Kenya and perhaps this is due to the fact that taking care of young children in Kenya has for a long time been considered women's work. It therefore appears natural to assume that girls will care for their younger siblings. Sibling caregiving in Kenya, however, tends to be more prevalent in rural areas and low-income urban areas. Peer caretaking and mentoring can also not be ruled out. Peer caretaking refers to individuals providing support and assistance to their age mates while peer mentoring refers to age mates sharing knowledge and skills. Peer caretaking and mentoring usually takes place as children from different homesteads play together and they are bound to influence each other during their interactions.

Sibling caregiving includes, among other things, toilet training of infants. Among the Gusii and Agikuyu communities, for example, older siblings especially girls dig holes that their younger siblings who are being toilet trained use (Mweru, 2009). It is also during the infancy stage that older siblings start imparting the norms and values of their societies to younger children. Among the Kalenjin community, for example, it is not unusual to see older siblings between the ages of six and ten years instructing children as young as two years to greet elderly people in a respectful manner. This involves using both hands when greeting elders with their right hand outstretched and their left hand touching the right hand under the elbow.

Older siblings also support younger siblings who are learning to walk and talk. Among the Agikuyu people, for instance, girls aged five to eight years can be observed encouraging younger siblings to take steps until they are able to walk on their own and even telling infants to repeat words or names in order to improve their language capabilities. Among the Gusii, older siblings teach infants to walk by holding the infants' hands and uttering the syllables *taa...taa...taa..*, while gently pulling the young children forward.

Cleanliness and self-care is highly valued in many communities in Kenya and it is not unusual for children to instruct even siblings as young as three year-olds on how to wash hands, clean noses, remove clothes, and bathe. Older children also teach culture related activities such as singing, dancing and praying, especially to their younger siblings who can already walk and talk (Mweru, 2005).

The complexity of the tasks that children are expected to learn and perform seem to increase as children get older. Among the Ameru people, for example, girls as young as five or six years old begin learning from their elder sisters how to perform household chores such as grinding maize, cooking and washing utensils. On the other hand, boys of this age among the Ameru learn from their older brothers how to feed domestic animals. Among the Kalenjin community, by the time girls are seven or eight years old they are expected to be able to light a fire on their own using firewood. Elder sisters play a critical role of teaching this task to their younger siblings.

An interesting feature of sibling teaching among children is that children tend to use objects found in their environment such as sticks, stones, and mud as they instruct young children. Sibling teaching is also characterized by the inclusion of traditional games, singing, dancing, use of riddles and storytelling. Some of the songs and stories observed during sibling teaching have moral lessons or values embedded in them. Therefore apart from learning in a pleasurable atmosphere, young children also learn the values that are upheld in their society. Riddles tend to be used particularly with older children. Riddles apart from imparting knowledge in children, are also deemed to provide mental exercises and entertainment to the children. Older children who have already joined school also inform their younger siblings who have not yet gone to school of school related activities such as counting, saying the alphabet, how to scribble, and daily activities that take place in school (Mweru, 2005).

The games older siblings engage younger children in usually tend to be both informal and traditional. These games also tend to be played among peers. Informal games do not have written instructions nor do they require adult supervision while traditional games are those which are “inherited” by communities from past generations. The benefits of traditional games are that usually they can be played almost everywhere and without having to purchase any materials. Informal and traditional games also have an advantage in that they can be transmitted through informal channels such as word of mouth. The informal and traditional games that older children teach younger siblings and also engage in with peers therefore have several benefits and the following games among Agikuyu children described by Waithaka (2009) clearly illustrate this:

- (a) Games of Memory where children have to recall and be quick at it. An example of such a game played by young children in Kenya is *nyama, nyama, nyama* (meat, meat, meat). In this game, one child calls out the names of various animals. The other children are expected to only jump up when the name of an animal whose flesh is eaten is called out. If a child jumps up when an animal whose flesh is not eaten is mentioned, he or she has to leave the game. This game not only teaches children the names of animals whose meat is eaten but also encourages children to pay attention and respond quickly. *Kabamsa* is another game of memory where each participant must remember to say “*kabamsa*” before sitting down or standing up. If one forgets, the others hit him or her lightly on the back. This game trains children to remember to think before they act.
- (b) Simulation games where children imitate experiences around them. An example of these games is *kurugaina* (cooking) where children use sticks, containers, leaves and other objects found in their environment to simulate cooking. Another simulation game is *mucango* (merry-go-round) where girls role-play women’s groups and “contribute” token money as a group. They then pick numbers and share the “money” in turns. In Kenya, it is common to have

women form groups where they contribute money on a monthly basis. This lump sum of money is then given to one woman in the group. Each woman in the group has a chance to receive the lump sum of money and with this money, the women are able to achieve a goal which they would otherwise not be able to, for example, they are able to purchase household items or start a small business.

- (c) Games of Physical Prowess which are games that involve motor abilities such as strength, agility and endurance. An example of these games is *nyororoka* where children skid barefoot on a wet muddy surface especially during the rainy season. However, during the dry season, children pour water on the ground and play this game. This game improves children's ability to balance. Another game involving physical prowess is *kuratha nyoni* where boys use a homemade sling to shoot at birds. Boys who manage to shoot down many birds are admired by the other boys. This game enhances estimation, planning and accuracy skills. *Kubaica miti* (climbing trees) is another game of physical prowess which involves boys climbing trees for fun. This activity enhances large motor coordination and balancing skills. Children also boost their balancing skills by playing *Nduro* (walking on hands) where they walk on hands with their feet in the air and those who can walk on their hands for the longest period of time emerge as the winners.

The preceding description of how sibling caregiving and teaching are carried out serve to illustrate the benefits that these two practices have and that young children have the capability to engage their younger siblings in productive activities.

SIBLING CARE AND TEACHING IN AFRICA IN THE LIGHT OF THE UNITED NATIONS CONVENTION ON THE RIGHTS OF THE CHILD AND CHILD DEVELOPMENT LITERATURE

Although sibling caregiving is widely practised in many non-industrialized societies, it is a practice that is also condemned in some parts of the world especially in Western societies where it is viewed as child labour or a form of child abuse. The United Nations *Convention on the Rights of the Child* and the African Charter on the Rights and Welfare of the Child however, do support children's participation at different levels and value sibling caregiving as a cultural right of every African child (Nsamenang, 2008). Many African societies readily practice sibling caregiving as they view it to be part of children's training for responsibilities they will be expected to play in future as adults and parents. It is therefore seen as a facet of responsibility training. Responsibility training is a concept that means children are put in charge of tasks or activities to perform and it is expected that by performing these tasks, they will become more responsible individuals especially as adults. Use of sibling caregiving is also considered vital as it inculcates in older children a sense of duty to help weaker or younger members of the society.

During the pre-colonial days in many of the societies in Kenya, it was the father's responsibility to teach his sons the various skills they needed so they could fit in the society. Mothers likewise had to educate their daughters on the skills women needed in order to be able to play their roles in the society. However nowadays, most parents have to work away from their homes and many leave very early in the morning and return late at night, therefore they may not spend a lot of time with their children. Older children however may spend more time with their younger siblings and thus may have a greater influence on these younger children's cognitive, social and emotional development. With the rising number of child headed households in Africa, older siblings today may be playing an even bigger role as they take up roles that are usually performed by adults. Such roles would include providing basic needs for the family, and taking care of young children.

Sibling teaching is also facilitated by the fact that elders in African societies are seen as transmitters of knowledge therefore young children are likely to pay attention to their older siblings and this is beneficial during sibling teaching. Another concept that facilitates sibling teaching is the existence of the seniority principle among the Agikuyu people. The seniority principle means that older individuals are always in charge and younger individuals must always respect and obey their elders. This for example can clearly be seen in the manner that Agikuyu children use to address each other for example, the older siblings are referred to as *mokoro wakwa* (my senior) by their younger siblings while the older children refer to their younger siblings as *moruna wakwa* (one who follows me). The seniority principle and the belief that elders are transmitters of knowledge therefore make sibling teaching possible. Older children also have the skills necessary to teach their younger siblings for example they use commands and admonish younger siblings if they are not able to perform a task correctly (Mweru, 2005). Younger siblings therefore learn they have to obey their elders otherwise they will be punished.

Sibling caregiving illustrates that children are active social agents, capable of being responsible and taking care of younger children which is necessary both for the family and for the children's developmental learning (Nsamenang, 2008).

LESSONS LEARNED AND IMPLICATIONS FOR TEACHERS' PROFESSIONAL SKILLS AND SCHOOL EDUCATION

Since older children have the capability to teach their younger siblings, teachers can take advantage of this by encouraging children to assist their younger siblings with school tasks and homework. In many African countries not all preschool age going children attend preschool due to several reasons such as poverty which means that parents cannot afford to send their children to preschool. In East Africa specifically, the introduction of Free Primary Education in Kenya and Uganda has resulted in parents opting to skip preschool due to the fees charged. These parents instead send their children straight on to primary school. In such instances children who are attending school would play a useful role as tutors to those children who

cannot attend school. Due to the existence of the seniority principle and elders being perceived as transmitters of knowledge, young children are likely to pay attention to older children and this is beneficial during tutoring activities. The children who are engaged as tutors would also benefit because the task of tutoring other or younger children trains them to be responsible.

In many countries where financial resources to purchase learning materials such as books and pencils are scarce, teachers can borrow a leaf from children's use of objects in their environment. For example, pupils learning to write would be encouraged to practice their writing skills on the ground using sticks while pupils learning about sinking and floating would be encouraged to bring objects such as feathers, leaves, stones and maize cobs and have practical lessons where they observe for themselves the objects that sink or float in water. Practical lessons involving the use of objects found in the environment should take the place of cramming and rote learning.

Just as older children use songs, stories and games to teach certain values or concepts to their younger siblings, so should teachers use indigenous or traditional songs and stories to instil values in children. These activities undoubtedly make learning enjoyable and teachers should borrow from these culturally appropriate teaching methods. There are many benefits that inclusion of songs, dance and games can have in the teaching-learning process. Games of memory for example are important as they prepare children for school tasks and tests that require recall. They also help children to be on the alert and this encourages the ability to concentrate while simulation games help children develop social skills and are a training ground for roles and skills needed in their society. In addition, games of physical prowess provide children with the opportunity to refine skills that necessitate muscular dexterity. Traditional games have benefits therefore teachers should consider including some of them especially during physical education and free-play lessons. Through traditional games children obtain fundamental skills for effective living in their social context. Among the Agikuyu of Kenya, children's play has been found to include rehearsals for adult activities prior to real performance in future stages (Kenyatta, 1965; Leakey, 1977; Mweru, 2005).

Researchers in Kenya such as Onguko (2000) however have noted that children's play and outdoor activities are considered a waste of time by parents and teachers, for example. Although physical education is compulsory in primary schools, more emphasis is put on theoretical academic work and at times the time allocated for play and physical education activities is used to teach other subjects such as Mathematics and Science. The benefits of play and games for children might suggest the need to review school curricula to inform teachers of the role of traditional games in the development of young children. In addition, many of the games children used to play are not played anymore. In the pre-colonial days, siblings and elders used to teach traditional games to children however, nowadays, many parents have to work away from their homes and do not have the time to pass on information on

traditional games to their children. This suggests that due to their benefits, there is a need to promote traditional games in Africa perhaps for example, by encouraging the setting up of localized play centres where traditional games can be taught.

Recent research (Mweru, 2009) also shows the change in attitude towards gender appropriate roles for example older girls have been observed teaching their younger brothers how to cook although in the traditional Agikuyu society, cooking was women's work. The children's games therefore are a reflection of changing gender roles. For example, it is not unusual today in a modern Agikuyu family to see boys performing tasks such as cooking which was reserved for women. These changes can be attributed to modernization and embracing of western cultures and changes in family structures due to various reasons such as death of both parents from HIV/AIDS. In many child-headed households, the eldest child whether boy or girl has to perform both the father (male) and mother (female) roles (Arogo, 2006). These findings (Mweru, 2009) suggest that the Agikuyu people's culture has been influenced by modernization as reflected in the activities children engage in during sibling caregiving. These findings therefore illustrate that older children can be used to inform their younger siblings of the changing roles in society. In Kenya there have been drives by teachers and gender activists to inform girls that they do not have to be confined to traditional roles or occupations such as nursing or teaching. Older sibling's engagement of younger children in androgynous play certainly helps in this cause. Teachers especially those working with young children can learn from this and encourage children to engage in androgynous play.

Sibling teaching shows children learn from their environment including the individuals who surround them such as parents, siblings and other relatives. Due to the benefits obtained from interacting with the environment, teachers should not constantly emphasize only the learning that takes place in the classroom. They need to realise that as children play in the countryside they learn about the different types of insects, animals, birds, leaves, trees, flowers and so forth. This knowledge forms a good foundation for science education. Current school programs therefore should be structured with the children's environment in mind. Inclusion of culturally inappropriate material should be discouraged. In Kenya, for example, it is not unusual for teachers to lead children in singing songs and reciting poems that have sentences such as "London's bridge is falling down ..." or "I am a teapot short and stout ...". Most Kenyan children have never been to London nor have they ever seen a teapot. Inclusion of concepts or ideas that are unfamiliar only serve to confuse children, therefore these should be avoided.

Sibling caregiving and sibling teaching demonstrate that children are able to look after their younger siblings and they have the capability to teach them various concepts, values and skills using objects found in their immediate environment. Teachers therefore can learn from sibling's use of various teaching skills to improve the current educational system.

SUMMARY AND CONCLUSIONS

Sibling caregiving and sibling teaching demonstrate that children do not begin learning only when they join school nor is learning confined to the four classroom walls. Teachers therefore need to realise that older children's teaching skills can be used to help their younger siblings. These skills could be exploited by having older children tutor their younger siblings and peers. In addition, just as children use objects found in their environment, and culturally appropriate teaching methods such as songs, stories and games, so should teachers adopt similar teaching strategies and avoid the use of culturally inappropriate materials and processes.

Lessons from sibling strategies can support classroom pedagogy. Teachers therefore need to identify useful indigenous African ideas and concepts and use this knowledge to enhance the current educational system.

LEARNERS' EXERCISES

1. Visit a village or residential area where sibling caregiving is practised and write a report on the activities the older children engage their younger siblings in and how they do it.
2. Discuss:
 - (a) The values, concepts and skills that older children in your country teach their younger siblings or peers, and
 - (b) How teachers can incorporate these values, concepts and skills to improve learning in schools or make it more meaningful.

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Chapter 18

**USEFUL DIMENSIONS OF EDUCATION
IN THE NIGERIAN FAMILY TRADITIONS**

Mary O. Esere, Joshua A. Omotosho and Adeyemi I. Idowu

LEARNING OBJECTIVES

At the end of this chapter, learners should be able to:

- 1) Give examples of proverbs, riddles, word games, tongue-twisters, etc in the reader's local language;
- 2) Give one example of a counting rhyme in the reader's indigenous language;
- 3) Explain to what use proverbs, riddles and tongue-twisters are put in African family traditional education;
- 4) Describe the implication of some African educational theories and practices to teacher education curriculum;
- 5) Describe the usefulness of wordplay in today's school.

It is essential to clarify that our use of one sex in parts of this chapter does not in any way imply non-recognition of the opposite sex; it's only a way of writing.

INTRODUCTION

Africa is a continent of immense diversity, not only in terms of its size and geographic diversity but in terms of the cultural, linguistic and ethnic diversity that form the hallmark of African people. This diversity, notwithstanding, some commonalities are still be found in the African way of life. One of such commonality is found in African educational theories and practices. In other words, when one talks of education in a specified African cultural setting, one will find similarities in so many other African cultural settings.

Each of the ethnic groups in Nigeria has family traditions handed down from one generation to the next through oral methods. Such traditions which were used for the education of Nigerian children and for the inculcation of the mores of the various groups include Proverbs, Tongue Twisters (Wordplay), Riddles, Word Game, Rhyme, Folktales etc. In order to avoid duplicity and repetition, some of these are illustrated with some of those found among the Yoruba and Igbo ethnic groups of Nigeria. These two ethnic groups are two of the three major ones in Nigeria. They occupy the south-western and south-eastern parts of the country.

EDUCATING THE AFRICAN CHILD THROUGH PROVERBS

Proverbs (*ilu* amongst the Igbo and *òwe* among the Yoruba of Nigeria) feature prominently in virtually all traditional Igbo and Yoruba cultures and play important communicative and educational roles. Akinmade (1998: 15) highlighted the role of proverbs thus:

The built-in power in proverbs give them a didactic tendency. It would not be surprising that in an authoritative culture as that of Nigeria, there would be a tendency to use proverbs as tools of relatively formal education (p.15).

The following features make proverbs an instrument for aiding recall of moral lessons

1. They are colourful, full of imagery and illustration. These enable the hearers to visualise their messages, thus creating a life-lasting impact on their mind.
2. Proverb contents are real, practical and situationally appropriate, thus they create no illusion on the mind of the audience.
3. A proverb is usually short. This aids quick application to situations.
4. A short proverb can encapsulate a long moral story.

Proverbs and other forms of folklore that can be used through effective communication are common in almost all the ethnic groups in Nigeria. This makes them a ready-made tool for this assignment. Riddles and tongue-twisters also come into play as other sources of further intellectual exercises. Oral poetry; dirges, odes, fables (with animal heroes, especially the tortoise), incantations, recitations, praises, etc. are used as the occasion calls for. These are expertly recited by adults as the younger ones listen attentively with the main purpose being to learn life's lessons from them and to internalize them for his/her own use when he/she reaches adulthood when most of those he/she learned them from must have died and gone.

There are many examples of proverbs from traditional African contexts, and these provide us with insight into both traditional education and social-cultural values and mores. In many cultural contexts in Nigeria, proverbs form the hallmark of parenting practices. Some examples are hereby examined. An Igbo parent encouraging his/her child to follow his footsteps would tell the child.

1. *Akukwo mnewu talu, ka mweya nata*: The leaf that the she-goat has eaten will be eaten by her kids.
2. *Ezinkpolo nada ezinkpolo*: From good seed falls good seed.
3. *Nkpuke mnewu kpuru anaghi afa nwa ya nfa*: The path taken by one's parent does not become narrower for his/her child.

A speaker using a proverb is expected to give due deference to her audience, particularly elders. Yoruba proverbs are in myriads. Some reflect the customs, ideologies, beliefs, etc which the Yoruba perpetrate from generation to generation. Some more examples:

Yoruba Proverb	Meaning (English)	Remarks
A ki i sùpó aláàyè	We never inherit a living man's wife	This proverb traces up Yoruba history of an era when divorce was regarded as unnatural. The proverb was credited with the power to convince everyone that a woman is not married to be remarried by another man during the lifetime of her original husband.
Asunrami kit i té bòròbòrò	A hardworking man seldom comes to disgrace	An encouragement to spur people (especially the young) to work hard in order to escape the disgrace that slothfulness brings.
Pípé ni yóò pé, akólòlò áá ape baba dandan	However long it may take, a stammerer will completely sound the word “father” ultimately	A proverb used for encouraging the slow learner to keep on at the task on hand; she may be slow but being persistent and unyielding achieves the desired end.

Tongue Twisters (Okwu ntabi ire)

A tongue twister (*okwu ntabi ire* among the Igbo and *gbénujé* in Yoruba) is a phrase or sentence which is hard to speak fast, usually because of alliteration or a sequence of nearly similar sounds. It is used by adults to help a child to discover his weakness in verbal fluency and to rectify it as he practices those short words or phrases several times until mastery is gained. It helps develop speech skills. To get the full effect of a tongue twister one needs to repeat it several times, as quickly as possible, without stumbling or mispronouncing. Tongue twisters have long been a popular form of wordplay, particularly for children. In traditional African setting, children most at times learn through play/game. Tongue twisters are great for young children. They create fun in learning. Tongue twisters exercise a child's pronunciation muscles. They help in strengthening a child's speech skills. The faster a child can say the tongue twister without slipping up, the stronger his/her language skills become.

In Nigeria, parents in the indigenous society use tongue twisters to train the child's capacity to retain the sequence of events. Examples include:

Wordplay (Yoruba)	Meaning (English)	Remarks
Kinni ketekete lára kétékété àgūnfesèwólè	What is the fuss about a donkey which when ridden, still leaves one's feet dragging on the floor?	This is a play on the word “kétékété” (fuss) and “kétékété” (donkey). The lesson is that it is unwise to labour on what does not pay off for one's labour.
Ohun tí à ñ wá lo Sokoto, ó wà l'apò sòkòtò.	What one is travelling to Sokoto to look for is inside the pocket of one's pair of trousers (sòkòtò).	Here, the play is the word “Sokoto” (a Hausa city in the north-western part of Nigeria, outside Yoruba-land) and “sòkòtò” (the Yoruba pair of trousers). It teaches us that we should not foreclose or disregard our immediate environment; it could have the right answer to what we are looking for.
Eni ti ñ wá'fà ñ w'ófò	He who is looking for gain (free of charge) is looking for loss/disaster.	A play on the words and rhyming “wá'fà” and “w'ófò” which, though different in meaning and spelling, are tonally similar. It warns of the danger in trying to seek success or gain without laboring for it. Labour must precede gain/profit, or else disaster would follow instead.

It must be noted that adults in teaching the child to gain fluency in words, phrases and pronunciation, make a subtle but guided demand on the child to gradually increase his speed. In this way, mastery is gained after some time of practice whose length depends on the progress made.

Riddles: Gwam Gwam Gwam or Àló Àpamò in Yoruba

In traditional African society, riddles constitute a formidable intellectual exercise. They are used as medium for developing the child's power of reasoning and skill for decision-making. Riddles in traditional Nigerian society are borne out of the cosmology and value system of the African/Nigerian society. Whatever that is studied is the instrument by which the individual develops self-knowledge and self responsibility to contribute to the well-being of his or her community. The teaching of riddles in Igbo, Yoruba, Hausa or any other indigenous Nigerian dialect therefore introduces and exposes African children to their material and non-material culture such as agricultural tools, household utensils, arts and craft, effigies and symbols, the mother tongue language, belief system, music, drama, geography; history, social

ordering and sociopolitical structure of the African people. Riddles are used to pose problems to which the audience is to find solutions, though a large proportion of the riddles are not posed in question form. Hence, a good assessment of how much wisdom a child has acquired is if he knows that even a non-interrogative riddle demands an answer. Some examples include:

Gwam ibe buru nmeri n'ala laa n'elu: Tell me an object that fetches water from the soil to the sky. Answer: *Aki bekee:* Coconut.

Gwam ibe kuru mwata ibe n'iru nne ya: Tell me what makes a child to cry in the presence of his/her mother Answer: *Aguu:* Hunger.

Gwam ibe chi umu laa n'elu: Tell me what carries children from the soil to the space. Answer: *Agbiridi:* Pawpaw.

Taa lo mo, o? Ki lo kan oba niko? : Who can tell me what has the effrontery to knock the king's head? Answer: *Esinsin:* The fly.

Ki lo bo sodo ti ko ro to? What falls into the river without producing any noise? Answer: Egbon owu: Cotton wool.

Olatunji (1984) has indicated that metaphor which is a general property of Yoruba poetry, has a higher incidence in riddles than any other poetic type. Hence, mastering riddles is doubly profitable. Consider the following:

<i>Agba maa-run-un sin Olu Ife lo si ogu:</i>	Five elders accompany the King of Ife to battle
<i>Olu Ife ra:</i>	The King of Ife disappears
<i>Awon agba maa-run-un pa-da:</i>	All the five elders return.

The five elders are the five fingers with which food is eaten. The King of Ife is the morsel of food which disappears into the mouth where the battle of chewing and swallowing is fought.

Itu Elo : Word Game

Itu elo (Word games) can include a wide variety of different kinds of linguistic activities, but are generally concerned with the players' speed and continuity, although such games can also depend heavily on knowledge of the social and rural worlds, as was the case with riddles (Reagan, 2005). For example, a common word game is for parents to quiz their children about the names of different kinds of trees, plants, animals, and so on. Another common type of word game is one in which children must engage in repetition (or alteration) of words, either real or invented, in some series or sequence. Such a game strengthens the memory and helps to develop mental acuity and speed.

Similar games often serve to teach and reinforce Mathematical concepts. For instance, the Igbo and Yoruba of Nigeria have developed a system of counting and

have used a variety of human experiences to promote practice and dexterity in enumeration. The child in these cultural milieus is introduced early in life to counting by means of concrete objects, counting rhymes, songs, folklore, plays, and games, at home and on the farm. The following is an example of one of the counting rhymes that Yoruba and Igbo children are likely to learn:

Rhyme (Yoruba)	Translation
Ení bí ení	One is one
Èjì bí èjì	Two is two
Èta ntagbá	Three, spin calabash
Èrin wòròkò	Four crooked
Àrun ñ gbódó	Five, pestle pounding
Efa ti élé	Six of ele
Woro n kéje	Cymbal of seven
Epa-a bù'sán	Eight of bata drum
B'oo da K'easan	If one is missing (out of ten fingers)
Gbangba l'èwá	Ten exposed
Rhyme (Igbo)	Translation
Oto, abuo, tuturu aki	one, two pick up the nut
Ato, ano, tipia ya	three, four crack the nut
Ise, isi, tuba ya no onu	five, six put it in your mouth
Asa, asato, tapia ya	seven, eight chew it
Itolu, iri, loba ya	nine, ten swallow it

These word-games serve to stimulate the intellect and test the Mathematical capabilities of the children.

Folktales

According to Omoleye (1977), folktales played a very important role in the community life of Nigerians. Although the stories were unwritten, they have been passing down from generations without losing their originality. Omoleye listed the following seven aims in the use of folktales in “educating the listeners”:

1. To fear God, the deities and observe the traditions;
2. To respect elders;
3. To instill fear in the minds of the young not to take laws into their hands;
4. To oppose injustice;

5. To teach elementary principles of natural and supernatural laws;
6. To sharpen the creative sense of visualization and imagination of the young ones;
7. To direct the mind of the young to think independently on a given topic, arrive at judicious conclusions on perplexing or confronting matters (p. 9).

Imagination is vital in the plotting, arrangement, climaxing and weaving of a Yoruba folktale around objects or personalities so as to teach a moral lesson (Omoleye, 1977). Little wonder, after a folktale has been told to kids, the elder (story-teller) would ask them: “what does this story teach us to do and not to do?” The children would then give their rulings respectively in relation to their understanding of the story. Furthermore, Omoyele (1977) has submitted that

Yoruba tales were usually told to groups (old and young) in the olden days to enliven the evening after the day's hard work had been over and there was that need for a leisurely relaxation. They were ready psychological weapons in the hands of Yoruba parents to sharpen the imaginations of their children and successfully instill enormous fear into their minds against wrong-doing (pp. 10-11)

A few of the 20 stories told by Omoleye to illustrate the points raised above include the following titles: The jealous housewife (pp. 11-16); Why the tortoise has bald head (pp. 17-20); When there is life, there is hope (pp. 39-41); The disobedient boy (pp. 45-47); The downfall of Eleyinmi (pp. 55-59); The three clever tortoises (pp. 74-75).

In Yoruba folktales, one would find something to make one laugh, something to make one think, and something to set one's imagination on an imaginary flight into deep jungle where animals ruled like human beings.

Metaphor

According to Olatunji (1984), an object, action or situation is described in a terminology proper to another. In Yoruba language, there are several uses of metaphorical language. The effect of metaphor is to examine the qualities of people or even things from several perspectives in order to make them vivid to the audience. Example:

Ádán dórí kodò ó ñ wòse eye: Àkeekèé rìn tapótápó

The bat hangs head-down and observes the attitude of birds; The scorpion goes about with its quiver.

This is said to be the description of Oba Timi Bamgboye Ajeniju (of Ede) who is compared to the bat; he observes the whole world with an apparent detachment, patient men do, but he is also the deadly scorpion that carries its quiver of poison, battle-ready. This king is seen as cautious, easy-going person but an ever-ready warrior.

IMPLICATIONS FOR TEACHER EDUCATION IN AFRICA

In traditional African society, education is a way of life which spans an individual's life from cradle to the grave. The child learns fables and legends in a variety of settings and from a host of different adults, including especially the village storyteller. By listening to the village story-teller, (the child) acquires knowledge of the past. Every tale is a parable; it is not just history but an educational story. The stories are manifestations of the tribal memory, the origin and history of the group, the deeds of their great men and women, their group success and those which led to individual and group failure. This oral tradition, according to Reagan (2005, 2009), includes not only the history of the community, however, but also serves to "sustain morality, ritual, law, and sanctions against offenders" It is manifested in everyday life in a variety of ways, none clearer than in the praise-songs or praise-poems (Oriki among the Yoruba) that are sung to honour individuals, groups, and so on. In order to understand many praise-poems, however, let alone to be able to compose one, an individual must possess a broad historical and cultural knowledge of the community. The recitation of such Oriki remains a way of maintaining and transmitting the oral tradition, and it is a feature of traditional Africa education that needs to be incorporated into the present teacher education curriculum.

To this end, the term 'cultural inclusive curriculum' is hereby advocated. Cultural inclusive curriculum is curriculum that is developed to embody the core values of the traditional African people while adhering to the basic education learning competencies. Its end goal is the development of a more appropriate, culturally-relevant and holistic education for the children (Gollan, Steen, and Gollan, 2008).

In the traditional African society, educative information is stored in culture in various forms, such as legends, proverbs, folk dramas, folk stories, folk songs, traditions, myths, customs, etc. Use of these cultural items as resources in schools can be very effective in bringing indigenous knowledge alive for the students. It would allow them to conceptualise places and issues not only in the local area but also beyond their immediate experience. It would also enable active participation because teachers could involve students in collecting folk stories, folk songs, legends, proverbs, etc., that are retold by their parents and in their community. This will stimulate action research and generative learning.

In view of its potential value for sustainable development, it is necessary to preserve indigenous knowledge for the benefit of future generations. Perhaps the best way to preserve indigenous knowledge would be the integration of indigenous knowledge into the teacher education curriculum in Africa's colleges and faculties of education. This would encourage learners to learn from their parents, teachers and other adults in the community, and to appreciate and respect their knowledge. Such a relationship between younger and older generations could help to mitigate the generation gap and help develop intergenerational harmony. The local African population, for the first time perhaps, would also get an opportunity to participate in curriculum development. The integration of indigenous knowledge into school

curriculum would thus enable schools to act as agencies for transferring the culture of the society from one generation to the next.

The family traditions in Nigeria exemplified by the use of wordplay, folktales, proverbs, metaphors, praise poetry, riddles and songs have certain implications for Teacher Education Curriculum. Some of these are hereby elucidated.

Wordplay: A special feature of Igbo and Yoruba wordplay is its use in obtaining verbal dexterity through juxtapositioning two or more lexical items of similar shape. The effect is to give a pungent moral lesson in a cryptically concise way. Such lessons are easy to remember because of the strong word picture that is imprinted in the minds of the hearers. Another feature of Nigerian wordplay is its economical use of words. Those who use wordplay in their speeches save a lot of words and yet convey much information accurately and succinctly. Through its use a lot of ancient wisdom was passed unadulterated from one generation to the other.

Today's teacher education curriculum planners can borrow a leaf from the traditional practice of using wordplay to teach both the young and old. One of the ways this can be achieved is by integrating it into language classes in the primary and secondary schools. It can begin with assigning to pupils the task of collecting samples of wordplays often used by their parents and other adults. Students could also ask for the meanings of wordplays they collect from adults as well as the contexts of their usages. The class can thus have a reservoir of wordplays in the native language to work with.

The uses to which such collection of wordplays can be put are many. For instance, a school counselor can use them in group counseling to stem the spread of some aberrant behaviours such as bullying, lateness, pilfering, slothfulness, etc among students. A class teacher can infuse them into an English lesson in lexis and structure. A Yoruba/Igbo language lesson teacher will find ready use of them in a class if, for instance, s/he divides the class into two or more groups and asks them to compete in the use of wordplays by which s/he can measure their proficiency in their understanding of this aspect of Yoruba/Igbo tradition. The teachers themselves will, in the course of such pedagogical exercise, be enhancing the opportunity for their own personal development and capacity for effective teaching.

Folktales

Among the uses of folktales listed earlier is its use to help the young learn to accord respect to elders and to instill fear in the minds of the young not to take laws into their hands. These two-fold uses have implication for today's teacher education curriculum. The spiraling increases in breakdown of law, order and morals in the school system of today are well documented (FME, 1998). One of the ways to stem the tide of burgeoning disorder and anti-social behaviours among in-school youths is the use of folktales. Adejumo (2007) has rightly noted that Yoruba society is a "moral order" (p.27). According to her, among the Yoruba people, there are a set of normative requirements which are presented to the consciousness of individuals

through the use of oral traditions such as satire and folklore. For folklores to achieve such goal in today's teacher education curriculum, they have to be purposively integrated into the latter.

The first step to that end is to upgrade them from their current status, which is largely oral, to a newer status – written. This can be done by folktales experts – literate and illiterate – coming together to make a compendium of this genre of oral traditions and classifying them into various categories. The class teacher can then resort to them for use as antidotes against a problem-prone school system at any given time. The brevity required of this chapter does not allow for a discussion of details here. However, it is the studied view of the current authors that the success that can be achieved by the use of folktales in modifying anti-social behaviours and modeling societally acceptable ones will be largely a function of the creativity of the school teacher.

Proverbs

Using proverbs is a common feature among indigenous Nigerian people. Their speeches are skillfully interpreted with proverbs that help to drive home their points convincingly. A ceremonial utterance that helps the speaker to give due regard and respect to his hearers, especially the elders, must precede the use of proverbs. These preliminaries are relished and help to establish the needed initial rapport between the speaker and his audience. This then becomes the ingredient that ushers in a spirit of camaraderie, companionship and peace necessary for strengthening the bonds of commonality amongst them. Also, it helps to dissolve any malice or misgivings that could possibly be lurking in the midst of some of them up to that point in time.

The acquisition of proverb-using skills (in the native language) can easily translate into the enhancement of a classroom teacher's effectiveness. In the first place, such a teacher would automatically become a good role model for his pupils as the latter observe how their teacher weaves proverbs adroitly into his speeches with parents and guardians who call at the school on issues of concern to them. It is as pupils listen to their teachers' speeches that they learn to imbibe the culture of respect for elders which the use of proverbs confers on them.

A language teacher (e.g. of English or indigenous language) could ask his pupils to collect several proverbs from their parents or other adults over a considerable period of time. He could with the assistance of other teachers or adults classify the proverbs so collected into various occasions or subject areas. Hence, there would be proverbs appropriate for the following: wedding, burial, taboo, politics, education/learning, worship, child naming, encouragement, social control, misbehavior, etc. A classroom assignment may be to ask students to write a certain number of proverbs from a subject area, and to give their meanings in English. Alternatively, students may be arranged into opposition teams who take turns to say proverbs in a "who-knows-the-most-proverbs?" game. The winner team in such a game could be given

a token or garland which the members of that team can wear for one week before the next game.

The class of Yoruba proverbs which Odunjirin (1956) called “axiomatic affirmative proverbs” are actually axioms or self-evident proofs of facts of nature and the universe. A creative classroom teacher could use such proverbs as affirmations to inspire his pupils to embrace the mores of the community which are used to hold the society together in peace and tranquility.

Metaphor

A classroom teacher who has a good repertoire of metaphors could imbue his pupils with a thirst for personal achievement in life. This can happen because metaphor in the indigenous society, like personification, is used to bring out the various qualities of things or people from several angles in order to make them vivid to the audience. Hence, a teacher with good skills in the use of metaphors could go metaphorical when trying to ginger up a child with an academic or behavioural problem. He could do so by first calling the pupil’s attention to the fact that he (pupil) is something or somebody else, which/who has the good qualities that the teacher desires the pupil to aspire to. The ability of a teacher to achieve that feat will depend largely on his ability to go beyond the use of words with their ordinary meanings to describing such a child or somebody using an image or symbol of the person or quality desired.

CONCLUSION

In traditional Nigerian society, the child’s education is effected through the acquisition of knowledge via instruction, oral literature, wordplay, ceremonies, apprenticeship, storytelling, folktales, dirges, poetry, proverbs, observation, participation, etc. The child is taught these both formally and informally by the child’s parents, immediate relatives, elders, and peers. As highlighted in this chapter, the contents of education in African family tradition include every sphere of natural and human life of the African society. It is an education that is laid on the foundation of the child’s cultural environment. It is therefore necessary that teacher educational planners in African society today not to leave the value of the culture as they have found them but consider them as commodities to be used, manipulated for effective imparting of knowledge in our ever growing children in a changing world.

The thrust of this chapter is that modern teacher education curriculum can have recourse to the traditional system of raising and educating children for a total, well rounded individual who will be able to find his/her feet in the indigenous society as well as find balances in the modern society.

LEARNERS' EXERCISES

1. Give one example of a counting rhyme in your indigenous language
2. To what use are proverbs, riddles and tongue-twisters put in African family traditional education?
3. Do you think that African educational thoughts and practices can find relevance in today's teacher education curriculum? Justify your answer with some examples.
4. Do you think wordplay and proverbs could be useful in today's schools in Africa?

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Chapter 19

PSYCHOSOCIAL PARAMETERS OF CLASSROOM PROCESSES

Therese M. S. Tchombe

CHAPTER OBJECTIVES

At the end of this chapter teachers will be able to: 1) Identify major indicators of psycho-social parameters of classroom processes, 2) Increase awareness of classroom processes, 3) Comment on classroom socio-affective climate, 4) Address sociometric knowledge in classroom structure and group dynamics, 5) Link the relationships between parameters and learning processes, and 6) Identify appropriate strategies for better management of psycho-socio-affective factors impacting classroom processes and pedagogy, for quality learning.

INTRODUCTION

The classroom is the basic unit in the school setting, where different processes take place leading to learning and development. Classrooms vary in size and composition. Some classes consist of mixed ability, multicultural members while others are unique sex classrooms. Common characteristics of all classrooms are that there are teachers, pupils/students and material resources. These three interact at various levels of difficulty and relationships determining the psychosocial parameters for classroom processes generally but more especially the socio-affective climate. The nature and tone of the classroom climate is determined by whether the classroom is teacher dominated or child-centered; based on pre-set goals. The achievement of the goals is a function of the psychosocial parameters of classroom processes. Facets of the parameters comprise the teacher's interactive behaviors, whether they are dominantly direct or indirect; intellectual; interpersonal; socio-affective; power and authority; control; leadership style and the sociometric standing of the pupils/students.

The emerging picture illustrates that classrooms are dynamic and invigorating, so understanding the above mentioned realities gives a great insight into classroom life. Most teachers are unaware of the constituents of these parameters and the interplay of the processes. The dilemmas generated by the psychosocial parameters require constant and prompt adoption of coping strategies, skills in managing conflicts, nuances and contradictions that also come from teachers' styles and the interplay between power and authority in maintaining order and discipline. This does not exclude children's aberrant behaviours. How teachers manage learning and the problem of order is pertinent and depends on their interactive behaviours and management styles. All of these determinants and their influences may be symbolic, instrumental or social. The main preoccupation of the classroom is effective cognitive functioning based on quality processes. Quality in this context refers to effective interactions in transmission of knowledge, discipline, control, interpersonal relationship, the degree of dependence and independence, autonomy, confidence, self-esteem and many more such concerns. Although the formal activity of the classroom is teaching; learning in effect cannot take place without the psychosocial influences impacting teacher-pupil interactions from a triangulation framework. By

triangulation, I mean interactions that flow from teacher to pupils, pupils to teacher and pupil to pupil. This points to a high degree of interactive cycles in the class. It can also reflect the degree of cognitive maturity in the class.

Cognitive functioning that determines academic achievements requires an enabling psycho-social environment. Classrooms constitute a community of persons at various age levels, different socio-economic backgrounds with different perceptions of school, teachers and even peers (Cohen and Manion, 1981). Pupils would have had different home experiences and consequently different expectations of schools (Fox, 1993). Evidently, in the classrooms these pupils would experience different types of pressure that create different adjustment problems.

An environment is enabling when there is discipline, orderliness, healthy positive interpersonal relationships based on affective goals and positive self-concept, empathy, good control, and sense of belonging, acceptance, and positive interaction, sharing and collaborating. A psychologically balanced classroom climate will encourage healthy positive competition, compliance and maintenance of good standards (Cohen and Manion, 1981).

However, the functions and objectives of the classroom are different because of the formal nature of the classroom with defined rules and routines within a prescribed curriculum. Three factors interplay in the classroom context necessitating an understanding of their psychological nature, which are: the teacher who at the same time is the manager, planner and facilitator; the child, who is the learner and the curriculum which is the task. To understand the implications of psychosocial parameters in classroom processes requires also an understanding of the psychosocial status and cognitive development level of the child. The classroom is a complex social structure, where transactions between teachers and pupils and peers take place and the teacher is faced with myriad of dilemmas requiring quality skills decision making.

A focus on classroom processes permits an understanding of the role of the school as a social system to enable the child to learn her/his role and function in society as s/he interacts with others, works in groups, and shares her/his life with others. What the objective of classroom activities should be addressing is not the narrow objective of academic achievement but to expand by also ensuring the promotion of the personal and socio-affective growth of pupils. When pupils are psychosocially mature, they will have positive attitudes and dispositions and also the capacity to function, interact and maintain social cohesion.

THEORETICAL EXPLANATIONS

In this section I articulate how Erikson's (1974) stages of psychosocial development can enable successful management of the challenges during development to promote a healthy development of the child's ego (self) in class. The issues of effective management of developmental crisis are central to the

socialization of children in most African cultures. Erikson's psychosocial theory informs us about the growth of the ego; during infancy stage (0-1) the child experiences the psychosocial crisis of trust vs mistrust and the virtue of hope is very crucial as this is the first step in psychosocial development. The infant can only understand the world through the interaction with parents or caregivers. The values of warmth, regularity and dependable affection help the child to understand his/her world better. If parenting or caregiving fails to respond to these basic needs, the child will not trust those around him. Mothers and caregivers create a sense of trust in their children by employing administrative strategies which use quality sensitive care for the child's individual needs and a firm sense of personal trustworthiness within a trusted framework in the culture. This is very important because it establishes the basis in the child's sense of identity and interpersonal relationships. Excessive prohibition and permission can be detrimental. Parents and caregivers should be able to represent to the child, an almost somatic conviction that there is a meaning to what they are doing.

The toddler stage 2-3, is marked by the psychosocial crisis of autonomy vs. shame and doubt with the virtue of will. The child searches for autonomy but still relies on parental support as security. Parental patience and encouragement help foster the child's autonomy. Teachers in nursery school should have these qualities. When there is much restriction, children doubt their capacity to face challenges.

The preschool stage (4-6) is marked by psychosocial crisis of initiative vs. guilt with virtue as purpose. The preschool child models ideal roles. The child at this stage is learning to assume responsibility by using her/his initiative, which cumulating with autonomy increases the child's potential to undertake, to plan and solve problems. Already, the preschool child at this stage can develop courage, independence and leadership skills. The child will develop negative behaviour mainly because of frustration and aggressive behaviour caused by the environment. There is increasing independence with attempts at accomplishing tasks. Sometimes these projects are very unrealistic. Teachers should encourage and support children's efforts and make them to engage in realistic and appropriate activities, develop initiatives, confidence and independence. At no point in time should children's initiatives be discouraged because that stunts cognition.

Childhood stage (7-12) has the psychosocial crisis of industry vs inferiority accompanied by the virtue of competence and having a sense of division of labour. At this age children are more aware of themselves as individuals. They try hard to be responsible, to be good and to do things correctly. They can share, cooperate and are very conscious of moral values, and are able to recognize cultural and individual differences. As they express their independence, they become disobedient. The development of self-confidence emerges. The child also becomes more productive, creative and innovative. What these children need at this stage is recognition and the encouragement to work hard. Self esteem needs to be enhanced. Teachers should ensure they do not make children feel inferior because of too

many unrealistic expectations that the child finds difficult to achieve and accomplish. The stage coincide with the period of puberty that is marked with sexual maturity and growth spurts in physical development all of which influence the child's perception of self, making him/her become aware of self. The effect of this transition that is compounded by sexual and physical maturity impacts social relationships and expectations that must be well managed by parents, teachers and others, particularly regarding sex education matters. The classroom socio-affective climate must be positive to receive the changes the children are experiencing, as maturing boys and girls. Classroom teachers need to learn to adapt some socio-affective ethos to the needs of these children as support. This point is crucial, as the environment must be "enabled" to support the changes in the transition.

Adolescence stage (13-19) is marked by the psychosocial crisis of identity vs role confusion with the ego quality of fidelity and societal ideology. Erikson's discussion gives a clear picture that informs teachers of the psychosocial characteristics of adolescents. They experiment with variety of behaviours and activities (Erikson, 1974). This knowledge, it is hoped will orient the teacher's thinking on how to manage classroom activities, processes and how to make pupils/students more responsible. Teachers must take note that "the adolescent's mind is an ideological mind and indeed it is the ideological outlook of a society that speaks most clearly to the adolescent who is eager to be affirmed by his peers and is ready to be confirmed by rituals ..." (Erikson, 1974, p. 254)

Clearly the patterns of early childhood socialization have consequences for the efficacy of later traditional or progressive teaching styles. With this knowledge, classroom interactional processes need to be fine-tuned to the child's characteristics. Teachers are also controlled by focusing more on the cognitive domain of educational objectives. For most of the time they function more at the lower cognitive levels that are knowledge, comprehension and application. In this approach they do not drive the children to higher cognitive levels that engage the children on analysis, synthesis and evaluation. The adolescents' characteristics demand higher level of cognitive engagements and functioning, making them to create knowledge rather than test knowledge all the time. However, the psychosocial parameters are not only determined by interaction that is cognitively oriented as most teachers tend to believe. The affective and psychomotor domains of education objectives are just as important and cannot be separated from the cognitive. The affective domain of educational objectives is characterized by receiving, responding, valuing, organizing and, characterizing, thereby linking cognition and emotions as major dimensions that impact classroom processes. Managing self-concepts, values, attitudes, perceptions, expectations and personality types are crucial for successful classroom activities. These address cognition as well as values. Decision-making during adolescence is critical and adolescents require careful guidance on it.

With the integration of information and communication technologies (ICTs) in schools the parameters will have to take cognizance of the implication of ICTs in these processes.

CLASSROOM CLIMATE

The classroom environment is socially structured and generates different types of social interaction and relationship that positively or negatively influence learning and teaching. As most teachers would agree, in classrooms there are situations that encourage social cooperation, competitiveness, isolation and individualism. The extent to which cooperative learning can take place in a class depends a lot on how students' interests are alike as well as on the teacher's efforts. Such interests rely on good classroom interpersonal relationships and clear objectives and expectations by the teacher. Classroom climate depends on effective planning, good management and effective instruction and teacher's feedback techniques. In turn, all of these depend on the teacher's personality and qualities such as empathy, warmth, patience, zeal, resourcefulness, and so on. Good classroom climate will generate a constructive approach to positive discipline, which takes into account the inclusive nature of the classroom, in terms of multicultural membership, mixed abilities, and children with disabilities.

An enabling classroom climate inculcates positive psychological climate characterised by effective behaviour management that employs constructive teaching strategies to foster interactions. All of these embrace teachers' and pupils' prosocial behaviours and non judgmental engagements. In addition the psychological climate of the classroom created by the nature of teachers' feedback procedures are crucial. For example, pupils' errors are sometimes equated to misbehaviour when such may not be the case. Teachers' reaction strategies can sometimes be quite destructive to pupils' self-concept and performance. Furthermore, reprimands are usually too general and lose their essence and they too often create low self-esteem in the concerned pupils. Teachers should be consistent in their reaction strategies (e.g. praise, criticism or punishment). They should reflect on the effect of criticism or punishment on pupils' self-esteem. The use of reinforcement as teaching strategy has great potential for facilitating learning. Reinforcements can be either positive (praise) or negative (blame). Teachers should not dominate classroom talk because pupils can be bored, fall asleep and become disruptive; interactive lessons sustain students' interests and active participation. Pupils' have the basic need to succeed and their drive for self-actualisation could be high. Transmission in classrooms is strictly an intellectual process and teachers should have varieties of possible methods of encouraging pupils to learn meaningfully. What is most important is that teachers must set realistic and achievable tasks with clear objectives including well defined activities for pupils.

Punishment (if it should be used) and reward should be meted out proportionately within the appropriate time. From classroom observation (Tchombe,

2004) teachers spend most of their management time on the control of misbehaviours instead of increasing and sustaining pupils' engagement in classroom events. Classroom activities are many and are varied. Teachers would agree that the amount of time pupils are actively engaged in planned learning activities determines the level of learning achievement. So teachers need to make not only available time for learning on task but should ensure students' involvement and perseverance on tasks.

Sociometry in the Classroom

Literally, sociometry means the measurement of social groups. Every teacher knows that the group of children with which s/he works is more than an aggregation of individuals. S/he should know that the group has form and structure; that there are patterns of sub-groups, cliques, and friendships. Some individuals are more accepted by the group than others; some are more rejected. These factors play an important role in determining how the group will react to learning situations and to various types of group management employed by the teacher, as they exert significant influence on classroom dynamics and climate.

Differences in interactions depend on the sociometry of classroom situation. As pointed out by Hoffman (2004), measurement of relatedness can be useful not only in the assessment of behaviour within groups, but also for intervention to bring about positive change and determine the extent of such change. Reflection on classroom situations shows that classrooms are made up of many individuals of different characteristics. The differences could be intelligence, age, sex, race, ethnicity and language, to cite a few. Constituting class groups must therefore take cognizant of the influence of these factors for the desired aim of the learning activity. Clearly, using sociometry enables teachers see how children get along together in group work and what this means in the context of learning and developing within the classroom (Teachers College, 1950).

Hoffman (2001) thinks sociometry can be a powerful tool for reducing conflict and improving communication because it allows the group to see itself objectively and to analyse its own dynamics. Teachers College (1950) holds that a sociogram is an important tool for teachers. In charting the interrelationships within a classroom group, it discovers group structures and the relation of any one person to the group as a whole. Thus, the sociometry can enable the teacher to develop greater understanding of group behaviour so that s/he may operate wisely in group management and curriculum implementation. Understanding this relationship by the teacher enhances better facilitation of group work for greater learning outcomes.

PARAMETERS, PROCESSES AND QUALITY OF PRODUCTS

Discussions on the psychosocial parameters of classroom processes cannot be exhausted in this chapter. But, how a class is managed affects all the constituents of the psychosocial parameters such as the climate, expectations, degree of

motivation and goal achievement for the class, personality, the nature of interactions and even the degree of student engagement. Furthermore, as teachers, we are all aware of the significance of the underlining principle (knowing the learner and matching teaching and learning to the cognitive levels and personality of the pupils) guiding classroom teaching and learning processes which each teacher must know. Teachers must use transition techniques, pace the information given and link it to what the child already knows to ensure assimilation and accommodation. The reason is to ensure that the child remembers and can transfer and be able to solve life problems (Tchombe, 2001). Level of task difficulty must be respected. All of these are governed by the psychology of child development and educational principles as well as by specific “factors”.

The Pupil Factor

Teaching activities in the classroom depend on the theories the teacher holds about the developing child. Erikson’s (1974) stages examined in the previous foregoing paragraphs inform us of who the learner is psychosocially, which to an extent gives information about the child’s capacity to learn and do things. The degree to which pupils can be independent and actively involved in classroom processes depends on each pupil’s cognitive capacity and level of intrinsic (inner) motivation. This could address the child’s genotype and the environment especially social factors related to quality of interaction and relationships. Theoretical perspectives illuminate classroom processes. Pupils’ performances are influenced by many factors that are both internal and external to them. Some examples of internal factors are the pupils’ self-concept in particular self esteem and cognitive abilities. External factors could be parental and teacher’s motivational strategies, the type of expectations teachers set for the class and the richness of the learning environment. What is most important is how the learning environment engages the cognitive processes and provides emotional security.

For the classroom process to achieve its goal, pupils must be intrinsically motivated to want to learn and to sustain the desire to want to learn; they must be extrinsically motivated by the teacher and his teaching approaches including his views on attribution for success. Pupils must be made to see that they are responsible for their learning (Tchombe, 2001). They should be made to see the value of learning in their lives outside the classroom. Their active engagement in these processes will develop their interest and this will make them able to address learning challenges (Tchombe, 1999). Interest is a critical factor as it is the basis for active pupil involvement. To develop and encourage pupils’ interests in the classroom so as to have maximum participation, teachers must know the behaviour of the pupil and his experiences and entry characteristics. This is why knowing pupil’s family background is important for effective classroom activities (see Dasen, Chapter 11, this Volume). For example, managing antisocial behaviours would require the teacher’s knowledge of its antecedents in the family in order to develop a strategy that will bring about positive change.

Since pupils come to each classroom context with expectations, they have an implicit contract with the teachers: “You have to make me learn by teaching well”. The teacher knows the pupil psychologically and also has an implicit contract that states: “You have to participate and behave well so that learning can take place”. So pupils’ thought processes guide their behaviour because they are studying and evaluating the classroom situation and to see what it holds for them, in particular the relevance of such learning for life outside the classroom. This depends on their perceptions and the constructs they have developed about the class. Teachers are very quick to hold these perceptions that lead them to label pupils in class as clever, dull, passive, and active. On this account they treat them accordingly. It is important for teachers to find out how pupils construct their perceptions of the class and what they are. It is vitally important for teachers to understand pupils’ thought processes and beliefs as these would seriously affect classroom processes. Pupils’ beliefs which are tied to pupils’ thoughts influence pupils’ emotions and the emotions influence behaviour. When pupils are not happy, sad or are anxious or hold that “my teachers or peers do not like me,” this will affect their behaviour in class. Teachers must learn to understand pupils’ emotional difficulties in order to ensure effective and full classroom participation. Bandura’s (1977) reciprocal determinism is important because of the cyclical interactive processes between cognitive factors (beliefs) and expectations, situation/context and behaviour manifestations. This knowledge is important for the teacher because it reinforces their understanding that classroom teaching and learning activities are interactive processes between the teacher, pupils and the learning tasks, including the whole learning situation.

Teachers must understand how pupils gain information or learn concepts and principles. Teacher’s awareness of how pupils gain information will help their strategies in pacing and sequencing knowledge presentation. Such strategies will enhance clarity in sensory reception of such information and transfer to short term memory where appropriate coding for storage in long term memory for easy retrieval will be ensured. More especially, teachers may need to know the concept of intelligence in order to avoid labeling children and deterring their progress. Fox (1993) states that North America identifies three indicators of intelligence such as problem-solving ability, verbal ability and social competence. In Africa social competence is the basis for judging intelligence as this ability has a broader meaning. So what is the basis for labeling dullness or cleverness? Mental capabilities of pupils may differ in various ways indicating individual differences, which teachers must be aware of in order to reach each pupil in class. We are all aware that ability to learn in most African schools is measured only by examination results. Other classroom forms of assessing performance needs to be adopted by teachers so as to identify pupils’ diverse potentials that examinations are not meant to measure or incapable of capturing.

Witkin et al (1977) found differences in pupils in how they perceive the world which are known as perceptual styles that are determined by culture (see Dasen,

Chapter 11, this Volume). Two such styles are field-dependent or field-independent (Witkin et al 1977). Field independent individuals are those persons who are more abstract in their orientation to the learning task; field-dependent persons are more concrete. This suggests that in a teaching situation where learning activities emphasise pupils' ability to restructure and organise new information, the field independent pupils would perform better because they can think abstractly. Evidently, some pupils will learn better and more quickly when there are presentations of concrete materials and illustrations because their thinking is more concrete.

Pupils also differ in their learning styles (Ridding, 1983) which are consistent patterns of behaviour and performance by which an individual approaches learning tasks. Learning style consists of cognitive, affective, and physiological behaviours that serve as relatively stable indicators of how a learner perceives, interacts with and responds to the learning environment. A pupil's cognitive style underlies learning styles because it involves the description of processes. Two types of learning styles are common among pupils in class. They are "verbalisers" and "imagers". Verbalisers are pupils who learn better when lessons are presented verbally, while imagers are those pupils who learn better when taught using teaching aids, images and illustrations. Teachers' teaching strategies must be based on a well planned lesson to ensure structure and systematic lesson presentation. These differences suggest that materials to be learnt should be clearly structured by the teacher and in some cases pupils may impose their own organisations in the teaching context. These suggest the need for teachers to be flexible.

The issues of sex differences (Maccoby and Jacklin 1974) that are determined by biological differences in the central nervous system produce differences in the ability to perform particular intellectual tasks. Hormones influence the developing brain of females producing differences in brain specialisation. The right hemisphere in male is said to control more visual-spatial activities than is the case for females. This makes them stronger in scientific and mathematical activities. In females, the left hemisphere is said to control more verbal activities than is the case for males. This makes female more strong in verbal activities. There are sex differences but classroom processes can alter these through employing gender sensitive pedagogy for example girls can lead groups in group work, Teachers could employ more collaborative and cooperative activities where girls play key roles. Their efforts should be acknowledged.

Personality, we would agree, is the entire mental and behavioural organisation of the human being at any stage in his development. Personality also determines characteristic behaviour and thought. But there are also individual differences in personality which relate to intellectual abilities. The characteristics of personality are important determinants of classroom behaviours and ultimate scholastic achievement. Teachers must understand that personality factors deal with subjectivity and socio-affective issues and intellectual aspects of learning. In other words, they have an indirect influence on learning. In addition to these perspectives, differences

in personality do have implications for the teaching-learning context. Let us comment on two commonly referred personality traits such as extrovert and introvert.

Extroverts are more sociable and they interact and discuss more than introverts. It is possible to postulate that while extroverts may appreciate teaching that allows for discussions, the introverts may prefer lecture and seminars that will not encourage much pupil talk. Yet introverts are said to be very scientifically oriented. What we need to know is that these personality traits may influence the degree to which pupils are divergent or convergent thinkers thus having implications for classroom interactions. This knowledge will enable teachers to adapt teaching methods to the needs of the learners. Teachers may face the difficulty of large class sizes with heterogeneous ability groupings, whatever the case, to cope with classroom problems, teachers have to understand pupils' personality. Methods of teaching are optimal only when they respond to the different needs and drives of the learner.

The Teacher Factor

From the above, there is need for a flexible teacher, who can be creative, imaginative, and innovative and can plan, organise, manage well and maintain discipline. Such a teacher should have the ability to create learning opportunities, increase peer-peer activities, increase involvement of pupils on tasks and ensure their perseverance. The significance of this discussion is the focus on increasing quality participation and collaboration of pupils, in which there should be less teacher talk and more pupil talk and expected action. Teachers' activities in class are many. They, organize, co-ordinate, present, elicit, probe, react, respond, monitor, supervise individual seat work or group work, demonstrate with visual aids, organise activities, teach, discipline, state rules and routines and assess, and much more.

The passive/active dimension varies across types of classroom activities and the degree to which teachers deliberately try to engage pupils. Other constituents of teacher factor that should support the teacher's work are her/his leadership styles that are democratic, dictatorial or permissive. The professional skills of teachers are important as these illustrate their technical competence judged through their pedagogical activities. Teachers must as of necessity involve their pupils/students in classroom decision making including discipline matters and even pedagogical issues. Class size can be a deterring factor in quality or in teacher's performance.

Class Size

Class sizes in some, if not most, African primary and secondary schools, even universities, in most contexts are large. On this basis, effective classroom processes can only be realized if teachers are imaginative and creative so as not to rely only on whole class teaching dominated by lecturing. Organising group teaching may be difficult but teachers would need to be proactive in creating groups for group work and individual sessions that will attract and sustain pupils' attention and engage individuals in seat-work which is indicative of time for learning. Teachers in such

circumstances can use the eclectic approach to teaching by employing diverse teaching strategies.

PLANNING, ORGANISATION AND MANAGEMENT OF THE CLASSROOM

Teaching, an interpersonal activity has as main objective to bring about learning and for the teacher to realise this, there is need for appropriate planning, organisation and management (Tchombe, 2004). Classroom teaching, therefore, has two major tasks: Learning and Order. The learning task is the function of instruction, while the order maintaining task (discipline) is the function of management. Learning is related to individual process, and order to group process. Group process relates to interpersonal relations in the nature of teacher-pupil and teacher-class interactions, carried out to ensure attention and group cohesion. Pupils' behaviours manifested through responses or non responses to questions and other interactional behaviours including misbehaviours mediate to alter teachers' plans. The element of control is important but this depends on the nature of teacher preparation and the quality of classroom interaction. Teaching therefore consists of both instructional and managerial components. Teachers employ moral skills. These activities and skills all interact as teachers control, identify and try to get into pupils' behaviours and their feelings. Management refers to the way in which teachers organise their approach to learning and organise the classroom as an enabling aid to classroom activities. Good management facilitates teaching and prompts in pupils the desirable cognitive maps for learning.

The teaching settings such as whole class teaching, small group, or mixed ability need to be addressed. Teachers should be aware that the management and organisational patterns they use for classroom seating affect discussion patterns and that their management behaviours can foster orderliness and cognitive growth in pupils. The classroom is a social unit where there are differences in cognitive levels, motives and reactions. Certain essential skills are necessary such as technical, human and conceptual. Technical skills highlight the teacher's ability to use specialised techniques using appropriate instructional procedures. Human skill is seen as very significant in teaching as it involves the capacity to understand, motivate and work with other people individually or in groups in class. Conceptual skill is the mental capacity to co-ordinate the interests and activities of pupils (Curzon 1990 p.159).

To be a manager depends on the teacher's ability to strike a balance between his/her power and authority which can be misused. It is under such conditions that teachers can have effective control of the class. Pupils will respect teachers who can attract them by being a good model; a good leader, ability to control them constructively, have mastery over the subject matter and can take good control over ensuring that pupils' activities are well organised. Teachers should use both their personal power and authority to control pupils' behaviour. Teachers can use both positive and negative control techniques. Positive techniques are praise, good marks,

privilege, and use of inducement such as promises. Examples of negative controls are sanction, threat, rejection and deprivation. To avoid disruptive behaviour, rules and routines must be well defined and pupils informed including sanction in terms of violations. Teacher's ability to maintain order is crucial. Order and other forms of discipline that appeal to the child's reasoning will have better effect than discipline that is in the form of corporal punishment. Corporal punishment is outlawed in Cameroon, although it is an easy way out that is not effective but when a teacher appeals to the child's reasoning this is effective and sustainable. This is of course very demanding and time consuming.

Orderly classrooms where less punitive measures are employed reduce misbehaviour, prevent misbehaviour and promote learning. Too many orders are no guarantee for an orderly classroom. The most orderly classroom is generally one in which fewer orders are given. Teachers should put in place good regulations guiding routines with prescriptions of what should constitute acceptable behaviour. If these decisions are made with pupils' cooperation, it will reduce wastage in terms of time and energy and will avoid class upheaval and produce quality learning. All of these will help sustain the effective functioning of psychosocial parameters in classroom processes.

EXERCISES

1. State some major psycho-social parameters of classroom processes.
2. Identify any 3 classroom processes and discuss their implications for learning.
3. To what extent can the teacher factor influence the relationships between psycho-social parameters and classroom processes?
4. How can the pupil factor determine classroom process for effective learning?

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Chapter 20

TEACHING METHODS

A. Bame Nsamenang

CHAPTER OBJECTIVES

By studying this chapter, the learner should be able to: 1) Explain how development, learning, and teaching are interrelated, 2) Differentiate pedagogy from andragogy, 3) Identify and describe various pedagogical strategies and methods of teaching, and 4) Analyze attributes of good teaching, especially of children with disabilities, and how to enhance creativity in learners.

INTRODUCTION

Broadly perceived, education is the process by which a novice gradually acquires knowledge, skills, values and a disposition to life appropriate to the developmental stage of his or her cultural world and for adjustment to a changing world. Education involves both learning and teaching as lifelong processes in and out of school settings. Given that the learner's behavior and condition affect the teaching situation, the learner is a teacher in that sense. In some traditions of education, the child is more often his or her own teacher than parents, teachers or other adults. Some educational methods consist of children imitating or modeling their behavior on that of their peers and elders, learning through observation and play or their own devices. In this sense, the children are the students, and the elder is the teacher; a teacher like the parent creates the course material to be taught and then enforces it.

The teaching field is increasingly finding it difficult to distinguish very clearly between learning and teaching. In fact, teaching, learning and development are intertwined because it is the developing person who learns and often engages in self-education (Nsamenang, 2004). Teaching and learning therefore progress as the capacities of children emerge. Teaching or what has to be learned targets the child at critical points or milestones of development, as the child faces distinct developmental tasks. In African family traditions, developmental tasks are conceived in terms of important transitions between patterns of social participation. As such, education in general and teaching in particular gradually and systematically connects children to the family routines, the social competencies and productive systems of the people and their cultural heritage. So, instead of talking simply of teaching or learning in isolation, it is more rational to talk of the teaching-learning-development nexus. By this we imply that child development, like education, means little without the learning of meaningful content.

The meaningfulness of what has to be learned should therefore be a central focus of teaching. Knowledge of how children learn is also a prerequisite condition for possible success in teaching. Children go to school to learn, but they also learn out of school. The school is a place where children are exposed to developmental experiences, indeed learning opportunities, and vice versa, that are not found elsewhere, even in their natural environments. An important prerequisite for successful teaching is the teacher's knowledge of how learning occurs and how the

learning context works. Contexts for learning may be in school and specifically in classrooms but they are more commonplace out-of-school, especially in African peer cultures. Teaching, like learning, is a natural activity; it occurs everywhere, as we can show, tell, describe, and explain in our everyday life. Most of the natural teaching involves interaction with other people as they see and imitate, and as they daily use their sense organs – see and react, listen and hear, smell, touch and feel, taste, etc. In this sense, there is nothing at all natural about pedagogy, that is, teaching subjects and values to large numbers of persons at once as happens in schools, sometimes in crowded classrooms or learning settings.

Teachers must be aware that they do not have direct access to the learners' brains regardless of their great teaching efficiency. Effective teachers can do no more than provide learners with experiences on which they can feed their brains. The art or science of teaching, thus, largely involves the management of learners' experiences in terms of learning materials and time, mainly but not exclusively in classrooms, with the deliberate and strategic intention of facilitating their learning. Managing learning has something common with other forms of management. Managers usually have clear objectives and strategies; they then deploy their resources to attain those objectives. This is the most fundamental difference between teaching as a formal, didactic process and learning as a naturally occurring process. The other fundamental difference is that professional teachers are experts in specific domains of knowledge called disciplines or subjects, but natural teachers like parents and peers are general practitioners; they do not distinguish between domains of knowledge.

Some learners seem naturally enthusiastic about learning, but many need – or expect – their teachers to inspire, challenge, and stimulate them. That is, effective learning in the classroom depends on the teacher's ability to maintain and enhance the interest that brought students to school or into the course in the first place. Whatever level of motivation your students bring to the classroom will be transformed, for better or worse, by what happens in school or the classroom. Unfortunately, there is no single magical formula for motivating or effectively teaching students. Many factors affect a given student's motivation to work and to learn: interest in the subject matter, perception of its usefulness, general desire to achieve, self-confidence and self-esteem, as well as patience and persistence. And, of course, not all students are motivated by the same values, needs, desires, or wants; neither do all students gain from the same teaching methods. Some students are motivated by the approval of others, others by overcoming challenges. For others, the teacher is a "master" to look up to, a model. Before we delve into general teaching methods or instructional strategies, it is critical to distinguish between pedagogy and andragogy.

PEDAGOGY AND ANDRAGOGY

The distinction between pedagogy and andragogy is important because teacher education and training tends to focus on pedagogy to the neglect of andragogy.

Pedagogy is the science or art of teaching children as less mature than the adults who teach them. The instructional strategies of learning based on a pedagogical approach have the following key characteristics:

1. Learners are assumed to be novices; they have inferior status while teachers are knowledgeable and have superior status. There is an implied assumption of the learner being an “empty vessel” that the teacher should fill with knowledge.
2. The teacher is the central figure or the subject matter “master”; the emphasis is more on teaching and less on learning.
3. The teacher instructs; the learner takes, receives or listens to instructions.
4. The teacher’s central responsibility is to teach or instruct; the responsibility to ensure that real learning takes place is not central to the teaching role.

Andragogy, on the other hand, is the science or art of teaching adults as adults and not as immature learners. The instructional strategies based on an andragogical approach have the following main features:

1. Distinction between the status of learners and teachers is not stressed.
2. The emphasis is on facilitating learning rather than on teaching or instruction.
3. Learners share responsibility with teachers for their own learning.
4. Learners are actively involved (i.e., participate) in the learning process. Learners engage in participatory ways of learning; education in African family traditions engages this approach, even with children, who are not considered blank slates.
5. Teachers adopt a different role from that of pedagogue, say, that of facilitator of learning and creation of conducive learning atmosphere.
6. Learners control and generate knowledge. Paulo Freire (1972) explained that knowledge is not an object; it results from specific social and historical circumstances. Human knowledge results from human interaction with nature in general and objects and humans in particular. Every learner is capable of producing or generating knowledge from participation and interaction.

From the foregoing and as a general but debatable framework, it seems reasonable to apply pedagogic approaches from nursery to the high school levels and to increasingly deploy andragogical approaches from high school to university levels and in participative community-based interventions. Regrettably, we find pedagogical/instructional strategies in application even in university systems in most African countries. However, there is a sense in which pedagogy is used to refer to the art or science of being a teacher, generally referring to strategies of instruction

or styles of facilitating learning. The bulk of the contents of this chapter are reviewed from: <http://www.classroom-assistant.net/teaching.html>, Wikipedia, and http://www.sundayschoolresources.com/teaching_techniques.htm, all of which were accessed on 27/10/09.

INSTRUCTIONAL METHODS

The ways children and adults learn are many. Learning involves a range of goals and processes for which an effective teacher should develop a catalog of strategies and skills to best promote or facilitate. Our focus now shifts to such strategies and styles that transform the teacher into a craftsman, who interacts with learners of differing abilities and varied backgrounds in diverse learning conditions. The concern here is to draw the student teachers' attention to some common methods and techniques of teaching, which include: lecture, discussion, individualized approaches, eclectic methods they use of teaching/learning aids, and many other creative 'new pedagogies' and technologies that focus on group and individual processes.

What is the most effective teaching or instructional method? The answer depends on the children in the class. The teacher must be alert to the fact that some children can listen and learn. Others learn by doing. Some learn well by themselves, with minimal support from teachers. Others need the interaction of a group. Most teaching in schools in Africa is done using either visual (sight) or auditory (hearing) stimuli. The child's sight is used in reading information, looking at diagrams, aids, pictures or demonstrations, or reading what is on the teacher's board. The sense of hearing is used in listening to what the teacher or peer says. A child may experience difficulties with either or both of these senses and more, hence the notion of sensory deficiency. The child's vision may be affected by difficulty with tracking objects, visual processing or seeing the words become unclear or move around. The child's hearing may be satisfactory on a hearing test, but auditory memory or auditory processing may be weak. Using a variety of teaching methods may be the best approach. With children with difficulties learning to read, a multi-sensory teaching method would be the most effective approach. This is crucial, but what does it mean? Using a multi-sensory teaching approach means helping a child to learn through more than one of the senses.

For effective teaching to take place, a good teaching method must be adopted by a teacher to the condition of the learner(s). A teacher has many options when choosing a style or method by which to teach. Teaching methods are best articulated by answering the questions, "What is the purpose of education" in general and of teaching this topic in particular? and "What are the best ways of achieving these purposes?" Resources that help teachers teach better are typically a lesson plan (see Tameh's Chapter, this Volume), or practical skills involving thinking, motivating, social communication, audience or learner orientation, and learning, among many

others. Teachers often follow a specific curriculum with precise standards set by the Government, a school board or an institution such as a teacher training college. These standards can change frequently, depending on what government education policy is.

Students have different ways of absorbing information and of demonstrating their knowledge on instructional outcomes in the cognitive, affective and psychomotor domains. As hinted earlier, some teachers use techniques which cater to multiple learning styles and sensory modalities to help students retain information and strengthen understanding. A variety of strategies and methods are used to ensure that all students have equal opportunities to learn. Therefore, a lesson plan can be prepared to reflect such pedagogical strategies as questioning, explaining, modeling, collaborating, and demonstrating.

Questioning: A teaching method that includes questioning is similar to testing. A teacher may ask a series of questions to collect information of what students have learned and what needs to be taught. Testing is another method of questioning. A teacher tests the student on what was previously taught in order to identify if a student has learned the material. Before that we have to teach how to be a questioner. If the questioner is perfect then this method will be effective.

These are the four critical points about the questions: 1) they must be interesting or captivating to the students; they must lead by 2) incremental and 3) logical steps (from the students' prior knowledge or understanding) in order to be readily answered and, at some point, seen to be evidence toward a conclusion, not just individual, isolated points; and 4) they must be designed to get the student to see particular points. You are essentially trying to get students to use their own logic and therefore see, by their own reflections on your questions, either the good new ideas or the obviously erroneous ideas that are the consequences of their established ideas, knowledge, or beliefs and practices. Therefore you have to know or to be able to find out what the students' ideas and beliefs are. You cannot ask just any question or start just anywhere. It is crucial to understand the difference between "logically" leading questions and "psychologically" leading questions. Logically leading questions require understanding of the concepts and principles involved in order to answer correctly; psychologically leading questions can be answered by students' keying in on clues other than the logic of the content.

Explaining: This approach is similar to lecturing. Lecturing is teaching, giving a speech, by giving a talk on a specific subject that is open to a community of learners, who may be a group of students or a public audience. Lectures are usually given in the classroom. This can also be associated with demonstrating and modeling. A teacher may use experimentation to demonstrate in a science class. A demonstration is the condition of proving conclusively, as by reasoning or showing evidence. Modeling is used as a visual aid to learning, as when students visualize an object or problem, then use reasoning and conjecture to determine an answer.

Demonstrating: Demonstrations are done to provide an opportunity in learning new exploration and visual learning tasks from a different perspective. Demonstrations can be exercised in several ways. Here the teacher will be also a participant. He will do the work with his/her students.

Collaborating: Students' working in groups is another way a teacher can enforce a lesson plan. Collaborating allows students to talk among each other and listen to all viewpoints of discussion or assignment. It helps students think in an unbiased way. When this lesson plan is carried out, the teacher may be trying to assess the lesson of working as a team, leadership skills, or presenting with roles.

Learning by teaching: Learning by teaching is a method wherein the students take the teacher's role and teach their peers the materials the teacher would have taught, albeit with the teacher's support and guidance. It is one form of scaffolding and guided participation.

WHAT ARE SOME SPECIFIC TEACHING METHODS?

As any good teacher knows, all students do not learn in the same way. In addition, it is common for a class of students to be at a variety of levels in any particular subject. Teachers need to use different teaching methods in order to reach out to all students effectively. A variety of teaching strategies, knowledge of student levels, and an implementation of which strategies are best for particular students can help teachers to know which teaching methods will be most effective for their class. The first step to choosing a teaching method is to assess the students. This assessment can be formal or informal. Formal assessments may include standardized tests, tests from the textbook or curriculum being used, or teacher-created tests. These assessments can give you an idea of the previous instruction that the students have received as well as their academic level. The students in your class may have undergone various teaching methods and quality of instruction in previous years.

Informal instruction is, as the name suggests, much less formal. Good teachers know their students. If you have been teaching a particular group of students for some time, you probably already know quite a bit about their interests, ability levels, and learning styles. If the group of students is new to you, you can make a point of asking them, individually or in a group, about their interests and academic strengths. Depending on the age of the learners, they may also be able to write about this, or answer some form of questionnaire about their hobbies, interests, previous lessons, strengths and weaknesses. Students generally enjoy talking about themselves and having their teacher get to know them well, as it makes them feel special, as well as directing you in choosing your teaching methods. Once you have assessed your students, you need to plan for different teaching methods.

Direct instruction is the most common form of instruction. This is the lecturing method of teaching. Many teachers use this teaching method almost exclusively, as it tends to be seen as the simplest, and you can cover large amounts

of material in a short period of time. However, this is not the most effective teaching method to reach all students, especially younger ones, who often need a more engaging, hands-on strategy in order to learn effectively. In addition, it is hard for teachers to tailor instruction to students at different levels.

Inquiry-based [discovery] learning is a teaching method which has been gaining popularity around the world. Based on the scientific method, this teaching method can be used for virtually all subjects. Using inquiry-based learning takes a lot of time, energy, and planning, but it is often very effective in the long-term. Students practice problem solving and critical thinking skills to arrive at a conclusion. This teaching method is student-centered and student-directed, and can be modified for students at any level, reaching them where they are. Teachers will generally need to start by modeling the process to the students.

Cooperative learning is considered highly effective when done correctly. With cooperative learning, students are put in small groups to work together. They are usually not grouped by ability, but put in a group with learners at a variety of levels. The students are then given tasks to accomplish together. Teachers may need to inspire, monitor and guide these groups carefully, to make sure they are staying on task and that all students are participating. This form of instruction also lends itself well to differentiation, because the teacher can assign specific tasks to children at different ability levels. With careful planning and keen supervision learners of any level can cover a great deal of content in a relatively short period of time than any teacher would in the same period of time.

Information processing strategies focus on memory processes. They enable learners to really understand the teaching methods and not just memorize facts; there are some cases when facts need to be memorized nevertheless. Facts and concepts may also need to be grouped or organized in order to facilitate better understanding. Teachers can use various teaching methods to help students with memorization, or they can use graphic organizers, mind maps, story webs, or other ways to represent information visually.

The Socratic Method: This is teaching by asking questions instead of by ‘telling’ what the teacher intends to get across to learners. In its purest form, the Socratic Method uses questions and only questions to arouse curiosity, which at the same time serves as a logical, incremental, step-wise guide that enables students to figure out about a complex topic or issue with their own thinking and insights. In a less pure form, which is normally the way it occurs, students tend to get stuck at some point and need a teacher’s explanation of some aspect, or the teacher gets stuck and cannot figure out a question that will get the kind of answer or point desired, or it just becomes more efficient to “tell” what you want to get across. If “telling” does occur, hopefully by that time, the students have been aroused by the questions to a state of curious receptivity to absorb an explanation that might otherwise have been meaningless to them. Many of the questions are decided before

the class; but depending on what answers are given, some questions have to be thought up in the “heat” of the process. Sometimes this is very difficult to do, depending on how far from what is anticipated or expected some of the students’ answers are. The teacher may introduce this method by alerting the learners that s/he wishes to try out an experiment of which s/he is the subject of the experiment, not the learners. I want to see whether I can teach you a whole new kind of arithmetic, for example, only by asking you questions. I will not tell you anything about it; I will just ask you things. When you think you know an answer, just call it out. You won’t need to raise your hands and wait for me to call on you. This method takes quite long.

KEY FEATURES OF SOME COMMON TEACHING METHODS

The Lecture

Strengths: presents factual material in direct, logical manner, contains experience which inspires, stimulates thinking to open discussion, useful for large groups

Limitations: experts are not always good teachers, audience is passive, learning is difficult to gauge, communication is one-way

Preparation: needs clear introduction and summary, needs time and content limit to be effective and should include examples, anecdotes

Lecture with discussion

Strengths: involves audience; audience can question, clarify and challenge

Limitations: time may limit discussion period, quality is limited to quality of questions and discussion

Preparation: requires that questions be prepared prior to discussion

Panel of experts

Strengths: allows experts to present different opinions, can provoke better discussion than a one person discussion, frequent change of speaker keeps attention from lagging

Limitations: experts may not be good speakers, personalities may overshadow content, subject may not be in logical order

Preparation: facilitator coordinates focus of panel, introduces and summarizes, briefs panel

Brainstorming

Strengths: listening exercise that allows creative thinking for new ideas, encourages full participation because all ideas equally recorded, draws on group’s knowledge and experience, spirit of congeniality is created, one idea can spark off other ideas.

Limitations: can be unfocused, needs to be limited to 5 - 7 minutes, people may have difficulty getting away from known reality, if not facilitated well, criticism and evaluation may occur

Preparation: facilitator selects issue, must have some ideas if group needs to be stimulated

Videotapes

Strengths: entertaining way of teaching content and raising issues, keep group's attention, looks professional, stimulates discussion

Limitations: can raise too many issues to have a focused discussion, discussion may not have full participation, only as effective as following discussion

Preparation: need to set up equipment, effective only if facilitator prepares questions to discuss after the show

Class Discussion

Strengths: pools ideas and experiences from group, effective after a presentation, film or experience that needs to be analyzed, allows everyone to participate in an active process

Limitations: not practical with more than 20 people, few people can dominate, others may not participate, is time consuming, can get off the track

Preparation: requires careful planning by facilitator to guide discussion, requires question outline

Small (focus) group discussion

Strengths: allows participation of everyone, people often more comfortable in small groups, can reach group consensus

Limitations: needs careful thought as to purpose of group, groups may get side tracked

Preparation: needs to prepare specific tasks or questions for group to answer.

Case studies

Strengths: develops analytic and problem solving skills, allows for exploration of solutions for complex issues, allows student to apply new knowledge and skills

Limitations: people may not see relevance to own situation, insufficient information can lead to inappropriate results

Preparation: case must be clearly defined in some cases, case study must be prepared

Role playing

Strengths: introduces problem situation dramatically, provides opportunity for people to assume roles of others and thus appreciate another point of view, allows for exploration of solutions, provides opportunity to practice skills

Limitations: people may be too self-conscious, not appropriate for large groups, people may feel threatened

Preparation: trainer has to define problem situation and roles clearly; trainer must give very clear instructions

Report-back sessions

Strengths: allows for large group discussion of role plays, case studies, and small group exercise, gives people a chance to reflect on experience, each group takes responsibility for its operation

Limitations: can be repetitive if each small group says the same thing

Preparation: trainer has to prepare questions for groups to discuss

Worksheets/surveys

Strengths: allows people to think for themselves without being influenced by others, individual thoughts can then be shared in large group

Limitations: can be used only for short period of time

Preparation: facilitator has to prepare handouts

Values Clarification Exercise

Strengths: opportunity to explore values and beliefs, allows people to discuss values in a safe environment, gives structure to discussion

Limitation: people may not be honest, people may be too self-conscious or protective

Preparation: facilitator must carefully prepare exercise, must give clear instructions, facilitator must prepare discussion questions

New methods involved in the teaching-learning process are television, radio, computer, Internet, etc. Other educators believe that the use of technology, while facilitating learning to some degree, is not a substitute for instructional methods that bring out critical thinking and a desire to learn. Explore each of these new methods and its place in the education system you know best.

The top ten requirements in good teaching (adapted from Leblanc, 1998)

One. Good teaching is as much about passion as it is about reason. It is about not only motivating students to learn, but teaching them how to learn, and doing so in a manner that is relevant, meaningful, and memorable. It is about caring for your craft, having a passion for it, and conveying that passion to everyone, most importantly to your students. It is essential to focus passion, relevance, and meaningfulness on understanding the learner's background and context and generating and enhancing their knowledge bases.

Two. Good teaching is about substance and treating students as consumers of knowledge. It's about doing your best to keep on top of your field, reading sources, inside and outside of your areas of expertise, and being at the leading-edge as surely as possible. But knowledge is not confined to scholarly journals. Good teaching is also about bridging the gap between theory and practice. It is about leaving the ivory tower and immersing oneself in the field, talking to, consulting with, and assisting practitioners, and liaising with their communities in order to not

only understand their circumstances but also to understand how theoretical knowledge and professional expertise translate into or merge with the local realities of everyday life.

Three. Good teaching is about listening, questioning, being responsive, and remembering that each student and class is different. It is about eliciting responses and developing the oral communication skills of the quiet students. It's about pushing students to excel; at the same time, it is about being human, respecting others, and being professional at all times.

Four. Good teaching is about not always having a fixed agenda and being rigid, but being flexible, fluid, experimenting, and having the confidence to react and adjust to changing circumstances. It is about getting only 10 percent of what you wanted to do in a class done and still feeling good, with a sense of actual accomplishments. It is about deviating from the course syllabus or lecture schedule easily when there is more and better learning elsewhere. Good teaching is about the creative balance between being an authoritarian dictator on the one hand and a pushover on the other.

Five. Good teaching is also about style. Should good teaching be entertaining? You bet! Does this mean that it lacks in substance? Not at all! Effective teaching is not about being locked with both hands glued to a podium or having your eyes fixated on a slide projector while you drone on. Good teachers work the room and every student in it. They realize that they are the conductors and the class is the orchestra. All students play different instruments and at varying proficiencies.

Six. This is very important — good teaching is about humor. It is about being self-deprecating and serious but not taking yourself too seriously. It is often about making innocent jokes, mostly at your own expense, so that the ice breaks and students learn in a more relaxed atmosphere where you, like them, are human with your own share of faults and shortcomings.

Seven. Good teaching is about caring, nurturing, and developing minds and talents. It is about devoting time, often invisible, to every student. It is also about the thankless hours of grading, designing or redesigning courses, and preparing materials to still further enhance instruction.

Eight. Good teaching is supported by strong and visionary leadership, and very tangible institutional support — resources, personnel, and funds. Good teaching is continually reinforced by an overarching vision that transcends the entire organization — from full-time teachers to part-time instructors — and is reflected in what is said, but more importantly by what is done.

Nine. Good teaching is about mentoring between senior and junior faculty, teamwork, and being recognized and promoted by one's peers. Effective teaching should also be rewarded, and poor teaching needs to be remediated through training and development programs and collegial interactions and exchanges.

Ten. At the end of the day, good teaching is about having fun, experiencing pleasure and intrinsic rewards ... like locking eyes with a student in the back row and seeing the synapses and neurons connecting, thoughts being formed, the person becoming better, and a smile cracking across a face as learning all of a sudden happens. Good teachers practice their craft not for the money or because they have to, but because they truly enjoy it and because they want to. Good teachers could not imagine doing anything else.

CULTIVATING CREATIVITY IN LEARNERS

There is no activity book containing exercises for toning the brain or sharpening “hands” or the imaginations. This brief section instead focuses on inspiring students by identifying some of the characteristics that make creativity possible to assure students that they are capable of developing those characteristics in themselves.

Creativity can be defined as ‘the ability to transcend conventional or traditional ideas, rules, patterns, and relationships, and create meaningful new ones’. And that ability is not just the privilege of the very bright or very talented. It is available to everyone willing to develop the ‘habits and discipline of the mind’ that will allow them to extend the scope of their own abilities – whatever they might be. You therefore need to help your students not only to use their abilities but more importantly to stretch their imaginations and channel their creativity into innovatively productive ways. Creativity is a matter less of nature and nurture and more of focus, discipline, and effort. Everyone is good at something. Creative people simply have cultivated certain characteristics that allow them to go beyond the ordinary in the pursuit of their visions and interests; they pursue excellence in whatever they set out to do. The characteristics of creativity include vision, passion, curiosity, self-training, the art of listening keenly to self and others, courage, commitment, persistence, flexibility, and humor. Let whatever you do be the best.

Exploring the lives of productively creative or successful individuals can provide a unique look at the dedication, passion, and belief in their own abilities that enable their creativity to flourish and led to their success. Creative people set their own visions and courses, think deeply about their actions, and thrive in their creative works in spite of challenges. How important are these characteristics to you; can you develop them, and how can the (mostly self-imposed) obstacles to their development be overcome? How many creative and productive persons can you identify in your family, community, country, and the world at large? What is common in all of them?

TARGETING OVERARCHING INSTRUCTIONAL GOALS

To be ready for teaching, student teachers must possess certain core abilities that run through courses and lessons. They are the broadest instructional outcomes, skills, or purposes that tend to be implicit but are not explicitly stated at the course

level and therefore are not planned into the curriculum. Core abilities are different than course competencies in that they are not course-specific. They are not taught in “lessons” although they enable learners to perform competencies. As a result, these essential skills, which should be the most important educational targets, tend to be overshadowed by content-specific competencies and objectives. For example, good teachers recognize such core abilities as effective communication, employability, information management, interpersonal, and problem solving skills but these are usually reflected in the mission or philosophy statements of educational institutions than in instructional objectives. Some of these core abilities are:

Valuing self positively – an individual applies the principles of physical and psychosocial wellness, in fact, well-becoming, to his or her life, as it touches the lives of others.

Working productively – an individual possesses and applies effective work habits and attitudes within the family, community, and an organizational or institutional setting.

Learning effectively – an individual possesses necessary basic skills in reading, writing, and computing; applies skills in acquiring information, especially through research; and uses learning tools and strategies.

Communicating clearly – an individual is able to apply appropriate writing, speaking, and listening skills in order to precisely convey information, ideas, and opinions.

Working cooperatively – an individual is capable of working with others as an effective teammate to complete tasks, solve problems, resolve conflicts, provide information and services, and offer support.

Acting responsibly – an individual recognizes an obligation to self and others for his or her decisions and actions, especially in performing the tasks assigned to him or her.

Thinking critically and creatively – an individual applies the principles and strategies of purposeful, constructive, active, organized thinking, with particular focus on making her or his family, institution, community, nation and the global community better than s/he met it.

CONCLUSION

The teacher should consider diversity in the classroom when planning teaching lessons. When deciding what teaching method to use, a teacher needs to consider students’ backgrounds, previous knowledge, environments, and learning goals. Every classroom anywhere is a multicultural group, even in the same cultural community, as a result of differences in social class. Teachers should be aware that students learn in different ways, but that almost all children will respond well to acceptance,

approval and rewards. A teacher must be aware of her or his abilities and personal disposition and how these affect others, especially learners and peers.

The teacher should be sensitive to learners with disabilities. A child with learning difficulties experiences a huge amount of failure; the teacher should not add to it. The majority of children with learning difficulties have come to the conclusion that they are stupid! It is the conclusion that anyone would reach in similar circumstances, and it badly needs changing before any corrective teaching is going to be effective. This is an additional challenge to teachers and the methods they use. Gifted children are also a teaching challenge as well as promotion of creativity in learners.

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PART VI
MONITORING DEVELOPMENTAL AND
EDUCATIONAL OUTCOMES

Who should monitor child development and children's educational achievements? The chapters in this Section do not limit monitoring and evaluation to a well "structured" process undertaken by professionals and experts but extend it to the routine, periodic or continuous determination of the state of something also carried out by parents and caregivers to detect any changes which may occur in children's development or performance level. Developmental assessment, like educational evaluation, is necessary to identify any sign that a child is not developing or achieving normally or at the expected pace. Evaluation seeks to identify weaknesses, which signify potential vulnerability, bring to the forefront children's status as students or strengths that should be sustained.

Magen Mbaka-Mutepfa and Joseph Mablakane Seabi begin the Section with Chapter Twenty One and discuss how developmental assessment of African children is done by teachers in Zimbabwe. Despite the hurdles faced by the teachers, they work tirelessly to draw up effective intervention programs that help children to develop. The trend is not very different in sub-Saharan Africa where teachers are expected to know the children's cultural backgrounds so as to carry out effective assessments. Professionals and teachers often find that assessment inputs from parents and other companions of children are missing. Therefore, it is essential to train teachers into consideration of all sources of developmental assessment, including those from peers and siblings. In a nutshell, developmental assessment is an ongoing process by which qualified professionals, together with families, through standardized tests and observation, look at all areas of a child's development, whereby both areas of strength and those requiring support and intervention are identified. In Chapter Twenty Two, Levison Maunganidze, Joseph Mavu Kasayira, and Pilot Mudhovozi explain what educational assessment in the African cultural context entails, pointing out that for comprehensive educational assessment, both formal and informal assessments are necessary for the teacher to make an informed decision. Their central proposition is that, in addition to the formal tests that are routinely administered in our schools, there are other important forms of assessment, some of which they identify, that are not usually recognised. Such forms of assessment give teachers valuable insights about learners and this should provide leverage for restructuring the way assessment systems for African children are designed to take into explicit account such forms of assessment. Chapter Twenty Three by Valentine Tameh presents teaching practice evaluation (TPE) in Cameroon. The author depicts a three-pronged perspective of evaluation in terms of assessment of antecedents, monitoring of processes and transactions, and evaluation of the end results. He explains the misconceptions that student teachers hold and tries to alleviate students' anxiety by pointing out that the TPE is an essential part of a continuous process built into the teacher training programme for the improvement and extension of academic skills and professional proficiency. The author thus discusses facets of evaluation as baseline assessment (that determines the appropriateness, viability and sustainability of a programme), to guided or formative evaluation (that is sustained throughout the life span of a programme to progressively gauge its development and improvement), and to graded or "summative" evaluation (that judges the quality of the finished product). Teaching practice is very crucial because it enables enthusiastic trainees to face their strengths and weaknesses in the real-life context of the classroom.

Chapter 21

**DEVELOPMENTAL ASSESSMENT OF AFRICAN
SCHOOL CHILDREN IN ZIMBABWE**

Magen Mhaka-Mutepfa and Joseph Mahlakane Seabi

CHAPTER OBJECTIVES

By the end of the chapter, readers should be able to:

- 1) Explain what developmental assessment is,
- 2) Show understanding of how developmental assessments could be implemented, especially by teachers,
- 3) Demonstrate an understanding of who can conduct developmental assessments with school children;
- 4) Describe the challenges to the developmental assessment of African school children.

INTRODUCTION

Developmental assessment is an “ongoing process by which qualified professionals, together with families, through standardized tests and observation, look at all areas of a child’s development, whereby both areas of strength and those requiring support and intervention are identified” (Greenspan and Meisels, 1996. p. 1). One of the most important challenges facing countries in Sub-Saharan Africa in developmental assessment is in developing effective assessment tools that are suitable for indigenous children for various reasons.

To understand developmental assessment from an Africentric perspective, one must understand the process of development, that is, the more-or-less predictable changes in behavior associated with social functioning. Although some psychological theories hold that all significant developmental changes are influenced by biological factors (nature), it is clear that the environment (nurture) to which one is exposed shapes development. According to the nature perspective our abilities are influenced by heredity- our inborn characteristics. Heredity shapes development by providing a framework of personal potentials and limitations. By themselves hereditary instructions are meaningless. The unfolding of genetic tendencies is tied to the quality of the environment in which a child lives, learns and grows (Lipsitt, 1990). According to nurture, behavior is molded by experiences. For instance, culture, disease, nutrition and other environmental factors can alter development. Malnutrition or neglect in infancy can affect a child’s developmental status as a toddler and in later years. The foundation for success during one’s schooling is determined by early childhood development services.

Thus, behavior cannot be understood outside of the context; rather development must be seen as a dynamic and changing process in which the individual and the environment continuously interact. These contexts comprise the biological context, intellectual, social, cultural, historical and the economic context. It requires a holistic view. Contemporary psychologists believe that both nature and nurture have an effect on development. Language development provides an example of the

constant interplay of nature and nurture. For example, children learn to use language which they are exposed to and for one to be able to learn human language one must have a human brain.

Given that the environment plays a critical role in development, what happens when one's environment is deprived or is non-enriching? The child who is only exposed to depriving environments would experience developmental delays. It is however essential for anyone who deals with children as a parent, educator, or any other professional or caregiver to understand that it is normal for development to be highly variable. While there are differences between children in their development, children also vary in the rate of their own development from one period to the next. However, educators should be well versed with the conceptions of the world a child naturally forms at the different stages of development. When professionals look at charts of the normal age at which children sit, crawl, stand up, walk and construct sentences, they must remember that minor variations from those norms may mean nothing at all, especially given that most of these norms were based on studies conducted outside Africa. However, any major deviation from development norms should be a cause for concern and may require intervention.

This chapter explores several issues on developmental assessment, how developmental assessment is implemented especially by practicing teachers and how to conduct developmental assessment. Multi-cultural perspectives of developmental assessments of African children are also discussed. The challenges often encountered when carrying out a developmental assessment are explained. In addition, the chapter also considers how the African cultural belief of *Ubuntu* may influence developmental assessments. Finally, implications of developmental assessments to the student teacher are revealed. But before discussing developmental assessment, we sketch a profile of the context of an African child's development.

DEVELOPMENTAL CONTEXT OF AN AFRICAN CHILD

Given that "almost every aspect of development is deeply influenced by the local context, which includes affordances that promote or hinder child survival and provide protective as well as risk factors for health and thriving throughout the lifespan (Irwin, Siddiqi and Hertzman, in Nsamenang, 2009, p.100), it is critical to reflect on the developmental context of an African child. The developing African child is equipped early in life with the basic skills of taking care of him/herself and doing chores for the family. For instance, around the age of three years the child is taught to wipe his/her face, dress up, go to the toilet and sweep the floor. At about the age of six and seven years the child helps with chores like fetching water and herding the flock. This is consistent with an assertion that "indigenous African parenting practices socialize the norms which foster children's self-education in participative learning processes in their families and communities, especially in the early childhood" (Nsamenang, 2009, p.102). At this age (the age at which school starts), the educator becomes part of the nurturance environment.

An African child grows in an extended family that has a social support structure than one finds with the nuclear family. The availability of grandparents, uncles and aunts, siblings and peer caregivers helps in supporting the child's development. This is further solidified by the support from the community, although this is continuously waning. Unlike in Western culture which largely emphasizes individualism, African societies value connectedness more. This is clearly captured by a Nguni term *ubuntu*, which has prominence across much of the southern African region. The term *ubuntu* refers to the notion or spirit of togetherness. A child who participates according to the community's standards and expectations both morally and socially is said to have *unhu* (humanness). Thus, the success of one's child is the success of the entire community. In times of difficulties or joy, the community shares the strain or happiness and supports each other. The maintenance of unity despite the hardship is embedded in the old adage *tautSa bloka seboka diSitwa ke nare e blotSa*, the literal meaning of which is that divided lions cannot defeat an ailing and weakly buffalo. This implies that through unity the community is powerful and victorious regardless of the challenges.

In the Southern African region in general, children are not only regarded as belonging to a particular family, but are also perceived as children of the community in which they live. For example, any elderly person can send a child for errands and the child would carry out such instructions with respect and honesty without expecting rewards. Furthermore, unlike in the Western countries where it is customary to address any individual with the first name irrespective of age, an African child is taught early in life to respect people. This child would, depending on his/her judgment of the adult's age, address him/her in terms that reveal respect, for example, *gogo* for grandmother. In cases where the child has to be specific of the name of the person, often the last name would be used.

Thus, while the growth of individuals takes place within the community, it is the community that opens up possibilities for individuals to realize their potential and, in turn, contribute to the good of others in the community. Hence the entire community becomes educator in informal education. Thus the community prepares the child for future developmental assessment.

WHAT IS DEVELOPMENTAL ASSESSMENT AND ITS FUNCTIONS?

Developmental assessment is a process through which information is obtained in order to provide answers to developmentally related questions and to generate appropriate intervention strategies (Johnson and Goldman, 1990). It is the "gathering of information about the strengths and weaknesses in a child's abilities, levels of functioning and learning characteristics, which is inclusive of what parents, caregivers and peers as holders of potential and actual gatherers of valuable assessment data do (Nsamenang, 2009, p. 97). It is an ongoing process, which ought to be conducted

in a collaborative manner. Of significant importance is the emphasis placed on the process given that often collateral information is obtained from several individuals, namely, the parents, educators, other professionals who may have assessed the child. In Zimbabwe, for example, when a child is referred for further assessment, s/he is often accompanied by the mother who takes with her all reference letters with assessment results on the child from the other professionals.

Assessments are done for an overview of current child status to support learning (e.g. by parent or educator to see what type of activities the child is ready for, mostly informal) and assessments for the identification of special needs. The educator should work with the child's parent during motor development assessment, social skills and communication skills. During social assessment a child's social competences (i.e. respect, honesty, compassion, perseverance, giving, self discipline and responsibility) are assessed. How does the child interact with others? Can s/he follow directions? How does s/he deal with trips out of the home? Educators have a checklist of attributes of child social behavior that they are encouraged to examine every 3 or 4 months. Psychologists especially in Zimbabwe use the Vineland Social Maturity Scale (Mpofu, Peltzer, Shumba, Serpell and Mogaji, 2005) to measure social competence, self help skills and adaptive behavior from infancy to adulthood. These assessments are now being done by teachers due to job attrition.

Before an assessment can be conducted, the educator would interview the child's guardians regarding the child's development. The information pertaining to the child's home environment and upbringing, such as the amount and type of environmental stimulation, which might facilitate or impede normal development, are gathered. Specifically, an assessment is done on a child to ascertain whether they are ready to start school. The educator can work with the psychologist and collect information related to development of the child such as mother's health during pregnancy, circumstances of delivery, early childhood problems, developmental milestones (e.g. sitting, toilet training, enuresis, encopresis, emotional, cognitive and physical development), informal stimulation and pre-school history.

In addition, family background and socio-economic conditions (e.g. who the child lives with, which area, or any exposure to abuse) are explored. The educator or specialist takes the child's cultural background, beliefs, values and customs into account when collecting and recording the details. Amongst the children's intrapersonal characteristics that educators and parents as well as other professionals should understand especially when working with children is temperament (i.e. easy, difficult, slow to warm up and mix with others). This knowledge will help to understand a child during developmental assessments.

A developmental assessment is commonly conducted by a remedial or class teacher, given the lack of child specialists in child psychology. In addition, a group of doctors and experts, including audiologists, language specialists, child psychiatrists and occupational therapists are also involved. Sometimes, it may be conducted by a developmental assessment specialist, who is a person trained to perform much of

the assessment alone. The dearth of professionals to do these assessments has left the bulk of the work in the hands of educators, who are not experts. Teachers should therefore do continuous assessments from the time children start school and keep records which they should pass on to the next grade so as to maintain efficacy of assessments. Those with health problems are referred to the clinic or hospital for treatment.

School children have various unique ethnic and cultural needs (Yagi, 1998) which are understood by psychologists and educators. The educators and psychologists become culturally responsive, so as to understand cultural diversity and to provide multi-cultural developmental services. Acculturation, immigration (from rural to urban/vice versa), economic variables and language are additional social factors which are considered in the assessment process (Yagi, 1998) and in meeting the developmental needs of children. Informal assessment procedures are perceived as promoting the assessment of the whole child in their environmental context in order to emphasize their strengths rather than their deficits (Allen, 2007).

Health professionals are also responsible for the identification of children with cognitive, behavioral, emotional, physical and social problems. It is also not uncommon for parents to be concerned about the developmental progress of their children. Given the amount of time educators spend with learners in the classroom, it comes as no surprise that they tend to do more of these assessments than other specialists. Educators also recognize behavioural and cognitive patterns in children that are distinct from others. They determine the child's operational stages for them to do effective assessments.

Mpofu and associates (2005) reported that most parents in Zimbabwe were superstitious of atypical development and did not understand the actual causes of learning or behavioral problems in their children, thus failing to participate in the school intervention programs. This seems to be the norm in most African countries for most parents flexibly utilize the services of both traditional healers and psychologists, regardless of ethnic identity. Thus intervention in the area of assessment and diagnosis should be adapted to local needs and educators and psychologists should not dissociate themselves from the communities they serve. This poses a great challenge given that ethical practices require the use of locally developed norms to interpret assessment performance accurately. As a result of inappropriate norms being used, this could lead to incorrect decisions being made on the basis of the results, and problems being over or under-identified.

However, educators should realize that nowadays most contemporary local children are a product of both their own indigenous culture and western culture; hence blending intervention with the two techniques may be our best therapeutic intervention (Mpofu et al, 2005). Teachers can also find out whether the children can carry out traditional activities without guidance, for example, ask them to gather firewood and light a fire. Most African children are capable of making a fire by age seven unless they grew up in a suburb. The teachers should then be able to explain

the causes of delayed development so that parents can understand the goals for certain interventions. If they want to visit a traditional healer or prophet, they should not be stopped if that makes them satisfied though the teacher should emphasise the importance of getting assistance from a specialist.

Developmental assessments of students' learning and behavior assist educators in drawing up effective intervention programs or individualised education programs for students who are experiencing problems both at school and at home. They also help parents or carers to make informed decisions about their children's education.

The reasons for developmental assessments may include lack of motivation, poor school performance, and conflict with friends, often being in trouble at school, inability to socialise and integrate with other learners, display of emotional difficulties such as irritability, low energy levels, negative attitude, HIV positive status and stunting or a disability. In certain cases, parents seek advice from school psychologists about an alternative school program for their child and access to special educational services after getting advice from the class teacher. Assessments are also done for an overview of current child status to support learning (e.g. by parent or educator to see what type of activities the child is ready for, mostly informal).

Educators are expected to understand and use formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner. These assessments are targeted at particular developmental stages. Formal assessment is done through interaction with curricula materials while informal assessment is less structured. Informal assessments include special activities such as group or individual projects, experiments, oral presentations, demonstrations, or performances (which are not documented, mostly off the cuff exercises). Most informal assessments are exciting and motivational to the learners. Educators observe how children respond to learning and school adjustment, peer to peer interaction and child to teacher interaction. The educator may use own assessments as background knowledge for other stakeholders to promote child development. They keep notes or checklists to record their observations from student-teacher conferences or informal classroom interactions. Providing weaknesses and strengths of children may assist other specialists in performing effective and useful interventions. Including a variety of types of assessments ensures that students are provided with ample opportunities to demonstrate their abilities and educators will have the information they need to compile a complete, balanced assessment of each learner. However, the student teacher is not trained to use developmental tests so as to assist psychologists and other specialists. They are trained on the job or are in-serviced. Teachers observe specialists as they do the assessments. Workshops are held on an annual basis so as to in-service them. Where specialists are available, teachers work with them initially and are able to carry on with the assessments thereafter. This implies that student teachers need further training in developmental assessment while they are still in college so as to enable them to perform the assessments effectively.

STRATEGIES IN DEVELOPMENTAL ASSESSMENT

Students are trained in the use of mostly formative and summative assessments and evaluation. This is part of formal assessments which are done on a regular basis. Formative and summative evaluations are done to evaluate academic progress in educational settings. These forms of assessments are seen as pivotal for promoting improved student learning and achievement (Hauge, 2006). However, all assessments should be made part of the student teacher curricula including criterion and norm referenced. Research done on student requirements for further training reported that educators required relatively less training in observation and communication but more on assessment and evaluation (Volante and Fazio, 2007). Teacher candidates lack appropriate mentorship on developmental assessment. It is important that the teacher is able to undertake student assessment in the classroom without assistance from specialists. However, most teachers can handle these assessments due to in-service training and observation techniques.

The teachers use formal tests when grouping students into ability groups at all levels. They make use of group tests. Most children are placed into different classes according to teachers' evaluations. Those who are lagging behind in their development are placed in special classes which are available throughout the country. However, the country is now moving towards inclusive education, which also has its own problems of implementation. With special classes of older children, teachers work on literacy with bias towards skills training. Others get individualized tuition. Criterion referenced assessments are done at grade seven, form four and form six. Assessments are done as aids in selection, placement and classification to predict how an individual will perform in future on a given criterion. These can also assist in placement and classification. Most researchers (e.g. McCauley, 2008) believe criterion based rather than normative assessment should be used because every child develops differently.

Diagnostic assessments are done on individual pupils whose performance on achievement assessment is much poorer than expected in relation to intelligent test scores (which are done by psychologists). Diagnostic assessments, which are also normal school assessments, indicate or pinpoint problems in specific areas. Such children may even be referred to remedial tutors or psychologists for an investigation. The children may need personality assessments which are usually the prerogative of school psychologists.

CHALLENGES TO DEVELOPMENTAL ASSESSMENT

Young children do not have or have limited expressive language skills, which make it difficult for them to express their opinions and perceptions (McCauley, 2008). Language impedes developmental assessment especially in Sub-Saharan Africa since most tests are in English. Assessment of a child should be carried out by a qualified trained teacher (with the help of parents and caregivers) and children should be allowed to express themselves in their mother tongue. Failure to express oneself

in English should not be considered as a limitation. The role language plays in instruction and assessment is awesome and hence teachers should use the one children are more proficient in. If the teacher lacks proficiency in the child's language, s/he can make use of a translator. However, a translator is not the best option for interpretations and non-verbal cues may be perceived differently by assessor and translator.

The educator must also be familiar with the key milestones in development, as well as the signs and symptoms of abnormal deviations from the developmental path. Developmental problems in young children can be subtle and hence it takes great experience and knowledge of infant development to build acute observation and interpretation skills. Thus assessment of young children requires sensitivity to the child's background, knowledge of assessment limitations and procedures with children (McCauley, 2008).

A further challenge relates to lack of developmental assessment instruments developed for the African child and teachers' creative skills, which maybe a result of inadequate training. Many childhood assessment approaches are derived from Western perspectives about what young children learn and how they develop. Assessment tools that are developed for western children may be interpreted differently for African children. A child's performance is often judged against externally established norms. For instance, while in western culture, children are encouraged to introspect (self-reflect), deliberately seek out and use self-relevant information when solving problems and making decisions, as well as to strive for personal growth and development, in African culture children are generally taught to internalize and conform to the standards and expectations of significant others, including placing their personal desires below that of the needs of their society. Given that there are no "culture free" tests, assessors should be open and aware of cultural differences. Nsamenang (2009) confirms that being aware of cultural differences and being part of the assessment situation is a critical challenge. For example, asking a Zimbabwean child to draw an igloo instead of a hut is ridiculous for they have never seen an igloo before. This implies local specialists should come up with their own assessment tools.

Developmental assessment is also hindered by the presence of very few qualified educators and a few in-serviced educators as compared to the number of students especially in Zimbabwe. The ratio of educators to students as of now is 1 to 40. Some provinces may not have a full complement of staff because of poor remuneration and job attrition.

IMPLICATIONS TO THE STUDENT TEACHER

In most African countries, children from rural areas often do not have access to resources that promote stimulation such as books, pencils and crayons, building blocks and puzzles. Factors such as cultural differences and language barriers, lack

of resources, lack of interaction with other children may adversely affect a child's performance. Younger children do not always attend pre-school, but are often left at home with the grandparents and aunts. Hence educators and other specialists should take cognizance of this when interpreting developmental assessment results, since certain items of the assessment may be irrelevant or unknown to the child. In addition, health and educational professionals should take great care and responsibility to adequately assess children's strengths, needs and challenges due to the decisions that are based on the results of assessments, rather than focus only on weaknesses.

Teacher education programs should include developmental assessment courses, for example, measurement, assessment and evaluation or peer group assessment. Governments and research agents can use the United Nations Millennium Developmental Goals as their focus to acquire resources and funding for training teachers in developmental assessments.

Young children are difficult subjects to assess accurately because of their activity (energy) level and distractibility, shorter attention span, wariness of strangers, and inconsistent performance in unfamiliar environments (McCauley, 2008). Interviews with peers may assist teachers to get some of the information that might not be readily available because the teacher's assessment is not necessarily an adequate reflection of the child's abilities and consequently should not be used in isolation, nor be the primary source of information for making diagnostic decisions. Peers can give information on participation in social activities, disciplinary problems like bullying and others. The way or manner in which the child interacts socially with strangers should also be taken into consideration during assessment. Hence decisions may be made from the child's ability to socially interact, his or her affective state and temperament, for they all affect the child's cognitive ability. Multiple assessments can produce comprehensive, credible, dependable information upon which important decisions can be made about learners. The use of pre-formative evaluation, formative evaluation and summative evaluation allows participants to judge the overall merit or worth of the activity and gives decision makers the information they need to plan for the future.

Teachers should not only rely on traditional approaches and this requires an array of assessment and evaluation approaches (Volante and Fazio, 2007). Mertler and Campbell (2005) developed the Assessment Literacy Inventory as a practical mechanism for faculties of education and teacher educators to measure the assessment literacy of their teacher candidates. This type of emerging index, or other comparable survey, could be used as a diagnostic instrument geared toward the identification and remediation of classroom assessment misconceptions or weaknesses of in-service teachers (Volante and Fazio, 2007). The government and School Development Associations would need to secure adequate funding because building assessment literacy costs money for expertise and material resources and to a greater extent, funding to support teacher time. Volante and Melahn (2005) suggested that such investments do pay dividends in terms of improved teaching

practice and student learning. Thus the level of students' performance on traditional assessment measures can be improved by supporting college approaches to teaching, learning and assessment.

CONCLUSION

A practicing teacher, just like any other specialist, should have an understanding of a child's temperament and cultural background. This understanding provides a fresh way of thinking about child, family and social relationships, given that it reframes how one interprets a child's behavior and affects the way one thinks about the reasons for his/her behavior (Harcombe, 2000). For example, one might view a shy and slow-to-warm-up child as "sensitive" and thoughtful, rather than as unfriendly and unmotivated.

The overall aim of developmental assessment is to promote interactions that will enhance child development and learning thus a multi-disciplinary approach should be adopted so as to resolve the many challenges that African countries face. Professionals should take great care and responsibility to adequately assess children's strengths, needs and challenges due to the decisions that are based on assessment results. Despite the dearth of human, material and financial resources in most African countries, Volante and Fazio (2007) claim that training student teachers to effectively manage and do developmental assessments of their pupils will have a ripple effect within the education system.

Thus developmental assessments of students learning and behavior assist teachers in drawing up effective intervention programs for students who are experiencing problems through use of reported results. They plan feedback and effective interventions that may lead to typical development of their children. Developmental assessment also helps in enhancing effective learning. The three types of evaluation (pre-formative, formative and summative) also assist teachers in producing effective information and feedback that can be used to make important interventions and decisions during the children's learning process. The assessments also assist parents or carers to make informed decisions about their children's education.

LEARNERS' EXERCISES

1. On which group of children should developmental assessment be carried out and why?
2. Why should teachers play a mentorship role in developmental assessments?
3. How would you assess a child with a learning problem?
4. Discuss the influence of society and culture on developmental assessment.

5. How can a teacher be certain that a child is ready to start school?
6. What information do you think should be added to teacher curricula on developmental assessment?

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Chapter 22

**EDUCATIONAL ASSESSMENT AND ANALYSIS
IN THE AFRICAN CULTURAL CONTEXT**

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CHAPTER OBJECTIVES

By the end of this chapter we expect the reader to be able to:

- 1) Identify the main elements of *bunbu/ubuntu*.
- 2) Explain how the school and home can work together to assess children's achievement of the values of *hunhu*;
- 3) Demonstrate an understanding of the impact of cultural contexts on school performance;
- 4) Develop a critical understanding of the limitation of current school assessment practice;
- 5) Explain the role of the family and community in children's motivation and academic performance;
- 6) Develop ability to integrate Eurocentric theories with indigenous world view of performance;
- 7) Examine the contribution of culture to learning potentials of students.

INTRODUCTION

Educational assessment is a process by which characteristics of the individual, the group of individuals, the setting, goals and objectives, and materials or teaching strategies are identified and understood for the purpose of making judgments and decisions relevant to educational activities (Guerin and Maier, 1993, p. 8). For comprehensive educational assessment, both formal and informal assessments are necessary for the teacher to make an informed decision about a given learner. But educational assessment in the African cultural context is underrepresented in the scholarly literature. The central proposition here is that, in addition to the formal tests that are routinely administered in schools, there are other important forms of assessment that are not usually recognised. Such forms of assessment give teachers valuable insights and provide leverage for restructuring the way assessment systems for African children are designed (Jordan and Putz, 2004).

This chapter discusses an Africentric model of educational assessment for teacher training and evaluation to enhance the development of African children. It is an attempt to capture Africa's diverse cultural heritage, which encompasses developmental, historical and social assessment practices. The chapter starts by examining how Africans facilitate and monitor child development, which is presented as a communal task. Among the major objectives of education, indigenous and school-based education, it is noted that cultural values, in particular *bunbu/ubuntu* (humanness), are emphasised in the development of a healthy society. It is also noted that in most cases the greater part of schooling consists of theoretical knowledge while aspects such as cultural values like *bunbu* may be inadequately

represented as the books are not usually written for the local communities. To this end, questions of interest include how an analysis is made of how significant others know and monitor whether or not their children or dependants are fairing well. It is also beneficial to juxtapose assessment in family contexts and assessment in academic school settings. Culturally sensitive assessment techniques are promising, with ecological assessment of pupils' performance as one strategy. In addition school experiences are important for multilingual and personal-social competencies. We advocate the integration of formal assessment practices and informal assessment which occurs in the routines of children's lives in families, peer groups, and school activities.

ASSESSMENT IN CULTURAL CONTEXT:AFRICENTRIC PERSPECTIVE

From the preceding section, assessment in cultural context implies the use of authentic assessment tools which ask students to demonstrate their proficiency in doing something linked to the real world. Much of the real world is outside school, thus the teacher has to devise a way of checking how students are able to perform meaningful tasks as they are presented by the culture and environment in general. The way the community has always assessed their children should be taken on board and customized if need be. The alternative way of assessing students would help give a full picture of students' development. The African view seems to emphasise the practical outcome of learning where the question is how the student uses what is learned. By so saying, we are not against the traditional assessment or formal assessment. Both informal and formal assessments are necessary in helping the teacher assist the students better.

Commenting on the formal assessment practices with children in education settings in Africa, Nsamenang (2003) contends that the contemporary education system focuses almost exclusively on the Western educational tradition and to the unfortunate neglect of non-western educational heritages, yet children take their culture to school. Further, research evidence confirms that the ways children respond to learning material is shaped by their cultures of origin or range of cultural experiences implying that the African worldview may need to be considered when conceptualising education for African children. Be that as it may, under the given circumstances, the first education policy makers might have experienced constraints like lack of qualified Africans to give the view of what African realities were. Cognisant of this, it is our suggestion that the current education system for African children can be strengthened by replacing contextually irrelevant material with culturally relevant items.

In this section, we argue that assessment must be done taking cognisance of African practices and life-journeys that impact children's development, economic life and cultural education in addition to some positive aspects of the contemporary education systems. We do this to uphold a provision in the United Nations *Convention*

on the Rights of Children that a child's cultural background must be recognized and taken into account in developmental and academic assessments (United Nations, 1989). Hence, we propose to rethink assessment by developing a framework that puts assessment by classroom practitioners into a broader social context. In the next section we examine African perspective of human development within which to position educational analysis and assessment.

An African perspective of human achievement

African views of the world and the human person differ from those that inform contemporary developmental psychology and the process of education (Nsamenang, 2003; Serpell, 1993). African concept of being is dynamic and rooted in the belief that personhood is attained not only as one grows old, but also in direct proportion to the enactment of one's status roles and social insertion in the community. Socialization and education are organized to gradually integrate children from an early age to responsible roles through guided participation in valued cultural and economic activities at different stages of life. This is in keeping with Rogoff's (2003) observation that children are moulded by cultures in which they are brought up; they in turn influence their cultures through their behaviours and activities.

To attain full personhood, African worldview posits that human beings need others and to be responsible for and to them. In the next section we develop this African worldview by explaining how a highly prized component of personhood termed *hunhu* or *ubuntu* is cultivated in Zimbabwe and other countries in sub Saharan Africa. *Hunhu* which literally means humaneness imbues in the individual a sense of responsibility to the community, which is developed through cultural education as the core of the value system of indigenous African peoples. Before discussing how cultural education and even contemporary theoretical knowledge endeavours to develop *hunhu* in students (over and above any other education objectives) it is advisable to briefly discuss the concept of *hunhu/ubuntu*.

The concept *hunhu/ubuntu* or humanness is the core of the African value system based on principle of caring for each other's well-being. Chivaura (2006) argues that people could attain *hunhu* through practicing some principles inherited from African ancestors. The principles emphasise love, justice, peace, harmony, balance, and above all co-existence with nature. The qualities of *hunhu* are very important for the health of society; as such, they are also very important to the school as a community and as it should inculcate these values to students for the betterment of the nation and the world in general. In the next section we discuss the process of cultivating *hunhu* in the indigenous education system.

Cultural education process

The indigenous African education imparts productive and moral lessons to children tacitly woven into the texture of daily life activities. Children perform core activities such as taking care of young siblings to reflect the principles of sharing

family responsibility (Serpell, 1993) and the priming process of learning the caretaker role from an early age (Nsamanang 1992). To put the foregoing in perspective let us look at how the Shona society cultivates good character (*tsika*) and ultimately *bunbu* in their youth.

Among Zimbabwe's Shona people, standards of valued behaviour and virtue are called *tsika*, which refers to knowing/possessing and being able to use the rules, customs and traditions of the Shona society (Pearce, 1990). As children grow they are taught *tsika* by significant others, especially elders. *Tsika* includes modesty, self respect, prudence and above all self control. *Tsika* provides the framework within which actions are judged and evaluated. Thus, learning and understanding *tsika* prepares the youth to enter into the moral order of responsible adult life. Learning *tsika* is the foundation of developing *bunbu/ ubuntu*.

According to Chivaura (2006) one's *bunbu* is measured by one's ability to exercise control over the overpowering urges of one's instinctual being. *Hunbu* requires both that one has learnt *tsika* and that one can reflect upon, and take responsibility for one's own behaviour. Thus some adult may lack the attributes of *bunbu*. In indigenous education, *bunbu* is the ultimate product which transcends all other qualities of a well brought up person. At school, professional teachers are expected to teach *tsika* in addition to theoretical knowledge. Thus, even in theoretical knowledge, *bunbu* is also a major product. However, some teachers tend to focus on aspects of education which are more examinable than *bunbu* which is mainly demonstrated through the learner's behaviour. One of the possible consequences of the neglect of *bunbu* by teachers when teaching theoretical knowledge is bad behaviour displayed by some people in public offices.

From the foregoing discussion, the following are some of the competencies expected from undergoing cultural education:

1. Attainment of *tsika* and *hunhu*, which include having respect for elders; being obedient to parents; being patient with others; having self control; and being sociable, polite and honest.
2. Achievement of a high moral order of responsible adult life.
3. Understanding and being able to pass the history of the community to the younger generation.
4. Attainment of life skills and wisdom, and the ability to pass this to younger generation.
5. Ability to solve disputes amicably.
6. Attainment of technical skills.
7. The implication of this section is that the schools should not only be able to encourage the development of some of these competencies, but must assess them as an integral part of the curriculum. Of course this entails some policy

changes in the school education system as well as in teacher training. In the next section we discuss school-based education in some detail.

Goals of the contemporary school education system

In most African countries, educating children is a huge multi-level investment that is heavily contextualized and it takes place in settings that imply partnership towards common and valued goals. Thus, many African children enter school from homes where both basic theoretical knowledge and cultural knowledge have been successfully transmitted in nurturant and well-scaffolded contexts. They however, have difficulty in transforming the skills they utilized in acquiring knowledge at home to the new learning environment at school (Liddel, 1996). Also requirements for success at school and home are very different. Activities considered important should find their ways into the classroom by way of assessment while at home feedback is more regularly available on what would be taking place in school. At home, practical skills are emphasised while at school mental skills are rewarded better than practical skills. Therefore, integration is required and there is need to involve parents and guardians in the education of their children including the assessment process. This could be started at the time when parents register their children with the school for the first time, at which point they are asked about the general strengths and weaknesses of their children, and what and how they expect the school to help and the part they expect to play as parents.

Parental/community involvement : Although most educators recognise the strong influence that parents have on their children, their expertise in assessing their children often go unnoticed. The skills and knowledge that parents possess must be recognised. Parents are with their children the greater part of the day during school days and all day long during the holiday. Parents also have the major responsibility for their children from birth until the children can provide for themselves, even thereafter in many families. Teachers must accept the parents as experts in the educational process of their children. Teachers have to be more cognisant of the strengths and weaknesses of parents and more attuned to their needs. Unlike teachers, parents are always responsible for their children as parents do not foreit this right to new set of parents – teachers.

However, it is very important that parents and guardians as first teachers are made to understand that their child rearing practice might have a bearing on how the child fits into the school system and ultimately general school performance. In addition to cultural education, children get moral and material support from their families. Thus as important stakeholders in the education of their children, parents and guardians must work with schools by providing information about their children's daily activities while they also check on their children's school work. Working together of parents/guardians and teachers will bring a lot of challenges as all stakeholders will be faced with additional responsibilities. The responsibilities would include knowing more about what is happening to the child in terms of theoretical knowledge and cultural education. For these to be effective and realistic, parents should be

consulted at the curriculum design stage when decisions about content, method of delivery and models of assessment are made.

Synchronizing cultural education and theoretical knowledge

The imported system of education did not incorporate African cultural and economic realities, social thought, and models of constructing knowledge, among other exclusions. Thus, while most African families continue to rely on indigenous forms of participatory learning, African countries received education which does not comprehensively address their educational needs including the constructs that form the building blocks of their daily life and identity (Nsamenang, 2005; Serpell 1993).

In examining why about a quarter of South Africans failed grade 1, Liddel (1996) observed that there were discrepancies between instructional methods and instructional objectives which children were exposed to at home and at school. At home children rote-learn cultural knowledge such as songs and kinship networks, and the learning method ensures accurate passing on of information considered essential to cultural identity. Children are not expected to transform, abstract or generalize such information, which is cultural heritage that must remain fixed over generations. Liddel (1996) argues that several South African children fail grade one because rote learning method is used inappropriately.

To synchronise cultural education and theoretical knowledge there is need to work towards having students achieve goals the community has for development to mature functioning. One starting point towards achieving these goals is to acknowledge children's strengths in both cultural education and theoretical knowledge, both at school and at home. To this end, both school and the parents/guardians need to initiate and maintain communication with each other. A teacher can keep track of tasks which a child is given at home relative to other children of the same age. In most cases a child is given more responsibility as s/he grows and matures.

Social life becomes possible at first because of the mutual assessments that human beings continuously conduct through verbal interactions, nonsemantic features of language such as prosody, non-verbal body language including gestures, body orientation, participation and bodily distancing (Jordan and Putz, 2004). Typically developing children are able to do more academic tasks on their own initiative and to be given more responsibilities as they grow and mature. The parents and guardians can provide very useful information to teachers on what their children are able to do on their own and what responsibilities the children are assigned to. Elder students can also be asked to talk or write about the task they perform at home and new responsibilities they will be taking up. The whole discussion shows that there is need to adapt the teaching and assessment methods to the student's way of life. In other words, assessment must be as exhaustive as possible so that as many student competencies as possible are assessed. The process needs to be holistic.

There should be room for other teachers to write comments in a student's log book or progress book whenever they perform some important competencies some of which would have been listed as examples during teacher-parent consultation meetings. The teacher, as a professional who generally commands a lot of respect from the parents/guardians and the community in general can take a lead in this initiative. Parents/guardians and the community in general would most likely cooperate when the contributions of each stakeholder is clearly spelt out and the goals of the initiative are clearly laid down.

Assessment Facets and Strategies

Teachers should adopt a multi-pronged approach to assess the African child fairly. The teacher must consider the following assessment methods: inherent assessment, discursive assessment and documentary assessment. The assessment methods are discussed below.

Inherent assessment: Inherent or informal assessments are part of routine work activities as well as in the normal home, family and recreational activities of human beings (Giddens, 1984). We all make assessments of each other all the time, assuming that we each can or cannot, will or will not do certain things. Inherent assessment occurs all around the children as a part of all socially situated activities, especially in peer groups. The assessments are not usually made explicit in the form of verbal utterances or mental descriptions but tend to remain in the sphere of practical consciousness. The challenge is to make them deliberate and accessible.

Parents and Children: At home, parents, particularly mothers constantly assess their children's acquisition of various life skills. Mothers do dozens of such judgments daily, for example, asking the child to bathe self or clothe self. Furthermore, other family members, particularly siblings are keen judges of younger sisters' and brothers' acceptability in play groups. At home, there is a constant, on-going assessment of activities. There is mutual monitoring in that the parents would want to keep children appropriately integrated in the activity while the children would like to acquire the skills necessary to carry out the tasks at hand (Jordan and Putz, 2004).

Teachers and Students: In class, the teacher is constantly on the lookout for appropriate and inappropriate behaviour. Teachers judge the children's conduct. Students also make judgements about each other's competencies, an assessment that becomes apparent in how a joint problem is attacked. Unlike externally imposed tests, these self-generated assessments are inherent in the social scene of ongoing classroom or peer activities. Teachers should note that inherent assessments are made in the interest and for the purposes of the individual child attempting to align to (or misalign) with the class or group. Thus, the assessments constitute one of the fundamental mechanisms by which learning occurs, including the kinds of incidental learning we regard as normal components of human development. In class, children continuously assess approval or disapproval of their actions by the teachers. Teachers' assessment criteria should be based on the affordances of ongoing situated activities

rather than on underlying abstract skill requirements. The mutual assessment is the one that informs children that they are ready (or not) to do the next concept or take the next step.

Discursive assessment: Discursive assessment implies making inherent assessment explicit and shared with a group or class. Teachers like parents may talk to the children about what they already accomplished and what they will be able to do soon. Students may talk about how they are doing, how much they lag behind and why and how much remains to be done. In discursive assessment, the reflective talk generated by the students engaged in a particular activity about that activity is an important vehicle for learning and innovation (Nardi, 1996). It creates a shared understanding of individual students' roles and responsibilities thereby works out a division of labour. Discursive assessment creates a public verbal representation of the capabilities, resources and issues for a group that enables them to consider implications of the current state, as they understand it for behaving more responsibly. The assessment is often produced spontaneously, effortlessly without official training as part of ongoing school activities and life spaces (Jordan and Putz, 2004).

Documentary assessment: Documentary assessment involves externally mandated, stable symbolic representations of evaluations in the form of tests, surveys, check lists, plans and targets. Reflective and evaluative set of marks such as progress tests, end of term results, end of year results and public examination marks may be produced by the teacher (Latour, 1986). The teachers should use documentary assessment to evaluate the extent to which pre-established performance targets have been achieved and to establish cross-class comparability. Teachers' entries in grade books or students' scores on standardised tests are less designed to facilitate students' learning than to satisfy the requirements of ranking students and schools. Such rankings are carried out not primarily to the interests of the students engaged in learning, but as a response to institutional and political constituencies (Jordan and Putz, 2004).

Informal and formal Assessment

The various facets and strategies of assessment outlined in the foregoing section can be either *formal* or *informal*. Formal assessment usually implies a written document, such as a test, quiz, or written paper. A formal assessment is given a numerical score or grade based on student performance, whereas an informal assessment does not, in current assessment practices in much of Africa, contribute to a student's final grade. An informal assessment usually occurs in a more casual manner and, as sketched above, may include observation, inventories, checklists, rating scales, rubrics, performance and portfolio assessments, participation, peer and self evaluation, and discussion.

Assessment and Analysis of Educational Outcomes

The Wikipedia defines educational assessment (accessed on 28/06/2010) as the process of documenting, usually in measurable terms, knowledge, skills, attitudes, and beliefs. Assessment or performance analysis can focus on the individual learner, the learning community (class, workshop, or other organized group of learners), the institution, or the educational system as a whole. It is important to notice that the final purposes and assessment practices in education depend on the *theoretical framework* of the practitioners and researchers, their assumptions and beliefs about the nature of human mind, the origin of knowledge and the process of learning. The Merriam-Webster online dictionary traces the word *assessment* to the root word *assess*, which is defined as: 1) to determine the rate or amount of (as a tax), 2) to impose (as a tax) according to an established rate b: to subject to a tax, charge, or levy, 3) to make an official valuation of (property) for the purposes of taxation, 4) to determine the importance, size, or value of (assess a problem), and 5) to charge (a player or team) with a foul or penalty.

Assessment in education is best described as an action “to determine the importance, size, or value of”. The term *assessment* is generally used to refer to all activities teachers use to help students learn and to gauge student progress or the outcomes of the curriculum. Though the notion of assessment is generally more complicated than the following categories suggest, assessment is often divided for the sake of convenience using the following distinctions:

1. formative and summative
2. objective and subjective
3. referencing (criterion-referenced, norm-referenced, and ipsative)
4. informal and formal.

Formative and summative: Assessment is often divided into formative and summative categories for the purpose of considering different objectives for assessment practices. Summative assessment is generally carried out at the end of a course or project. In an educational setting, summative assessments are typically used to assign students a course grade. Summative assessments are evaluative. Formative assessment is generally carried out throughout a course or project. Formative assessment, also referred to as “educative assessment,” is used to aid learning. In an educational setting, formative assessment might be a teacher (or peer) or the learner, providing feedback on a student’s work, and would not necessarily be used for grading purposes. Formative assessments are diagnostic. In practical terms, “when the cook tastes the soup, that’s formative. When the guests taste the soup, that’s summative.” Summative and formative assessment are often referred to in a learning context as *assessment of learning* and *assessment for learning*, respectively. Assessment of learning is generally summative in nature and intended to measure learning outcomes and report those outcomes to students, parents, and

administrators. Assessment of learning generally occurs at the conclusion of a class, course, semester, or academic year. Assessment for learning is generally formative in nature and is used by teachers to consider approaches to teaching and next steps for individual learners and the class. A common form of formative assessment is *diagnostic assessment*. Diagnostic assessment measures a student's current knowledge and skills for the purpose of identifying a suitable program of learning. *Self-assessment* is a form of diagnostic assessment which involves students assessing themselves. *Forward-looking assessment* asks those being assessed to consider themselves in hypothetical future situations.

Performance-based assessment is similar to summative assessment, as it focuses on achievement. It is often aligned with the standard-based education reform and outcome-based education movement. Though ideally they are significantly different from a traditional multiple choice test, they are most commonly associated with standard-based assessment which use free-form responses to standard questions scored by human scorers on a standards-based scale, meeting, falling below, or exceeding a performance standard rather than being ranked on a curve or ordinal position. A well-defined task is identified and students are asked to create, produce, or do something, often in settings that involve real-world application of knowledge and skills. Proficiency is demonstrated by providing an extended response. Performance formats are further differentiated into products and performances. The performance may result in a product, such as a painting, portfolio, paper, or exhibition, or it may consist of a performance, such as a speech, athletic skill, musical recital, or reading.

Objective and subjective: Assessment (either summative or formative) is often categorized as either objective or subjective. Objective assessment is a form of questioning which has a single correct answer. Subjective assessment is a form of questioning which may have more than one correct answer (or more than one way of expressing the correct answer) as well as alternative interpretations. There are various types of objective and subjective questions. Objective question types include true/false answers, multiple choice, multiple-response, completion, and matching questions. Subjective questions include extended-response questions and essays. Objective assessment is well suited to the increasingly popular computerized or online assessment format. Some have argued that the distinction between objective and subjective assessments is neither useful nor accurate because, in reality, there is no such thing as "objective" assessment. In fact, all assessments are created with inherent biases built into decisions about relevant subject matter and content, as well as cultural (class, ethnic, and gender) biases.

Assessment by comparison: Test results can be compared against an established criterion, or against the performance of other students, or against previous performance: *Criterion-referenced assessment*, typically using a criterion-referenced test, as the name implies, occurs when candidates are measured against defined (and objective) criteria. **Criterion-referenced assessment** is often, but not always, used

to establish a person's competence (whether s/he can do something). The best known example of criterion-referenced assessment is the driving test, when learner drivers are measured against a range of explicit criteria (such as "Not endangering other road users"). *Norm-referenced assessment* (colloquially known as "grading on the curve" " "), typically using a norm-referenced test, is not measured against defined criteria. This type of assessment is relative to the student body undertaking the assessment. It is effectively a way of comparing students. The IQ test is the best known example of norm-referenced assessment. *Ipsative assessment* is self comparison either in the same domain over time, or comparative to other domains within the same student.

Internal and external assessment: Internal assessment is set and marked by the school (i.e. teachers). Students get the mark and feedback regarding the assessment. External assessment is set by the governing body, and is marked by personnel external to the institution. With external assessment, students only receive a mark. Therefore, they have no idea how they actually performed (i.e. what bits they answered correctly.)

Reliability relates to the consistency of an assessment tool. A reliable assessment is one which consistently achieves the same results with the same (or similar) cohort of students. Various factors affect reliability—including ambiguous questions, too many options within a question paper, vague marking instructions and poorly trained markers. Validity relates to assessment of what is expected to be measured. A valid assessment tool is one which measures what it is intended to measure. For example, it would not be valid to assess driving skills through a written test alone. A more valid way of assessing driving skills would be through a combination of tests that help determine what a driver knows, such as through a written test of driving knowledge, and what a driver is able to do, such as through a performance assessment of actual driving. Teachers frequently complain that some examinations do not properly assess the syllabus upon which the examination is based; they are, effectively, questioning the validity of the exam. A good assessment has both validity and reliability, plus the other quality attributes noted above for a specific context and purpose. In practice, an assessment is rarely totally valid or totally reliable. A ruler which is marked or calibrated wrong will always give the same (wrong) measurements. It is very reliable, but not very valid.

CONCLUSION

Throughout this chapter, we have been clear that the main responsibility of carrying out educational assessment lies with the school and in particular the teacher. However, for the process to be more effective, the community and especially the parents must be involved. Since the outcome of what children learn are demonstrable in everyday life, children must be assessed where ever they are and by any community member (including peers) with the school taking a lead. Aspects assessed will depend

on the assessor and the context. Techniques of academic achievement analyses are many and they should be used in such a way that they complement one another. The implication to the teacher education is that, teachers must be trained in various assessment techniques. Above all, they must be able to develop reliable and valid tests since teacher-made tests are the most common tools for assessing academic achievement. In addition, the teacher must be familiar with standardised achievement tests and non-testing procedures.

Some schools teaching indigenous African children use standardised achievement tests, even intelligence tests to decide the educational progression of such children, yet some of these tests ignore cultural biases as they assume common experience among examinees (Oakland, 2004). Substantiating this observation is Grieve (2001) who proposed that the content of any measure reflects the culture of the people who designed the measure and the country in which it is to be used. Thus people who do not share the culture of the test developers will be at a disadvantage when taking that measure. Related to the foregoing argument is the fact that most standardised tests or even teacher made tests are presented in foreign languages. Language is a potential source of bias as test presented in one's second language may have concepts that are not accessible in one's first language (Grieve, 2001). Due to language barrier, some tests may give an underestimation of students' true level of ability. Each individual student has to be viewed within the parameters of their own situations and background, and all possible contributory factors need to be considered. One way of increasing the validity of an assessment of students' academic performance is to base the test on the actual instructional material given to students.

An educational assessment instrument needs to match the learning objectives, and the objectives in turn must be shared by both the student and the teacher. Given the mismatch between the realities of African children's lives and most school curricula still premised on the inherited colonial past, it is possible that sometimes the teachers informed by the Western models of pedagogy and pupils guided by their culture and family background may have different objectives. Arguing for presenting learning as part of social practice, Lave and Wenger (1991) contend that, useful and effective learning is concerned with changing forms of participation in social practices rather than receiving information.

In this chapter, we have echoed evidence in many chapters in this Handbook that Africans somehow differ from Westerners in conceptions of intelligence, education of children, and sought for educational endpoints. The Western education systems focus on developing children who strive toward achievement of personal success irrespective of how this may affect others. On the other hand indigenous African cultures emphasise educational attainments but in harmonious interdependency. These divergent value orientations pose not only pedagogical challenges but more tricky assessment issues that need attention and merging into a

unique Africentric education system and assessment models.

LEARNERS' EXERCISES

1. Describe some sources of bias in educational assessment which were stated in this chapter. How can the teachers reduce the sources of bias in educational assessment?
2. Explain why it is often difficult for the African child to transform the skills they utilise in acquiring knowledge at home to the new learning environment at school. Suggest ways of ameliorating this problem.
3. Examine the pros and cons of using Western based educational attainment assessment procedures on indigenous African students.
4. Discuss the implications of including indigenous African assessment procedure to the teacher.
5. Outline how we may proceed to merge individualistic and interdependent assessment techniques into an African assessment system.

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Chapter 23

TEACHING PRACTICE EVALUATION IN CAMEROON

Valentine Tameh

INTRODUCTION

The teaching practice (TP) for students in training is of vital importance. Throughout the training course, these teacher-aspirants are trained to observe, reflect and analyse. They are drilled in methods considered ideal, which have been tried and found workable by teachers throughout the ages. Also, they are guided through micro-lesson simulations, the nearest they usually get to mimicking the real classroom experience. So, as part of their end of course examination, these enthusiasts are sent to the field for a period of time in order that they can get firsthand experience of what awaits them in the profession.

As Souper (1976) notes, TP is crucial because it enables trainees to face their strengths and weaknesses in a realistic context; these weaknesses signifying their potential vulnerability as students. Nevertheless, those who begin this professional journey conscious of the demands of the profession and who are given to observation, reflection and analysis soon come to realize that only an honest assessment of their performance can effectively build up their strengths and hone new skills. Therefore TP, which gives trainees the chance to assess their entry performance, together with teaching practice evaluation (TPE), which counsels and evaluates them before entry, deserve keen attention in a teacher education handbook, like this one.

On completing this chapter, the student-teacher should:

- 1) Understand what evaluation means and entails;
- 2) Become aware of the stand of the training school on teaching practice;
- 3) Analyze the phases and stages of and the expectations from teaching practice;
- 4) Plan lesson notes on chosen topics and deliver successful lessons;
- 5) Determine what good classroom qualities and practices should be.

EVALUATION PROBED IN DETAIL.

The word “evaluation” in school usually brings to the minds of learners a kind of terminal assessment, which measures and grades performance. And in the case of student-teachers, what immediately comes to mind at the mention of TPE is the picture of a no-nonsense, unfeeling inspector sitting at the back of the class, selecting the “saved” from the “damned”. Yet classroom evaluation and TPE, like evaluation in a general sense, are expressions that today suggest on-going processes.

Today evaluation is a continuous process built into a training programme for the improvement and extension of academic and professional skills with both retrospective and prospective dimensions. This thus enables educationists, course designers and implementers to look back at what has or has not been achieved, to take stock of the present state of affairs and to plan remedial and new strategies in a bid to enhance trainees’ progress. So evaluation can be seen from the three-pronged

perspective proposed by Obanya et al (1989): the evaluation of antecedents, of processes and transactions, and of end results. In other words, evaluation at once refers to baseline evaluation (that determines the appropriateness, viability and sustainability of a project), to guided or formative evaluation (that is sustained throughout the life span of a project to progressively gauge project development and improvement), and to graded or “summative” evaluation (that judges the quality of the finished product). And it is clear that the inspector should not come to scare but rather to inspire the trainees, and so should be inspirational, benevolent and full of empathy.

Every time before the practicum begins, educational trainers set targets, the standard for measuring results. They use TPE to determine how far expected results or outcomes correspond with results achieved in the end. As such, TP becomes organized monitoring and feedback, with outcomes compared with pre-set outcome objectives and with remedial action taken to repair lapses of all kinds.

Evaluation has both guided and graded facets. And its guided phase should necessarily have a diagnostic outlook from the onset. Evaluation in the training school has broader implications because it does not set out to evaluate only the trainees but also the effectiveness of the whole teacher-training programme. It judges relative merit; it deals especially with degrees of fitness, and is not necessarily obsessed with the absolutes of good and bad and right and wrong.

In a well planned TP setup, the evaluators do not adopt working methods that are meant to surprise or scare the trainees. Rather, they display a trainee-friendly attitude and a readiness to encourage, empathise with and understand the trainee. It should always be taken for granted that each trainee is a beginner and so should logically not be as adept and as knowledgeable as the evaluator. Thus TPE transcends testing and grading because it is supposed to gauge the trainee’s progressive effort and future potentials. This implies that every hardworking or well-meaning endeavour should be rewarded. This chapter therefore is not just a mere list of what inspectors expect; rather it probes the whole TP gamut from entry to exit point.

RATIONALE FOR THE TEACHING PRACTICE EXERCISE IN CAMEROON

Many a student-teacher has often wondered why they should be subjected to this gruelling and apparently time-wasting exercise, especially when their academic work lies uncompleted. And a few trainers have often wondered why this very costly facet of the training programme cannot be abolished, with the complacent feeling that micro-teaching is done, which could replace the TP. Permit us here to present the perspective of Cameroon’s Ministry of Secondary Education, in this paraphrase of former Minister, Robert Mbella Mbappe in his 1993 address to educationists, drawn from the *Teachers’ Resource Centre Teaching Practice File*; the parenthetical information is my attempt to clarify each of the points broached:

Let it be borne in mind that it is during this (TP) period that student teachers are effectively immersed in classroom realities, which are far better than the superficial mini-lessons and simulations. We should continue to emphasize that it is at this crucial phase of the training, after the phase of theoretical fore-grounding, that the attention of these future teachers should be drawn to:

❖ Knowledge of how to handle adolescent students (Learners, in secondary school and high school tend to be disruptive because of the maturation, and the trainees stand to gain if they interact with the former in the presence of the trainer who should already be adept at managing all kinds of learners).

❖ Student-centred teaching and teaching by objectives (Since teachers always tend to lecture with limited student participation, trainees should be guided by well defined, measurable objectives and make their teaching learner-oriented and activity-driven).

❖ New developments in teaching (Knowledge evolves, innovations come up always, and today the internet and ICTs constitute tools of research par excellence, so trainees should exploit these).

❖ The importance of continuous training (There is this trite saying: “The teacher who stops learning should stop teaching”; this should also be said of the teacher in training. Thus trainees should take up TP with love and enthusiasm, with the kind of gusto that will keep them researching and always wishing to improve).

❖ Educational research and material production (The teacher is at once a researcher, a curriculum development expert and a material designer. Trainees should therefore go beyond training school prescriptions and become investigators par excellence so that they can start getting used to the roles they will be expected to play later on).

❖ Manipulation, especially of teaching aids (The quality of the trainee’s lesson is determined largely by the illustrative materials used. Therefore, classroom trainers should impress this on trainees, especially by example).

❖ Adaptability and open-mindedness (Teachers, like trainees, should not be “know-alls” but human beings with their own strengths and weaknesses, as well as with integrity enough to acknowledge when they are wrong).

This position of Cameroon’s Ministry of Secondary Education is that of all who believe in rigorous teacher formation, the boon of any dependable educational system. And so despite multi-faceted organisational problems, the administration of the Higher Teacher Training College and the inspectorate of pedagogy, with their different supervisory bodies, struggle to sustain TP, which they consider a tradition of excellence, fully aware that its eclipse would bring about unparalleled adventurism and arbitrariness – a sort of dark ages for the country’s teacher training. It might now be propitious to examine the phases and stages of the teaching practice exercise.

TEACHING PRACTICE PROPER: ITS PHASES AND STAGES.

The practicum, like its evaluation, can also conveniently be seen in phases: the observation phase and discussion phase, the teaching phase and the evaluation phase. Here we mean evaluation of the whole exercise, which is not necessarily contingent on or determined by the mark obtained in one TPE “test” at the end. It will definitely be prejudicial if performance in one lesson at the end is used to judge aptitude in the whole TP exercise.

During the Observation Phase, the trainee attentively studies the verbal and non-verbal features of the teaching interaction for at least one week, with the cooperating teacher (CT) teaching. The trainees do not come to replace these regular class teachers, but to work with them, under their tutelage. The Discussion Phase, which ideally should follow each observation, is one during which the trainer and the trainee discuss the characteristics of lessons observed (by the trainee) with open-mindedness, fairness and mutual respect; the duo broaches both strengths and weaknesses of the lesson. And in the Teaching Phase, the trainee takes over the teaching, testing the theories learnt in training school in a real classroom situation. This phase constitutes the following stages:

❖ **The lesson planning stage** determines the success or failure of each lesson. As all pilots have a flight plan for each flight, so too must all teachers write objective-driven and aids-enhanced lesson notes or else their lessons will be mere drifts. Lesson planning helps teachers to make their purposes both appropriate and explicit and to ascertain the availability of necessary resources. A well-written plan for each lesson to be delivered becomes imperative because it enables the teacher to teach with gusto and éclat. Although many teachers on the field soon abandon this habit, trainees are however advised that if they hope to enjoy the profession and become models, they should avoid copying negative habits.

❖ **During the lesson presentation stage**, the lesson is taught. Here resourcefulness and variety are cardinal and the following issues, *inter alia*, count: punctuality, neatness, movement, gestures, questioning techniques, respect for classroom routines, maximum student participation, full logical chalkboard use, variety, voice quality, language ability, proper display and exploitation of aids, follow-up, etc. In general, mastery of subject matter and versatility and eclecticism in style and approach are assets.

Note should be taken that appropriate methodology is not necessarily what one learnt in school, but what one finds workable. Nathalie Hess cited by Ndikum (2006) defines large classes as classes of thirty (or more) and we come to realize that large is relative, given that normal classes in Cameroon range are about sixty and large classes that run into hundreds of students. Thus we conclude that methodologies proposed in course books may be crafted with such ideal classroom situations in mind. Consequently, we must always quest for workable methods which will satisfy the needs of our own overcrowded classroom situations.

❖ **The Post-Conferencing Stage** permits the trainer and trainee to discuss each lesson. Before this moment, the trainee should have done sincere self-evaluation. Then s/he should be able to listen attentively to any criticisms or advice proffered. An equally important discussion which inspectors insist on is the weekly pedagogic encounter, during which the trainer and the trainee take stock of the previous week, raise and agree on difficult or controversial issues and plan work for the new week.

Each trainee must have a TP notebook for writing down everything which is done: lesson observation, planning, discussions, pedagogic encounters, miscellaneous issues, etc. Its first page should indicate the usual preliminaries and should have a copy of the timetable attached and it should be forwarded to the inspectorate for appraisal at the end of the practicum.

❖ On its part, the **Evaluation Phase** enables the CT and the student teacher to evaluate the whole exercise. The trainee writes a report of all pedagogic activities that took place and deposits it at the inspectorate of pedagogy as soon as TP ends. The report should have an introduction, and should mention preliminary meetings, working conditions, number of hours/classes taught, number of tests administered, number of pedagogic encounters/ departmental meetings attended and the pedagogic issues raised, the general behaviour of the learners and the relationship with the supervisor, problems encountered, suggestions and general impressions. This report should be accompanied by a questionnaire, filled and signed by the trainee. Also, the trainer evaluates the trainee using a questionnaire on personal qualities, lessons delivered and other TP aspects, and forwards it with the trainee's mark sheet. Advisedly, in all fairness, the trainer should let the trainee read and sign this form before forwarding it to the inspectorate.

Teaching is a complex process and it is often very difficult to say what good teaching really is. This is because many different styles are acceptable and because there are differences of opinions even among many renowned educationists on method of teaching and style of management. It is also noteworthy that a teacher's efficiency usually extends beyond planning and classroom interaction to other variables as teacher-student and teacher-parent relationships, cross-curricular links, an awareness of the societal context, of socio-cultural determinants, of old and new trends in the business of teaching, etc. The key, therefore, is planning. And if the trainee plans well, s/he will even come up with some approaches that will be a pleasant surprise to TP evaluators.

SOME LESSON PLANNING TIPS

Harmer (1991) asserts that good lesson planning is the art of mixing techniques, activities and materials in such a way that a balance is created in class. The following tips should come in handy:

❖ Know the students, since they are your customers. The customer, the saying goes, is king. Note that they can be very difficult if they find you jittery, frightened or unsure of you on the one hand or brash and abrasive on the other.

❖ Determine average age, level, motivation, trainer's attitudes, her/his approach, textbook/syllabus demands, etc, to know what methods to adopt.

❖ Define your lesson objectives clearly, using action verbs (like spell, write, calculate, plot, draw, state, enumerate, show the working of, tabulate, paint, identify, compile, etc.- the list is interminable) and avoiding vague and ambiguous state-verbs (like know, understand, become aware of, comprehend, appreciate, gain insight into, etc, which are not measurable, which fail to indicate exactly what the learners will do to show that they know and which do not clearly indicate how the learners shall be assessed, etc.). Always use behavioural objectives; Bloom's much popularised six-point taxonomy (knowledge, comprehension, application, analysis, synthesis and evaluation) is most useful in defining teaching objectives as well as in setting tests and examinations, so trainees should exploit it.

❖ Master your subject matter; know the general aims and specific educational outcomes of your lesson, both from cognitive and affective perspectives.

❖ Know your constraints – time, number of students, your strengths and weaknesses, the views of fellow trainees, of the trainer, the faculty supervisor, the inspector, etc.

❖ Know the teaching or specific test task, the activity, the method and/or experiences you want to employ. Everything you do should be deliberate.

❖ Encourage students to collect specimens and get them to perform simple experiments. In a Computer Science class, let them have a go at the computer. A hands-on approach is most effective, as learners who do never forget, like implied in the time-tested Confucian adage: When I see, I forget; when I hear I remember; when I do I know.

❖ Know the student groups and exploit them well for each lesson. Organise individual, pair and group work – indicators of active learning.

❖ Know the level of acceptable learner performance at the end of the lesson. Celce-Muria and Macintosh (1979) call this the criterion level – the teacher determines in advance that the lesson will be considered successful if X percent of the learners can do what is required of them.

❖ Know the material you will use – the textbooks, aids (e.g. real objects, charts, models, living and/or preserved specimens, maps and atlases, globes, etc).

❖ Know the objectives, the teaching points and procedures (the actual number of different steps to be taken, including appropriate introductory and concluding activities, which the learners will follow to achieve the stated objectives, the time set aside for stages of the lesson etc).

❖ Adopt good questioning techniques, phrasing questions in simple, conversational language. Eschew the vague and the aimless (e.g, What can you tell me about ...?); use ‘yes/no’ questions sparingly, and especially ask directional (Nji, what is an isotope? ...) rather than impersonal questions (“Who can tell me what an isotope is?”), etc.

WHAT THE INSPECTORS EXPECT OF THE TRAINEES.

We hope that the issues raised above shall help to cure inspector phobia and allay the worries of timorous trainees. They should take note that they share a common, professional affinity with the inspector and that the inspector is usually full of empathy and comes looking for positive points. Consequently, by force of syllogism, if such trainees always just make the effort to master the content, plan their lessons and deliver them with confidence and consideration for the learners, then the inspector becomes an inspirational force, even an asset for “peer” teaching.

The trainees’ integration into the school milieu can only be sound if they immerse themselves in the routines of the department, if the relationship with the staff of the department in particular and of the school in general is driven by proper, ethical practices. At this moment, the trainees are being inducted into the profession of their choice so professional issues should remain the key, not dubious socialising that only goes to destroy focus and mar the training.

On their part, examining inspectors usually come to class armed with examination mark sheets which enable them to grade the following:

- **The conduct of the lesson:** the lesson notes, presentation, methods and mastery of content, objectives of the lesson and progression towards them, use and exploitation of teaching aids, student participation, conformity to the official syllabus and progression;

- **Teacher qualities:** class control, class mastery and class orchestration, teacher enthusiasm, fluency, time management, openness to research, intellectual honesty and general outlook;

- **Work follow up:** attendance of learners, incongruities in the handling and filling of class diaries, regularity and descriptiveness in the filling of all columns – matter, assignments, tests – the frequency and quality of assignments given learners, the checking of learners’ books and the marking of assignments. Note should therefore be taken that inspectors are also keen on the following **good classroom qualities:**

- a. **Neatness and correctness**, especially in attire. Neatness does not imply flashiness because ostentatious clothes rather distract. So the trainee should know that teachers are expected to be model in attire, attitude and language, especially because learners are impressionable.

- b. Enthusiasm**, a heightened interest in and enjoyment of something, usually seen in an eagerness to do that thing. Exude a love for what you set out to do. This will lead you to teach with passion and gusto. Remember that enthusiasm is infectious, and know that children, imitators par excellence, will copy your positive attributes with enhancing effect. Lack of enthusiasm in any enterprise betrays; in fact, nothing can be more destructive in the teaching arena.
- c. Self confidence:** This is the feeling of trust in yourself and your abilities. Be self-confident because self-confidence generates enthusiasm, keeps you at ease with your learners and wins for you their respect, admiration and confidence. Note that confidence means that you can say “I had not thought about that; I will find out and tell you during the next class” or that you can throw back the question to the class to get the students’ own opinion. It is possible that some of your students might have read or studied in advance and so might be able to explain the problem; and when you try to play the know-all always, you will fail woefully and become a laughing stock.
- d. Elocution:** good, clear public speaking, involving good pronunciation, voice control, etc. The inspector judges whether your voice is clear and strongly accentuated, whether your speech is correct, well articulated, fluent and effective. Therefore, speak well, varying your voice for variety. A sustained flat monotone or a sustained raucous, metallic voice either lulls to sleep or jars with ridiculous effect.
- e. Good Classroom Management** refers to discipline, to what trainees do to pre-empt disciplinary challenges on the one hand and how they tackle them whenever they come up. Our overcrowded classrooms mean that trainees need to be very resourceful, that they should become facilitators, managers and consultants and all actors in class become partners in the interactive process. Trainees are expected to be friendly and patient but firm; and they should do all to breed a controlled, democratic culture in class and to check permissiveness.
- f. Spirit of Initiative:** Having initiative means being resourceful; this resourcefulness is evident in your preparation, in the quality and quantity of your illustrative material, in your marshalling of the lesson, etc. Avoid lecturing because it shows want of initiative. Create useful activities. And either handle challenging situations deftly or defer them honestly. Good preparation helps you to pre-empt possible difficulties, and enhances your performance and that of your learners, especially by making them active participants in the learning process. Organize and marshal pair and group work well, to encourage peer interaction even after class. Finally, note that too much teacher talk is a sign of failure.
- g. Resourcefulness in fashioning illustrative material:** The inspector-evaluator will expect you to attempt to go beyond obvious aids like chalk, the teacher, the chalkboard, the textbook, etc. and use both visual and audio aids that are cheap

to obtain, simple, varied, available, focused, legible and visible from all points of the class, attractive, localized, relevant, tickling, and safe (Tameh, 2006).

- h. Self-Evaluation:** Buchanan and Jackson (1997) assert that self evaluation refers to the fact of assessing one's strengths and weaknesses, one's successes and failures. It suggests the individual is given to reflection and critical analysis, that the teacher makes plans to impact on the future – plans that will make them “self-developing professionals”. When one develops the habit of probing especially one's weaknesses, one becomes endowed with inner strength, with honesty, integrity and dependability, which are pre-requisites for one's growth and progress in the profession.
- i. Readiness to learn:** Trainees should be able to listen and ready to concede when found wanting. Nobody expects them to know everything, and they should never adopt such a posturing attitude. Students are very smart and will immediately see through such falsehood. They must therefore possess intellectual honesty and always be seen to be making well-meaning effort.
- j. Mastery of subject matter:** Trainees are also expected to have and display a mastery of the subject matter. They should read and master their subject matter and be time-conscious, meticulous and organized especially in lesson planning and delivery.
- k. Conscientiousness:** Teachers in training are expected to be conscientious – show great care, attention and industriousness in performing tasks. And there is the added fact that work, for such persons, is done in accordance to the dictates of conscience. Since teaching is nation building par excellence, teachers and trainees are expected to display a high sense of duty conscientiousness.

TPE IN THE TRADITIONAL SOCIETAL SETUP AND IMPLICATIONS

It might pay off at this juncture to make an attempt to situate TPE within the context of the ongoing attempt to redefine the objectives and content of African education, or to show how TPE also applied in the traditional African society. Bickerstaffe (1977) says that traditional societies had organized “educational” systems which they used to induct the young into the ways of the group. Before the advent of schools and school-based education, children were trained to fit into the patterns of their communities and to contribute to its sustenance and stability. They were taught the rudimentary skills that fitted into the people's ethos: how to use their hands to do things – hunt, farm, fish, build houses, make weapons and rudimentary utensils, keep the house, etc. So the young were evaluated in function of how adept they became at the end of their training; the builders, fishermen, hunters, blacksmiths and farmers became the society's mainstay.

Apart from being a family and professional person, the traditional African was also a community being. Thus because they lived in communities, these young ones were equally taught group ethics, the rules and the taboos of the community, its songs, its legendary beginnings, its myths and other legends, its customs and culture. And a very important aspect of this kind of education was the initiation of the young through adolescence to adulthood and active sexual life, and to the other secrets of the family and community that were considered useful to them as adults. Thus the multi-faceted traditional African too was constantly being evaluated as a family and community person, as well as a professional in his very functional society.

It is this functional aspect of traditional training that should inspire the teachers and trainees in our present day formal educational setups as they craft their lessons. Agreed the present setup has changed drastically and is not as rudimentary. Nevertheless it is still possible to shift from the knowledge acquisition focus and craft a functional curriculum, with emphasis laid on the promotion of knowledge generation and life skills – those skills not necessarily the core content of academic attainment but which might be necessary for success in society. Life skills enable persons to become successful and responsible in society, to become good custodians of individual and collective assets and to respond effectively and positively to the problems they face in their societies. Life skills are a sort of survival kit which endowed persons carry along through life. Thus thanks to these other endowments nurtured and developed earlier in life, man and woman, the *homo sapiens*, becomes an achiever in many respects later on. Thus the teacher, like the trainee should be able to design teaching programmes that will address the needs of the learners and the society, especially given the fact that the teeming and ever increasing majority of products from today's grammar-oriented school system cannot make all into the few available job openings. They can do this by focusing on skills and by defining a more activity-oriented, productive educational system.

The implications of adopting a functional curriculum are far-reaching. On the one hand, the educational system becomes realistic because it produces in function of the primary needs of its community. On the other, the products of that learning system get the type of education that will help them to fit into existing work domains in their society, with the multiple, multi-faceted attendant advantages to the individual and the community.

CONCLUSION

Teaching Practice, as we have shown in this chapter, is an indispensable part of the teacher training programme and a *sine qua non* of sorts. On its part, Teaching Practice Evaluation in all its phases becomes a useful yardstick to measure the aptitude and attitudes of the teacher aspirant on the verge of joining the profession as well as that of the training institution. The Cooperating Teachers follow the trainees every bit of the way, encouraging and correcting them as they teach and evaluating their output, with much empathy, from which the trainees will definitely benefit immensely.

Therefore, trainees should always go to their various practicing schools determined to give their best; if they do, they will be going with the blessings of all the education stakeholders, who have overseen and continue to oversee their grooming for qualification to join this noble profession – teaching.

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PART VII
EDUCATIONAL NEEDS AND SERVICES

Regardless of whether a general or special education curriculum is offered, all schoolchildren require basic provisions and services to meet their developmental, personal, and school needs. The first chapter of this Section, Twenty Four, suggests a general health-care structure for implementation by teachers in educational institutions of Africa. Such a system permits comprehensive health promotion from the standpoints of health education, illness prevention, reduction of environmental risks, standardization of sanitation, identification of children and families at-risk, treatment of acute illness, and counselling. It is advisable that teachers initiate such efforts at the onset of school entry and continue to monitor at designated intervals throughout the educational process. A committee of Teachers, Healthcare professionals and administrators would continuously evaluate the inputs and procedures from the standpoint of practicality, effectiveness and new developments, making the educational health structure recursive. The proposed structure would be holistic in its recognition of culturally sensitive needs in terms of health care and counselling. Additionally, the system includes methods by which to recognize families of students who are at-risk or in distress. With the daily student contact, the role of teachers is central in the configuration of improved health for students in terms of illness prevention and recognition.

Nareadi Phasha and Ziphora Moichela's Chapter Twenty Five on inclusive education in South Africa should be understood as an attempt to claim a space for African understanding of inclusive education. It does this by demonstrating the link between the main principles of inclusive education and the three African values of interdependence, communalism and humanism. This is important for promoting acceptance of the educational practice, and its proper implementation within African communities. In Chapter Twenty Six Moses Mbangwana explores the techniques of identifying children with various disabilities in the classroom setting and describes the assistive technologies available in local contexts. He also examines the modern assistive technologies that can be used. Notwithstanding difficult living conditions, Théogène-Octave Gakuba and Christina Passini claim that the African child has personal and social resources that are sources of resilience. The concept of resilience is placed in the context of the African society and cultural values wherein the child lives. Their Chapter Twenty Seven elucidates the role of resilience in the psychosocial guidance of the vulnerable African schoolchild.

Chapter 24

**HEALTH PROMOTION IN THE AFRICAN EDUCATIONAL
COMMUNITY: HOLISTIC APPROACH**

George E. Brannen

After carefully studying this chapter the reader should be able to:

- 1) Structure a Health Care System in an educational institution,
- 2) Institute methods to diminish the risk of common bio-medical illnesses,
- 3) Promote nutritional health,
- 4) Monitor the health of students and identify individuals and families at-risk,
- 5) Identify and correct environmental safety issues
- 6) Initiate culturally-sensitive counseling for students suffering adversities

INTRODUCTION AND OVERVIEW

The United Nations (UN) states that “Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.” (WHO 1948, New York) This broad definition of health is applicable to all cultures.

Education and the Health of the participating individuals blend into a unit of institutional and social well-being. The student who suffers physical or emotional issues inevitably demonstrates limited capacity for expected progress in the educational system and the subsequent career. The effects of illness and failure extend beyond the individual to the family, the community, and the nation. The most important promotion of health is education itself. The World Fertility Survey (UN, 1985) clearly suggests “a linear relationship between maternal education and childhood mortality, with an average of seven to nine per cent decline in [under age 5] mortality ratios with each one-year increment in mother’s education.” A defined institution, such as a school, must promote wellness, provide health education, and respond with provision of care to individuals falling ill within the school and the educational process.

CONCEPTUAL FRAMEWORK

Health and education cannot be separated. The teachers must promote and instill personal hygiene, environmental precautions, peer relationships, attention to prevention of specific illnesses, and proper counseling for the distressed student. Such must be imposed upon the individual template established by family’s early formation of the individual. With this in mind the teacher has broad responsibilities. The educator must recognize subcultures within the community and work with the students’ individual needs. This responsibility provides an opportunity for the teacher to display himself/herself as a role-model from several standpoints:

1. continuous *learning* in a changing health-care climate
2. *listening* to advisors with expertise
3. *assimilating* technical knowledge by independent efforts

4. *organizing* students / colleagues to participate in pursuit of health
5. *counseling* distressed students while understanding subcultures

Vaccines are perhaps the most effective method of preventing specific devastating illnesses. Immunizations strengthen the immune system to fight infections from specific bacteria or viruses. Each disease is caused by a unique microbe. Vaccines are developed independently for each disease. An immunizing vaccine cannot be developed for all disease-causing micro-organisms. For example, successful vaccines have not yet been developed for the malaria parasite or the Human Immune Virus (HIV). Immunizations before a child enters school prevent illness for that vaccinated student as well as decreases risk of spread in the community.

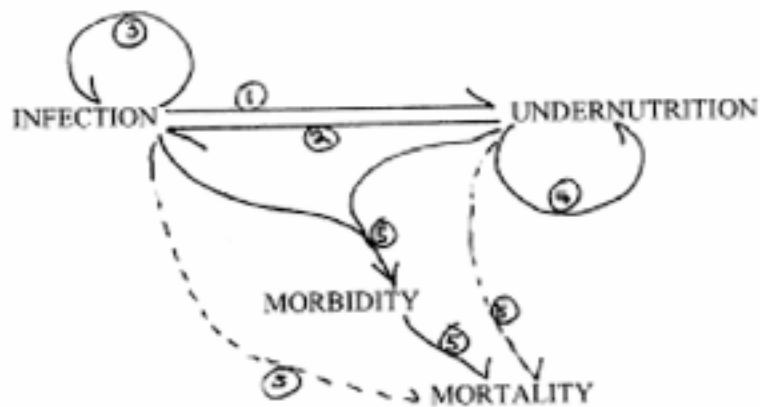
Nutritional status should be established at school entry. Poor nutrition weakens one's immune system; an undernourished person is more likely to get infections and to suffer more severe and prolonged illnesses. Infections use energy and contribute to further malnutrition. Infections increase the risk of other infections. The figure below diagrams the interrelationship between nutrition and infection (Scrimshaw, 2003). Work and school performances are directly related to nutritional status and to the presence of infection. Immunizations, nutrition, and vitamin A supplementation have the greatest impact toward preventing debilitation and illness.

Interval measurements of height, weight, and upper-arm circumference must be charted by the "teacher-advisor." If such parameters are not progressing, the family environment must be checked. Poor growth and poor nutrition may indicate poverty in the family environment. The critical interaction of multiple influences on child development and health are discussed in the Chapter entitled "Early childhood development" (Dawes and Biersteker, This volume).

The vigilance and prevention of specific illnesses emphasizes how the students may play a "participatory role" (Serpell, This volume). The teacher continues the role that the parents and family had during the first 6 years – socialization and participation with peers. Education outside of the format of classroom learning is reviewed in the Chapter "Developmental Learning in African Cultural Circumstances" (Nsamenang, This volume).

Conceptual Diagram of Synergistic Relationship

INFECTION AND UNDERNUTRITION



Legend:

- 1. Infection begets undernutrition
- 2. Undernutrition begets infection
- 3. Infection begets infection
- 4. Undernutrition begets undernutrition
- 5. Infection + Undernutrition beget enhanced morbidity and mortality

Further blend in participatory group efforts are required in pursuit of environmental health and safety. Some specific areas of expertise include food preparation, water and sanitation. A teacher will use advisors and demonstrate independent learning. This requirement for specialty expertise permits expansion of the curriculum to educate students on such topics. The strength of the African tradition is community rapport and group participation. Groups used in this setting may be displayed as a model to the industrial World, where individual accomplishment

and “ownership” dominate western cultures. Strength of family and community relationships prevented worse devastating effects of the HIV/AIDS pandemic; orphans were incorporated into the families of extended relatives or community members (Brannen, 2005).

Counseling of the distressed student includes effort to promote social, emotional and spiritual well-being in accordance with WHO definition of health. A discord in relationships may be more challenging than the treatment of bio-medical illnesses. Exploration of relationships includes the teacher’s role in assisting the student’s re-entry to family and non-kin community.

The body of this chapter suggests methods which may be implemented by teachers to maximize the health of the community. Suggestions for student participation are included. Organizational suggestions must be modified in adaptation to limited resources. School size and resources will determine the degree to which processes are carried out centrally or on-site.

STUDENT ENTRY INTO SCHOOL

The entry of a student to an educational institution provides an opportunity for a Health Review. This includes three components: confirmation of immunization status, establishment of baseline health measurements, and search for common illnesses. The designated educator/health officer carries out tasks in accordance with guidelines established by an oversight committee of teachers, administrators, health care professionals, and Ministry of Health. Preparation for this process may be facilitated by parents or guardians of new students in response to community health sensitization and enlightenment programs. The result of such campaigns includes increased level of child nutrition and of child immunizations. Parents and community members may serve as volunteers under the direction of the educator/health officer.

Immunizations: Many vaccines require continuous refrigeration from production until administration. Teachers must insure immunization completion in accordance with guidelines. Immunization is recommended against the following microbial diseases: Diphtheria – Pertussis – Tetanus (DPT); Polio virus (IPV or OPV); Hepatitis B (HepB); Rotavirus (RV); Pneumococcal (PCV); Measles Mumps Rubella (MMR); Hepatitis A (HepA); Varicella; Haemophilus influenza type b (Hib). Immunization schedules available from the US Ministry of Health (DHHS, 1999) are accepted by the African Union (AU) (2007) and the World Health organization (WHO) (2009). Intervals between each vaccine differ. Specific immunizations for African Nations commonly include Yellow Fever and BCG (WHO, 2009; AU, 2007). Educators must prepare for new vaccines.

Nutritional Status : Height, weight, and age are the main measurements of nutritional assessment. Mid-upper arm circumference is a screening parameter and is independent of age in children over age 6. A circumference of 14 cm is considered

normal; less than 12.5 cm indicates severe undernutrition. Low height for age suggests long-term growth faltering or stunting. Weight for height indicates acute recent growth disturbances. Weight for age represents harmony of growth. Adults over 18 are assessed using the *body mass index* (BMI). This is calculated by dividing the person's weight in kg by the height in meters squared: $BMI = \text{kg}/\text{m-squared}$. Undernutrition is classified as follows: Mild - $BMI < 18.5$; Moderate - $BMI = 16.0-16.99$; Severe - $BMI < 16.0$. A growth chart is checked every 6 months for each student. If the student is not meeting determined growth standards, a plan of action to improve nutrition is initiated. Standardized age-specific growth charts are available at <http://cdc.gov.growthcharts>.

Nutrition

The nutritional status of individuals in educational institutions should occupy a critical component of administrative attention. Required nutrients include macronutrients (Carbohydrates, fats, proteins) and micronutrients (vitamins, minerals, and trace elements). Developing world populations depend on staples of carbohydrates for 85% of energy requirements. Protein is critical to functioning of the immune system; an estimated 45 gm. per day may be required for response to infections. Starvation is a long-term intake of food energy which is below expended energy. Individuals may be adequately nourished for daily function, but retain no adaptive reserves with which to resist stresses of infections.

Awareness of the limited nutritional value of staples is the first level of prevention. The youthful person should have 3 meals per day with 10-15% of the intake in the form of protein – eggs, meat, fowl, fish, and beans. Daily fresh fruits and fresh vegetables are critical. Iodized salt must be used. During undernutrition or physical illness, daily vitamin A, multivitamins, and iron supplements are required. These increase capacity to defend against the infection. Foods are classified into 3 groups: Examples are drawn from the Nso Community, NW Region, Cameroon.

Table 1: Constituents of Food Sources and Examples.

Group	Constituent	Examples
Energy	Carbohydrates and fats	Cornmeal (FuFu), potatoes, cassava, gari, rice, root vegetables, palm oil
Body Building	Proteins	Meats, fish, fowl, beans, groundnuts, eggs, milk, soy beans, seeds, and nuts
Protective	Trace elements: vitamins / minerals	Fruits, green leafy vegetables, vegetables, jamma jamma, okra, carrots, pumpkin leaf, bitter leaf, iodized salt

Foods from each group should be part of the daily diet. Micronutrients (amino acids, vitamins, minerals, and trace elements) are critical for immune resistance and should be administered during illness. Vitamin A deficiency increases susceptibility to infections. Oral dose of 200,000 IU for 2 days decreases morbidity and mortality. Daily multivitamins and iron should be administered during dietary supplementation.

A school which works its own farm would permit educators to control balanced diet, teach nutrition, train self-sufficiency, and promote participation. Improved food sources would meet nutritional needs. Nso districts of northwest Cameroon have started school farms.

PREVENTION AND CONTROL OF SPECIFIC ILLNESSES

Prevention of prevalent illnesses must be initiated. Common examples are discussed; specific illness prevention depends on the threatening diseases in the community. Precautionary measures protect individuals and prevent the spread of diseases in the institution.

Malaria: The infecting agent, *Plasmodium falciparum*, persists in a human reservoir. Transmission is from person-to-person by means of (*Anopheles sp.*) mosquitos. Eradication efforts have been unsuccessful. Prevention of malaria transmission includes two methods: mosquito control and student protection. Sleeping under permethrin-imbedded bed-nets at night prevents malaria from three standpoints: mosquitoes are killed; infected persons are not bitten; susceptible persons are not bitten. Additional measures may enhance mosquito control. District Health Officers would advise on availability of spray programs for dormitories and breeding sites. School children would find mosquito breeding sites and overturn containers with standing water. Less malaria is transmitted if the students protect themselves

from the mosquito; fewer carry the infecting malaria parasite. See Robert Serpell (This volume) for a discussion of the child-to-child approach to health promotion.

Tuberculosis: *Mycobacterium tuberculosis* infects 1/3 of the world's population. Spread depends on duration and amount of exposure to sputum cough droplets of infectious persons. Control of this infection requires attention of teachers, students, and health staff:

Identification of suspected cases – persons with cough productive of sputum for over 3 weeks or productive of blood in sputum. Students and teachers provide identification.

Prevention of spread – during initial weeks of treatment the person must be removed.

Upon return, an authority must directly observe the person taking medication

Tuberculosis is an indicator for poverty, undernutrition, and infectious members within the household. The student's domestic environment must be investigated.

Intestinal parasites include hookworm, roundworm, tapeworm, strongyloides and others. Such infections depend on transmission from the soil, food, and fecal-oral contamination. Infestation suggests undernutrition and infection susceptibility. Prevention is effected by use of footwear and sanitary habits. It may be practical to treat students with mebendazole at the beginning of each school year, following the high susceptibility time of rainy season.

Schistosomiasis (Bilharziasis) *Schistosoma haematobium* – urinary infestation and *Schistosoma mansoni/S.japonicum* – intestinal wall infestations are common in agricultural regions of Africa with slow-moving freshwater. This is the most important helminth (worm) in terms of morbidity and mortality. Infections cause fever, bloody diarrhea, blood in the urine, pain, anemia, malnutrition, and impaired growth and mental function. Mass chemotherapy programs with effective agent (Praziquantel) have been combined with “deworming programs” – interval administration of effective medication toxic to intestinal worms. Programs are effective.

Staff education and awareness of prevalent illnesses is necessary; and maybe carried out centrally. With prompt recognition and follow-up of students suffering the adversities of infection, transmission will be reduced and the health of the institutional population and the individuals will be promoted. Quality of learning will increase.

ENVIRONMENTAL PROMOTION OF HEALTH

Motor Vehicle Safety: Motor vehicle accidents in the developing world account for more than 90% of world traffic fatalities, though such nations possess less than half of the worlds' vehicles. “Vulnerable road users” – pedestrians and bicyclists

account for 46% of the traffic deaths. Recommendations include: reduced speed limits, campaign against and penalize drunk drivers, promote seat belt laws, and reduce overcrowding in vehicles. Modification of school environment includes: placement of speed limit signs, construction of safe walking, limitation of unnecessary travel, and designation of institutional vehicles with good drivers.

Water Supply: The 2000 UN Millennium Summit (New York 2000) states intent to reduce by half the number of people underserved by water before 2015. Quality and quantity of water availability are pre-requisites to a healthy community with reduced infections. The water supply must be reliable and accessible with absence of a conveniently located contaminated supply. A well must access water at least 10-meters depth. Soil provides a natural physical and biological filter to protect groundwater. A 10-meter pollution free zone around the well must exist. Absence of fecal coliforms, suspended solids, metals, and fluoride must be confirmed each 6 months. Needs are availability of 20 liters per person per day. A functioning water tap is present on school property for all day schools and on the site of each housing unit for boarding schools.

Waste Water is classified as sullage and sewage. Sullage includes drainage from personal washing - body, clothes, dishes, and cooking preparations. Sullage is managed by surface “soak-a-ways.” Such management includes two issues: The field is sloped to avoid standing water. The field surface cannot be located within 10 meters of any potential water source.

Sewage: Pit-latrines provide essential requirements and eliminate soil and water contamination. Location must be more than 10 metres horizontally from a groundwater well source. Latrine is at least 2 meters deep and 1 meter in diameter. The presence of flies increases disease and contamination. Fly control is successful as follows: The contents should be kept more than 1 meter below the latrine floor; a stopper/cover should be placed in the latrine hole when not in use; a ventilation pipe from the floor with a high exit and a screen is effective.

Hygienic Practices: The teacher must be an activist and an educator to instill hygienic social changes. Such habits include hand-washing after latrine usage and before all meals, daily face-washing, and twice weekly bathing. Principles of kitchen-staff food preparation include:

1. Avoid food spillage to prevent insects
2. Wear clean clothing and hair nets
3. Wash hands x 20 seconds with soap prior to food preparation
4. Keep all food in sealed containers – prevent cross contamination with flies
5. Refrigerate meat, fish and fowl at 5 degrees Celsius
6. Cook meat to reach 68 degrees Celsius at the core

7. Wash thoroughly uncooked salads in potable water
8. Students may participate in promoting environmental health. Examples of projects include: wearing footwear, destruction of standing water, identification of tuberculosis suspects, and promotion of hygienic principles of latrine usage and hand-washing. Such action increases protection for individuals from illness as well as community members from disease transmission.

SEXUALLY TRANSMITTED DISEASES (STDs)

The global pandemic of infections with the lethal Human Immunodeficiency Virus (HIV) and subsequent development of Auto Immune Deficiency Syndrome (AIDS) currently receives priority and funding from global and regional institutions with support of the AU (AU, 2005). From the standpoint of prevention of STDs and pregnancy, recognized precautions include elimination of exposure – abstinence or (less effectively) barriers (condoms). It is not the purpose of this chapter to provide in-depth discussion, but to alert the educators to provide information to students and staff. Progress may follow directed education regarding STDs and the HIV/AIDS pandemic. A Health Officer may put in place a system for administration of antiretroviral medications and compassionate counseling for students with such adversities. Schools may establish guidelines regarding screening measures. Teachers must remain aware of regional and national policies and opportunities provided by the nation's Ministry of Health.

COUNSELING OF THE DISTRESSED STUDENT

Misfortunes distract the student from school progress. Such circumstances may include: death of family members, impoverishment, abandonment, displacement from conflict, contraction of a terminal illness by student or family member, and failure to achieve scholastic goals. Emotional illness may occur in the absence of external causes. The student requires consideration as a spiritual human being with feelings and beliefs. The teacher-counselor may engage the student and verify the individual's personal feelings. The counselor-teacher may also be able to diminish negative effects from environmental circumstances.

The counseling teacher must relate and respond in a culturally sensitive manner: “*wir dze wir bi' wir'*” (a man is a man because of [his relationship with] others): Nso proverb.

The individual's understanding of oneself is imbedded in sense of community, in which ancestors participate. As guardians of traditional values, ancestors affect social behavior. Individuals from African traditions generate their personhood from social relationships. Kinship is focus of moral behavior. Individual needs are less important than needs of community and elders. Behavioral deviations trigger ancestral activity, causing misfortune and illness. Supernatural forces are significant

factors in causation of misfortunes (Nsamenang 1992:74-95). Good health and success require a strong moral position. West African socio-affective cultural development differs remarkably from Western cognitive culture with its ideologies of material permanence and individualism. This cultural divergence is not clearly visible and traditional beliefs may be concealed by superficial western adaptations (Brannen 2005).

Keeping in mind that the extended family, including the ancestors, is part of the living community, the student may have feelings of guilt in having breached a tradition which hold the community together. Mechanisms must include recognition of needs, not perceived within the defined and measured education system. The student may feel a need to attend a relative's death celebration. Absence from this event may cause distress. The ill student may perceive a need to reconcile with a family member or to confess. Mechanisms for such measures should be recognized and provided. At times a clergy member, a family elder, or a traditional healer may appropriately assist. Counselors and Physicians have their place. But Traditional Healers and Traditional Rulers should not be excluded from educational environments (AU, 2007, p 15). Such persons may be the only spiritual force which permits the student to connect with their community and make progress from the forces of adversity. The student may suffer from the fact that s/he has fallen into poor rapport with student colleagues or teachers. All resources must be recognized which may permit progression to wellness. The student must be assured of confidentiality of discussions. Without trust, the counseling system fails.

Structure of health management in the educational institution

Health of the students and faculty is complex and requires focused organization. An individual cannot be an expert in all components needed for securing health and safety. A management system includes an advisory body and experts who carry out specific functions.

Central Health Committee:Health Officer (HO) + advisory board (AB) + financial office (FO) + administrator (A)

The preferred HO is a State Licensed Nurse with administrative and educational skills plus public health and primary care insights. This person must also learn from outside experts and initiate internal organizational efforts. The HO works with the administrator in fund-raising for special programs and equipment needs. He/she serves as liaison with the Health Ministry and District Health Officer. The AB ideally has membership from the following disciplines: social worker, traditional healer, traditional ruler, teacher, parent, health care worker, nutritionist, HIV/AIDS expert, student body representative, and religious leader. The AB would have authority to approve policies, procedures, purchases, and expenditures. Board members would have specific tasks and functions. The FO would advise based on available funds and respond to decisions approved by the AB. The A would have insights regarding the school goals, community support, possible fund-raising resources, and

commitment from the community. The Health Officer must have authority to conscript and contract experts for advise and work regarding specific needs. The HO would configure a health education curriculum for the purpose of teaching the students standards of health, sanitation, safety, disease prevention, and HIV/AIDS enlightenment. Teachers Training Institutions must offer classes to the student teachers regarding recognition of illness symptoms. A school Health Officer in a large school or district would be ideally trained as a licensed Health Care Professional as well as a certified teacher. This special “cross-trained” person would educate teaching staff to assist on components of the health system structure. In the small/rural system one teacher may provide multiple local functions, while other processes are managed by the central district.

CONCLUSION

Efforts to promote and maintain health require extensive continued efforts and resources. A system must include: a staff of health care professionals, a health committee, a health officer, and administrative direction. The building facility must include a designated health office and “sick bay.” Organizational structure is required centrally for schools in coordinated educational systems. Methodologies must blend practicality with idealism and financial resources. For example, the controls on food refrigeration require modification in a community which lacks electrical power. Adherence to methods is monitored by teachers as they develop expertise in health, sanitation, and illness prevention. Financial support must be sought. Continuous attention to new developments as well as evaluations of successes and failures will require constant revisions. The teacher’s ultimate goal is to instill curiosity and an attitude which leads to life-time learning and self-directed education. The enhancement of student health is an opportunity in which the teacher serves as a role-model in demonstration of continued learning; health recommendations continuously change. The critical message is that health and education are inseparable. Both fine physical well-being and educational progress fall within the WHO definition of Health. Such efforts will permit educational institutions to participate in the progress towards Goal 4 of the United Nations Millennium Goals, which includes “[reducing] by two-thirds, between 1990 and 2015, the Öchild mortality rate” (UN, September 25, 2008).

LEARNERS' EXERCISE

1. Design a structure of a Health System for a rural primary day school with a staff of 12 teachers.
2. Assign special titles to each teacher or administrator who participates.
3. Offer a "job description" for each special person involved
4. Describe the activity of this system at the opening of school.
5. Explain how many jobs may "overlap" or relate to other job descriptions

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Chapter 25

INCLUSIVE EDUCATION IN SOUTH AFRICA

Nareadi Phasha and K. Ziphora Moichela

LEARNING OBJECTIVES

This chapter aims to empower practicing teachers and student-teachers with the following skills and attitudes:

- 1) Understand and assume inclusive education as an agenda for All rather than a specific group of individuals;
- 2) Alleviate fears and negative attitudes towards inclusive education;
- 3) Identify and appreciate inclusive education as embedded in African values;
- 4) Stimulate debates that are engaging and greater awareness on issues pertaining to inclusive education.

INTRODUCTION

Schools in South Africa and other parts of the African continent are increasingly becoming diverse in terms of learner population. In particular, learners who differ in terms of their ability, race, religion, culture, language, health, socio-economic status and gender are admitted in the schools which are closer to their homes so as to enable them to learn alongside each other. Teacher education is therefore challenged to prepare the cadre that would work comfortably and effectively in mix-ability and multicultural learning environments. Inclusive education with its agenda for educational equality and success for all is undoubtedly an important vehicle which could equip teacher trainees and even practicing teachers with necessary skills and attitudes to work in diverse classrooms. However prevailing notions that consider inclusive education from a single angle, namely special need and/or disability may render the practice unachievable especially in South Africa. Such notions convey a message that a particular group of individuals have been denied access to quality education. This is a contradiction to the broader vision detailed in international commitments particularly, the World Education Forums that took place in Thailand (1990) and in Dakar (2000) whose central points were:

- (a) Equity;
- (b) Universal access to education;
- (c) Learning outcome;
- (d) Enhancing the learning environment;
- (e) Broadening the means and scope of basic education,
- (f) Strengthening partnerships.

Also, the special need-disability conception ignores the educational disparities and discriminations that had haunted the educational systems in South Africa and other parts of the continent for many decades under colonial and/or apartheid regimes. Most importantly, they give no room for non-Euro-Western understanding

of the concept, inclusion. For South Africans, this signifies the perpetuation of the previous practices of rendering their perspectives into a state of oblivion as if they have no valuable knowledge to contribute in the process of educational change. With the worldwide concern about the dominance of Euro-Western perspectives in understanding and addressing educational problems in non-European contexts and an acknowledgement of their limitations thereof, a shift towards alternative understandings becomes vital. In particular philosophies, which validate and address the experiences of the local people, could be relevant and appropriate for responding to their educational problems, and in particular, the implementation of inclusive education. For that matter, it becomes imperative for teacher education in South Africa in its initial and in-service programmes to inculcate understandings of inclusive education which will take into consideration its people's lifestyles and thinking, if not, we might find ourselves repeating the exclusionary practices of the past.

This chapter will discuss three values common to people of African ancestry living in South Africa, which clearly reflect inclusion, namely interdependence, communalism and humanism. The values will be interconnected to the main principles of inclusive education, and there would also be suggestions with regard to ways in which inclusive education could be rendered sensitive to cultural beliefs and contexts of people of African ancestry living in South Africa. In this way, it would be clear that the ideals of inclusive education are not new to African communities, they have always existed since time immemorial, as with other African ways of knowing which have been rendered obsolete as irrelevant to the 'feeder' Eurocentric worldview, and consequently to the African continent.

INCLUSIVITY FROM A SOUTH AFRICAN PERSPECTIVE

Perspectives obtained from seven local languages spoken in South Africa are brought in to demonstrate that inclusive education is not a new phenomenon to most Africans. The languages are: IsiZulu, IsiXhosa, TshiVenda, Tshitsonga and Sesotho (encompassing Sesotho sa Lebowa (N.Sotho/Sepedi); Sesotho sa Borwa (South Sotho/Seshweshwe; and Setswana). An attempt here is to bring in an African voice in the realm of educational discourse.

A Venda perspective reveals the following four interpretations – *angaredza* (embrace), *tanganedza* (acceptance), *farisanani* (pulling or holding together), *udzhenisa* (bring in). Tsonga perspective encompasses the following interpretations: *angara* (accommodate/embrace); *katsakanya* (combine, bring together) and *amukela* (accept or welcome). An IsiXhosa perspective would be understood as *ukublanganisa* (bringing together); *indibaniso* (togetherness) *ukumaya* (unite). In IsiZulu, the word is interpreted as *ukublanganisa/blanganani* (merge, unite) and *umbabano* (hold together). A Sotho perspective, which embraces the following languages – Setswana, Sesotho sa Borwa (South Sotho) and Sesotho sa Lebowa (Northern Sotho) reveals two meanings [*hlakanya*, *kopanya* and *akaretsa* (adding together, unite, embrace, welcome).

The meaning to be extrapolated from these African languages spoken in South Africa could be summed up as: “being welcomed or accepted with respect”. These expressions point to various features of African values and social behaviours traceable in Ubuntu/Botho, defined by Pityana (1999, p. 147) as a moral principle which promotes social responsibility and solidarity, the duty of care, the virtues of sensitivity, selflessness and devotion to duty, and the vision of a society founded on justice and equality. In the same vein, Letseka (2000) explained it as a principle to humanness/human welfare, thus suggesting the moral value takes as its priority, the human needs, interest and dignity of individuals *in what has been referred to as “morality” of care*. In this light, a child is accepted unconditionally, irrespective of his/her characteristics. S/he, together with his/her age-mates (other children born within a few years of one another) are taken care of, educated, fed, nurtured and incorporated into the society by adult members of the society. Mbiti (1969) clarified that the protection of children began even before it is born hereby referring to the special treatment the pregnant mother receives from members of her community, including being forbidden to eat particular food, interact with particular individuals and perform certain activities for the sake of bearing a healthy child. The *Ubuntu* features described above denote three broad aspects, namely:

- a) Humanness;
- b) Interdependence/interconnection;
- c) Communalism.

These elements are reflected in ideas behind inclusive education. Such interconnection will be clarified in the next section.

Humanness (Botho)

This value espouses desirable and appropriate human conduct (Letseka, 2000). It prescribes that human beings should see each other as valuable creatures to be treated with dignity and respect, irrespective of their characteristics. Mnyaka and Motlhabi (2005) noted that anything that undermines or hurts, threatens and destroys human beings is frowned upon since it tempers with the very foundation of society. In this light, human beings should demonstrate humanness by being good themselves and act sensitively towards their fellow human beings and their needs. They should show compassion towards each other and, above all, display an ethos of care. The value of humanness sets individuals free, and facilitates continuity and the development of harmonious relationships with fellow human beings and nature. Essentially, this aspect rejects exclusions or discriminations, and considers such practices as disrespectful, unacceptable, disturbing harmony and development of proper relationship. The point that each individual should be valued is equivalent to acknowledgement of diversity in the community and it promotes equal treatment of all children in the education systems.

Interdependence (Tswalano/ Bommogo/ Bootee)

The view of human beings as isolated beings contrasts African lifestyle expressed succinctly in the aphorism “*motho ke motho ka bangwe*” [I am because we are; and since we are, therefore I am]. The message is that the individual is viewed as integral part of society, and can only exist corporately (Mbiti, 1969). In this way, an African child is born into a world consisting of people who are connected, not necessarily by blood. This makes her/him a brother, sister, niece, nephew, and/or a grandchild of many people in his/her village. He also shares a relationship with nature, the plants and animals (Mbiti, 1969). In this network of relationships, children come to know that they are givers and receivers of widespread attention (Maquet, 1972), and they can learn appropriate behaviours from each of their relatives. This resembles early socialization about children’s position in the society – the rights to be protected, to receive support from all relatives as well as to stay in solidarity to their own members. It is in this type of relationship that the child becomes aware of his entitlement to protection and to be treated in the same way as others. Therefore any practice leading to her/his being treated differently from his/her peers would frustrate him/her. In fact, it would constitute a violation of his/her rights and constitute denial of support.

Communalism [Phedisanommogo]

The community is more important than the individual. A human being is incomplete without others. One belongs and finds community through being a neighbour, a friend, a relative, and a member of a clan or tribe (Mnyaka and Motlhabi, 2005). This concept is important in understanding the way problems are dealt with in the South African community. Therefore, the responsibility for educating children should not be shifted to one person or institutions as it is the case with the Eurocentric approaches which leave the responsibility to the teachers and schools. From an African perspective this should be a collective effort by community members including parents who do not have any formal qualification. In Mbiti’s (1969) words, the society assumes the responsibility to transform the child into a social being. In other words, the education of the children becomes a collective effort by the community *for* the community, as a communal approach. Moreover, the child does not only learn at school, but also at home and within formal and informal structures.

INCLUSIVE EDUCATION IN SOUTH AFRICAN EDUCATIONAL POLICIES

Within the South African context, inclusive education is reflected in a number of legislation. These include the South African Schools Act (Republic of South Africa, 2005), which mandates government schools to admit all learners and provides for their special educational needs. It should be noted that though private schools have a fair amount of autonomy, they are expected by the law to adhere to the government’s non-negotiable principle of non-discrimination; and the Integrated

National Disability Strategy (Republic of South Africa, 1997), which enforces the integration of disabilities into all initiatives of the government, including education. However, chief amongst them is the White Paper 6 on Inclusion of learners with special needs (Department of Education {DoE}, 2001), which was developed on the basis of the recommendations reached by two bodies which were specifically appointed in 1998 by the Education Minister of South Africa to look into the educational provision of learners with special educational needs – National Commission on Special Needs in Education and Training (NCSNET) and National Committee on Education Support Services (NCESS). The two bodies defined inclusive education as a system of education which responds to the diverse needs of learners by providing a wide range of options for education and support. It emphasized the integration of special and regular schools. Based on those recommendations, the White Paper 6 on Inclusion (DoE, 2001) puts forth this definition:

1. All children and youth can learn and need support.
2. Learners' needs and human experience are unique, and therefore they should be respected and equally valued.
3. The needs of all learners must be met by educational systems.
4. Learners differ in terms of age, gender, ethnicity, language, class, disability or health status,
5. In addition, educational institutions must:
6. Maintain flexibility in their structures and methodologies,
7. Acknowledge and respect learners' differences,
8. Acknowledge that learning occurs in home and community and within formal and informal modes and structures,
9. Change attitudes, behavior and curricular and the environment to meet the needs of all,
10. Create an environment for participation of all learners in the culture and the curricula of educational institutions and uncover and minimize barriers to learning,
11. Empower learners by developing their individual strengths and enable them to participate critically in the process of learning.

Clearly, the definition provided in the legislation points out to three important elements:

- a) focus on all learners;
- b) uniqueness of each individual and equal treatment; and positions the responsibility for educating all learners to educational institutions. The policy supports the

integration of special and ordinary schools however contradicts itself when it also points out that “some learners may not benefit from such settings as their educational needs may require specialized services, and further stating that existing special schools shall not be abolished, but strengthened (resource centers) for use by learners with severe disabilities (DoE, 2001, p. 45). The implication is that not every learner will ‘fit in’ integrated classrooms. Segregation in terms of ability would still exist, and testing of learners, labeling and categorizing would determine their placement. In this light, the notion flagged in the definition of inclusive education that “all learners can learn” is contradicted. Also, learners may not receive equal treatment, and diversity would therefore be compromised.

Having discussed the three important values common to people of African ancestry living in South Africa and fleshed out the contents of Inclusive education as it appears in South African legislation, the question then becomes: How then can Inclusive Education be rendered sensitive to beliefs and worldviews of people living in South Africa worldviews? In answering this question, two important points central to the South African legal definition are discussed in relation to African values presented in the previous section?

A FOCUS ON “ALL LEARNERS” RATHER THAN A GROUP OF CHILDREN POSSESSING PARTICULAR CHARACTERISTICS

This principle signifies the value of each child as an individual. In other words, no one child is special than the other. This principle relates well to the value of humanness (botho), which condemns any form of discrimination, and espouses equality in terms of treatment of children (see the previous section). The idea thereof is to ensure full and successful development of every learner, irrespective of their characteristics. In other words, no person should be denied *access and participation* in school on the basis of her/his inherent and/or acquired characteristics. This is in line with contents of the Salamanca statement agreed upon in 1994 by over 300 representatives from 92 governments and 25 international organizations under the auspices of UNESCO and Spain’s Ministry of Education and Science. The Statement requires schools to accommodate and respond to the educational needs of all children regardless of their differences in terms of physical, intellectual, social, emotional, linguistics or other conditions. It clarifies the definition of “all children” as it states that: these should include disabled and gifted children, street and working children, children from remote or nomadic populations, children from linguistic, ethnic or cultural minorities and children from disadvantaged or marginalized areas or groups. The condemnation of exclusionary practices is evident on items 17 and 18 of the Salamanca statement: mainstreaming children with disabilities should be an integral part of the national plans for achieving Education For All. Even in exceptional cases where children are placed in special schools, their education need not be entirely segregated. Part-time attendance at regular schools should be encouraged. Necessary provision should also be made for ensuring inclusion of youth and adults with

special needs in secondary and higher education as well as training programmes. Special attention should be given for ensuring equality of access and opportunity for girls and women with disabilities.

From the above discussion, it is evident that behind a focus on “all children”, there is an acknowledgement that every learner can learn, thus implying that individuals are born with abilities and potentials that need to be developed if they are to experience success. As noted by Malcolm (1999), anyone can be taught anything, given good teaching and sufficient time. Schools, educators and communities should therefore exhibit high expectations for all learners, and create educational environments that are enabling.

The principle further reveals that all children need support. The implication is that life is unstable and full of its own complications, which each child may experience at any point in his/her life. Therefore, the occurrence of such incidence may disturb the child's equilibrium and ultimately his/her functioning (academic, social, health, and economic). Support therefore should not be thought about as involving fixing, remediating and/or correcting an individual's functioning, as it used to be. Rather it should be understood as involving guidance, leadership, nurturance and development of all children to their full potential. This stands in contrast with the special needs-disability notions in the sense that the teacher does not focus on providing support to a few children whose characteristics fit into a definition of “special need/disability” and leaving out others. The focus on all learner is clearly an acknowledgement that learners are not the same, and in fact, learner differences are expected, and welcomed as strengths.

RESPECT AND EQUAL VALUE OF CHILDREN'S UNIQUENESS

No two or more children are alike, nor are they socialized to view life in the same way. For that matter, their idiosyncratic characteristics should be equally respected and valued as assets rather than a burden. Respect for differences should be translated into acceptance and equal treatment of all learners. Respect and acceptance means valuing children for who they are and appreciating what they bring, nurturing what they are capable of doing, anticipating what they might need, and offering the best one can do in order to enhance their development (Nutbrown, 1998). In other words differences should not be used as excuses for exclusion. This principle aims to facilitate access to education for all children irrespective of their differences. This explicitly, renders education *a right, not a favor*. The root of this principle is traceable in the statements articulated by the following international legislation: The Universal Declaration of Human Rights (1948; article 26), which requires that everyone be afforded the right to education, which shall be free, at least in the elementary and fundamental stages. Such education shall be directed to the full development of the human personality and to the strengthening of respect of human rights and fundamental freedoms. Article 13 of the International Covenant

of Economic, Social and Cultural Rights (1966) reiterates everyone's rights to education, and also included a statement that explains that education shall enable all individual to participate effectively in a free society, promote understanding and tolerance and friendship among nations and all racial, ethnic or religious groups and further the activities of the United Nations for the maintenance of peace. According to the UNESCO (2007), an entitlement to free and compulsory education refers to an obligation to develop secondary education, supported by measures to render it accessible to all children, as well as giving equitable access to higher education, and a responsibility to provide basic education for individuals who have not completed primary education.

This principle finds relevance in the African principle of interdependence, particularly children's socialization about their position in the society – their rights to receive protection, guidance and support from every adult in their community and also to be treated like any other child. Therefore inaccessibility in terms of learner's characteristics, physical infrastructure, learning content and finances constitute a violation of children's rights to education.

THE NEEDS OF LEARNERS MUST BE MET BY EDUCATIONAL SYSTEMS

Clearly, the responsibility of educating the children is shifted entirely to educators. This is so because all children are able to achieve, however they may do so in different ways because they are not the same. This principle also should be understood alongside the principle of quality education because education is defined so (quality) if it facilitates growth in children in terms of cognitive, emotional and creative capacities (see Education for All Global Monitoring Report of 2005). Thus, it should promote personal development, strengthen respect for human rights and freedom, and enable individuals to participate effectively in a free society (UNESCO, 2007). Quality should also be understood in terms of its relevance to the child's local context and world of work. Relevance to the local context implies taking into consideration of the child's worldviews that anything that undermines his or her epistemology will destroy his self-identity and deny him or her growth. Once more this relates to an African value of Communalism in the sense that education is a communal effort offered by all adults in the community.

IMPLICATIONS

The implications of the proposed culturally-sensitive understanding of inclusive education to teacher education are discussed in this section.

First, South Africa has just come out from an education system characterized by discrimination along lines of gender, race, colour, creed, location, disability and so on. Such practices are still rooted in the minds of most people. Therefore a broader conception of Inclusive education as an agenda for all learners may not be

easily welcomed by most teacher trainees even practicing teachers who associate the educational practice with special needs. For that reason, teacher education has to invest a reasonable time and resources on programmes aiming at addressing negative attitudes of the trainees, to ensure that they buy into the idea, as well as challenging the disability-special education notions. Alongside such programmes there should be those, which will equip teacher-educators with appropriate skills to make learning environments responsive to children's uniqueness as that would require more than reorganization of the physical infrastructure and other structures at the school. Programmes should focus extensively on appropriate teaching methods, the use of available resources and skills to mobilise resources, network and collaborate with relevant stakeholders in the education and non-education fields. They should also be taught creative ways of using indigenous apparatus/material which could substitute expensive technically sophisticated materials.

Second, overhauling of the entire teacher training would be necessary to make it responsive to the demands of inclusive education. Inclusive education as an educational practice and pedagogy for responding to the educational needs for all should be a module offered to all teacher trainees rather than a group of students following the fields of educational psychology and special needs education. In addition, it should be rendered compulsory for all who intend to work directly with schools and its contents be incorporated in all teaching and learning areas.

Finally, inclusive education at teacher training should adopt a broader rather than a narrow approach, which promoted a focus on special need-disability. This could be possible if the content is backed up by Frameworks such as Education for All adopted in 2000 at Dakar because they acknowledge and give space for indigenous perspectives. For example, it puts emphasis on quality education for all, thus expounding a focus on a holistic development of every learner [cognitive, emotional and creativity]. In addition, it recognizes the relevance of education to local contexts. The implication is that education will take into consideration of the learner's traditional lifestyle and ways of life, by ensuring that the curriculum addresses topics, issues, and activities that require students' knowledge about their everyday life experiences - what they say and do in their communities and they are guided and encouraged to use such information in their everyday lives.

CONCLUSION

A vision to achieve educational gains for all learners will not materialize in South Africa and other parts of the continent if her people continue to embrace notions which are not aligned to their cultural beliefs and contexts. This is so because culturally insensitive notions create feelings of rejection and dissociation with the practice, which culminate into confusions with regard to its implementation. Therefore the suggestions for understanding inclusive education in relation to African values will enable educational institutions respond to a wide range of learning needs, and therefore address the imbalances of the past.

Lastly, by infusing cultural flavor in the discourse of education, previously marginalized knowledge is acknowledged, and positive identity about self, community and sharing ethic amongst people of African descent (Biko, 1979) is created. Moreover the attempt should be seen as a response to United Nations concern for the hegemonic dominance of Western theories and practices in understanding and addressing problems in non-Western settings and a call for more contextually and culturally relevant knowledge in Africa (UNESCO, 1961). The principle is also endorsed by the *Convention on the Rights of the Child*; article 30 states children's rights to enjoy and practice their own his/her own culture, whilst article 31 affords them rights to be provided with appropriate and equal opportunities to participate freely in cultural life and leisure activities (UNICEF, 1990).

LEARNERS' EXERCISES

1. Identify the main concepts which should be taken into consideration when defining the concepts, inclusive education or inclusivity in education.
2. Provide a detailed discussion of important values embedded in African way of life and relate them to the major principles of Inclusive Education.
3. Explore the main components of the Salamanca statement and demonstrate how they fit in with the African understandings of Inclusive education.
4. Review the current educational policies and notions pertaining to the understanding OR implementation of Inclusion in education/Inclusive Education in South Africa or any African country of your choice. Present an arguable opinion regarding whether the policies:
5. Acknowledge African values and suggest ways in which African values and belief systems can be accommodated in inclusive education.
6. Conduct three sessions of focus interviews with groups of people of African descent who speak languages other than those spoken in South Africa to explore their perspectives of the concept inclusive education or inclusivity in education. Based on your findings suggest ways in which such perspectives can be accommodated in the definition of inclusive education as explained by international conventions.

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Chapter 26

**ASSISTIVE TECHNIQUES AND TECHNOLOGY
FOR TEACHERS OF DISABLED PERSONS**

Moses A. Mbangwana

CHAPTER OBJECTIVES

By the end of this chapter we expect teachers to be able to:

- 1) Explore the techniques of identifying children with disabilities;
- 2) Identify the various disabilities;
- 3) Describe the assistive technologies available in his/her locality or community;
- 4) Locate the modern assistive technologies that can be used.

INTRODUCTION

Assistive Technology (AT) is a generic term that includes assistive, adaptive, and rehabilitative devices (e.g., orthopedic footwear, prosthetic devices, and wheel chairs, etc.) and the process used in selecting, locating, and using them. In general, AT promotes greater independence for people with disabilities by enabling them to perform tasks that they were unable to do, or had difficulty accomplishing. Over the years, technology has been created without regard to people with disabilities; as a result; many barriers have been created to hundreds of millions of people.

According to the definition proposed in the Assistive Technology Act of 1998, AT commonly refers to products, devices, or equipment, whether acquired commercially, modified or customised, that are used to maintain, increase or improve the functional capabilities of individuals with disabilities. The products can enable individuals with disabilities to accomplish tasks, assist them in communication, education in order to achieve greater independence and thereby improve their quality of life.

A disability is significantly restricted ability, relative to an individual or group norm. This refers to individual functioning in terms of physical impairment, sensory impairment, cognitive impairment, or mental disorder. In common terms, disability refers to “a person with disability” or a person who is “disabled” or more controversially, who is “handicapped”. Learning disability which concerns most of our teachers is an unexpected inability to perform in one of the academic areas of reading, writing, listening, speaking, reasoning, and mathematics. Traditionally, a diagnosis has to be provided by a psychologist and teacher, because the accepted method of establishing the presence of a learning disability involves the administration of an IQ and achievement tests. When sufficient discrepancy exists between IQ and achievement, then a learning disability is thought to exist. The key assumption behind learning disabilities is that they are, indeed, a disability.

As concerns accessible computer input, there are two types of keyboard for normal functioning individuals. These are the keyboards with AZERTY or QWERTY and a mouse. Some disabilities require the replacement of the keyboard and mouse with alternative devices such as trackballs, joysticks, graphics tablets,

touch pads, touch screens, microphones with speech recognition software, and so on. Some accessible technology involving furniture reduces inconveniences with height-adjustable furniture, footrests, wrist rests, arm supports to ensure correct posture for people with learning difficulties to be at ease. Some input devices can be modified in such a way that it is easier to see and understand.

Universal accessibility or universal design means excellent usability of technology, particularly for people with disabilities. Assistive technology advocates argue that universally accessible technology yields great rewards to the typical user; good accessible design of technology is universal design. A simple example of an assistive technology that has improved the life of people in modern towns is the curb cuts in the sidewalk at street crossings. These curb cuts enable pedestrians with mobility problems to cross the street and even travelers and workers carry bags that can be pulled along. The question is how many of our schools have curb cuts that can facilitate the movement of children with mobility impairments? A visit to most schools in Africa shows that classrooms have been designed not to cater to the needs of children with mobility impairments. As these assistive devices are very important for quality and effective participation, school administrators need to advice on the design of classrooms in ways that will enhance the learning environment for children with various disabilities like mobility impairment. Simple calculators used in the classrooms can be improved with speech recognition software that has short commands that make them a little easier for children with mobility impairment.

ASSISTIVE TECHNOLOGIES FOR STUDENTS WITH DISABILITIES

Hearing loss is a very common phenomenon in the world. It has been estimated that more than 500 million people are hearing impaired. It is estimated that one child out of ten has a hearing loss. In most cases if this situation is not diagnosed early, children will not be hearing what the teacher is teaching in class and what their classmates are discussing. Teachers are therefore advised to pay attention to children having this disability and make the necessary referrals to ear specialists. Discovery of assistive technology by indigenous Africans such as hearing aid have permitted children with hearing impairment to be sent to schools where in some cases specialists teach them with sign language. One simple strategy in solving this problem is allocating the front seats to children with hearing difficulties. Teachers have to talk loud enough in case such children are found in the classroom.

The telephone is considered today as a good example of an assistive information technology. Children who are deaf or hard-of-hearing can use this technology to gain access to new knowledge. Most telephones are very sophisticated, as some are combined with a text telephone commonly known as Teletypewriter, which converts typed characters in tones and can effectively aid the deaf person to communicate immediately. Many telephones have volume controls which can help deaf children.

Deafness and Hearing Loss

The following can be used to help children with deafness and hearing loss. It has been noticed that Africans have not been able to design technologies that can help this category of children. They include:

1. Audiometer;
2. Captioning;
3. Fire alarm paging system;
4. Radio aids video cassette recorders that can read and record subtitles;
5. Door bell lighting systems.

Accessible Technology for the Visual Impaired

As of now there is no assistive technology that has been developed locally for the visual impaired except that the teaching techniques at individual homes have been with the use of songs and storytelling. Modern Information and Communication Technologies have been advancing and any person with visual impairment can study at a level he or she desires. The choice of appropriate technology depends on the user's level of functional vision. The following technologies can be used to facilitate learning:

1. Large monitors;
2. Modified cassette recorder. To record a lecture, own thoughts, ideas, notes etc.;
3. Refreshable Braille display. An electronic tactile device which is placed under the computer keyboard;
4. Electronic Note taker. A portable computer with a Braille and synthetic speech;
5. Screen magnifiers;
6. Screen readers;
7. Self-voice applications;
8. Braille translation;

Paraplegia in Cameroon

Paraplegia is impairment in motor and/or sensory function of the lower extremities. Usually, it is as a result of injury in the spinal cord that affects the neural elements of the spinal canal. This condition may lead to defects in the thoracic, lumbar, or sacral regions. What is the state of paraplegia in Cameroon? Despite the fact that there are many paraplegia cases in Cameroon, only three specialised centres effectively produce assistive technologies. These centres include:

1. Saint Joseph's Child and Adult Home (SAJOCAH) Bafut;
2. National Centre for the Rehabilitation of the Handicapped (CNRH) in Yaoundé;

3. Mbingo Baptist Hospital in Boyo Division of the North West Region of Cameroon.

SAJOCAH and CNRH were initially set up as centres to promote physical and occupational therapy of the handicapped. The Mbingo Baptist Hospital is the only facility that currently provides occupational therapy.

Problems Faced by Paraplegics in Cameroon: It is expected that to attain the Millennium Development Goals each child is supposed to have universal primary education. Movement to school is a serious problem for so many reasons such as poor roads to move to school. Most of the roads are very bad in that even wheelchairs cannot be used. There are bridges to cross; classrooms are not adaptive to children with disabilities. We notice that the benches are designed without considerations for children with disabilities, the size of the doors are not adapted to wheel chair crossing, and worst still there are no assistive technologies for children who have difficulties in writing for one reason or the other. For children with paraplegia, domestic activities are reduced to a bare minimum – they are unable to wash their dresses, go to the toilet easily and a host of minor things that normal children do with little or no difficulties.

This inability to perform daily activities often lead to discrimination and sometimes the individual is deserted. Both the boy and the girl child are reduced to nothing in the environment s/he finds him/herself. Maintaining personal hygiene is a serious problem and with growth being retarded in some such circumstances the child reaches adulthood incapable of ever performing any gainful activities. Partnership between parents, teachers and medical practitioners needs to be well defined so roles will be known. What is important is that government needs to reinforce the training of teachers to be capable of dealing with special cases in the classrooms.

NATIONAL POLICIES ON THE PROTECTION OF DISABLED PERSONS

In 1996, UNESCO received information from 52 member states as to legislation pertaining to special needs education. Forty eight countries or 92.3% involved in the study have enacted legislation pertaining to special needs education, while the remaining four countries or 7.7% have active proposals. Policies statements if put into practice can resolve a lot of problems in any given sector. Most African countries have developed and adopted policies which strongly support education of children with disabilities. Yet few governments can put in practice what they intend to do. A practical guide on disabled persons' access to infrastructure and buildings that are public or are open to the public was drafted, and partnerships forged to strengthen the school attendance of children with disabilities or whose parents are poor and disabled.

Statistics from Tanzania

According to World Health Organisation's formula of 1 in 10 being persons with disabilities, Tanzania with a population of 34,569,232 in 2002 had an estimated 3,346,900 people with disabilities as follows

Disability	%	Estimate
Physically impaired	28	967,932
Visually impaired	27	933,363
Hearing impaired	20	691,380
Intellectually impaired	8	276,552
Multiple impairment	4	138,276
Others	13	449,397
Total	100	3,456,900

PERCEPTIONS BY AFRICANS OF CHILDREN WITH DISABILITIES

To talk fully about education of children with disabilities, we need to reflect on the attitudes and belief systems of that population. It is only through such reflections that we can understand and appreciate how a typical African conceptualizes disability. The attitude of a given community toward people with disabilities can affect the kind of provision that could be made for the disabled. A typical African woman, for example, would not like to have anything to do with a disabled child. She would not even want to pay a visit to a special school. This, according to that culture, is to prevent or avoid having a child with disability in one's own family. Disability in Africa is regarded as a continuous tragedy. Many people regard disability as a stain in their social status. Families with disabled children tend to hide them. This attitude of shame breeds overprotection since people with disabilities cannot be let out to fend for themselves. This ties in line with a moral model (Bowe, 1978) which refers to the attitude that people are somehow morally responsible for their disability, including at one extreme as a result of bad actions of parents if congenital or as a result of practicing witchcraft. This attitude can be seen as unjust and causes unnecessary suffering. The viewpoint mostly contrasts that of Phasha and Moichela (Chapter 25, this Volume).

THE ROLE OF THE TEACHER IN IDENTIFICATION AND TREATMENT OF LEARNING DISABILITIES

The primordial function of the teacher in the classroom is to identify the strengths, weaknesses, and needs of the learners (needs assessment). When this is done, teachers therefore will have a better idea of a student's condition, prior knowledge as well as the methods and techniques of learning that have been successful. This information can then be used to build a curriculum which is performance-based that will ensure greater success. Second, the need is to use a variety of methods and techniques of sound pedagogical instruction/teaching. More often than not, the novice teacher/educator soon learns that a carefully planned and designed lesson that serves as a perfect learning tool for student A, can easily fail to produce results for student B because of variations in learning styles and ability levels.

For teachers/educators to counter this phenomenon they need to develop a variety of teaching techniques, strategies, methods and tools and to be flexible in their implementation and use. Primary education delivery strategies include storytelling, mental arithmetic, community song and dance, learning the names of various birds and animals, the identification of poisonous snakes, local plants and trees, and how to run and climb swiftly when pursued by dangerous animals. Third, it is very important for teachers to incorporate emotional authenticity in daily activities. Children respond positively to those who care about them and who take a genuine interest in them. Emotional support is an important aspect that allows children to cope with disabilities. Last but not the least, the administrative support for the teaching/learning cannot be overemphasised. The planning, design, instruction and assessment of any given lesson require enormous support from the administration. For a successful lesson to be delivered, we need the various types of assistive technologies and services to help in the teaching learning process. We need songs, poems, drama to arouse the interest of the children either during or after the delivery of a unit.

Songs and Music as Assitive Technologies in Helping Children Learn

One of the most powerful ways of communicating is music or through songs. When a lesson is taught and a song is used to summarise it, students tend to remember very easily. Johann Wolfgang von Goethe, the famous writer states that music is "the language of the heart." Information communicated through musical sound using drums, flutes, guitar etc carries with it an emotional content that reveals the impact of a person's or society's experience. Over the years I have attempted with my students to design instructional units ending with songs which can summarise the concepts and it has worked very well. Playing the musical messages of a culture to our students conveys the essence of that society in a deep and meaningful way. Any lesson can be taught and illustrated with the use of songs to improve learning.

Example: A teacher teaches the topic SUBTRACTION in Arithmetic and wants all students to master it. The teaching material here includes ten green bottles hanging on the wall. The exercise at the end will be to call each student to take off a green bottle from the wall. Below is a short song that can facilitate retention.

Ten green bottles are hanging on the wall (2 times)

And if one green bottle accidentally falls

Nine green bottles are hanging on the wall (2 times)

And if one green bottle accidentally falls

The song continues until all the bottles are removed from the wall. The implication is that children learn while playing. They are not bored but they are excited. Every child participates and feels belonging to the class. Slow learners capture the concept easily and remember longer. Whether a song is sung by the children or played from a recording, songs offer golden opportunities to motivate students, get their attention, or help them learn content. Children will like school and the content when they understand it and use the information.

The configuration of smaller units of information into large coordinated units is an important mechanism for memory coding known to be effective for learning and recall. Not only can musical chunking help our children manage large amounts of content, it also makes repeating information fun, facilitating the critical memory element of redundancy. Children pay more attention to lessons or things that are connected with something relevant to their lives and songs provide an excellent bridge.

Music and dance is a teaching technique that has been used in the African society to teach issues and concepts. We commonly find in our communities that during child birth and other types of celebrations music and dance are used as entertainment and a medium of passing information. This technique can be used for instructional purposes in the classroom. Getting children to volunteer to get up in front of the class, takes some effort but if it is well planned more and more students will show interest and learning becomes fun and enjoyable to all. Teachers can find out the type of songs and dances that appeal to children depending on the environment they find themselves in.

Dance can be considered a therapy and it is based on the belief that the mind and the body work together. Children can express their innermost emotions by bringing those feelings to the surface. Some people claim that dance can create a sense of renewal, unity, and completeness. Physically, dance therapy provides exercise, improve mobility and muscle coordination and as a result reduce muscle tension. Emotionally, it allows the child to communicate her feelings. Nearly all subjects can be taught and learnt with the help of music and dance.

Storintelling as an Assistive Technique

In most African traditional settings, stories have been used as a powerful vehicle for communication, recreation, entertainment, education, and to pass on cultural history in the evenings. Families always regroup in the evenings and children and parents sit together around the fire to tell stories. Good stories have appeal because they capture interest and attention, enable recall of details by association, and bring facts to life by putting them in personal scenarios. Adults tell stories as a way to interpret history to children. Family history is often passed on through stories about the family. Story telling therefore can be used in the classroom as advance organisers to capture the interest of children.

CONCLUSION

When many people think of disability, they think of it in terms of extremes. Most people think that to be disabled is to be in a wheelchair or being unable to see or hear.

Children who are challenged by disability and extreme poverty face the greatest danger of being deprived of their right to education and freedom of expression. For this population, technology must not only be accessible; it must also fit within a context of severe limitations in infrastructure and income. The biggest challenge in bringing access to education and eventually employment of children with disabilities is the adoption of public policies and strategies that are truly inclusive, feasible and applicable. Traditional strategies have a chance of changing the way children with disabilities can learn.

EXERCISES

1. Find out from your students whether they have any particular learning disabilities. Discuss with your colleagues on how these individuals can be assisted with any indigenous assistive technology.
2. Make an inventory of indigenous assistive technologies in your environment and recommend to your school board how they can be purchased or manufactured locally.
3. What are the modern assistive technologies available in your institution?
4. Outline a program which you can use to convince the government to design disability-friendly educational settings.

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Chapter 27

**GUIDANCE AND COUNSELLING OF THE
AFRICAN SCHOOLCHILD**

Thèogène-Octave Gakuba and Christina M. Passini

CHAPTER OBJECTIVES

By the end of this chapter, we wish the learner to be able to:

- 1) Understand the concepts of vulnerability and resilience in the African socio-cultural context;
- 2) Identify the African schoolchild resources and apprehend ways to mobilise them;
- 3) Work with the family of the child in promoting the wellbeing and welfare of the child;
- 4) Foster the healing of the child by enhancing his trust in adults;
- 5) Use the resilience in guidance and counselling of the African schoolchild.

INTRODUCTION

When faced with challenging or adverse conditions, some individuals are less likely to cope with those conditions and consequently they often develop emotional or behavioural problems. Therefore, their ability to overcome difficulties or adversities is curtailed. This ability often results from the interplay of individual characteristics, the characteristics of the family, as well as those of the physical and social environment. Vulnerability can be viewed from two different angles: person-related or environment-related. The term environment, as used here is in the broad sense of the word. It refers to the physical, social, economical, political as well as cultural context that makes up an individual's world.

In many African countries, the environment of the child is potentially harmful for diverse reasons, which include poverty and diseases such as HIV/AIDS. These adverse situations pose a threat to the mental and physical health of the child who, in most cases, lacks the resources to overcome them. For example, as a result of the HIV/AIDS pandemic, there is a generation of orphans in Sub-Saharan Africa. That region has 12 million orphans who lost either a parent or both (UNICEF, 2007), some of who are HIV positive and, in addition to their fragile health condition, have to deal with other significant difficulties such as the challenge of running the household and paying their school fees.

Other risk factors that increase the African child's vulnerability are armed conflicts, famines and negative traditional practices. For instance, armed conflicts are responsible for making many children refugees and/or to be abandoned. The largest number of displaced people and refugees are found in Central and East Africa. During these wars, some children had traumatic experiences while others lost their parents and found themselves alone in refugee camps in foreign countries and without any family. In addition, according to the data of the World Food Programme (WFP), some 38 million Africans are under the threat of famine. Baro and Deubel (2006) argue that famine occurrences in Africa are linked to historical

and contemporary socioeconomic processes that have increased over time the vulnerability of African households to hunger reduced their resilience to environmental and economic shocks Besides, in some places, children are still being abandoned and rejected by their families due to negative traditional beliefs. In certain areas of the Democratic Republic of Congo (DRC), for example, alleged children-witches are abandoned and left in the streets by their families. They are accused of being the root cause of family problems such as the death of a parent or polygamy.

In the face of these difficult circumstances, the entire African society is confronted with the challenge of promoting the emotional, social and intellectual development of African children, in particular primary school children. Indeed, in most African countries, there is an absence of adequate structures and specific programmes for vulnerable children such as those infected or affected by HIV/AIDS and physically or mentally handicapped children. Notwithstanding these adverse conditions, the African child possesses social resources that could act as protective factors. These include family and community solidarity, age group membership and participation in collective action. With respect to solidarity, in typical African society, an individual receives social support from members of the immediate family (father, mother and siblings), extended family (grandparents, uncles, aunts, cousins, etc) and the members of the community (neighbours, age mates, etc) which aids him or her to cope and overcome the vicissitudes of daily life. As to age group membership, it provides the child with peer support and prevents social isolation. Lastly, participating in community activities such as collective farming allows the child to develop, at an early age, an appreciation for working in a group. These elements of social capital in African cultures could be related to the concept of resilience reported in psychological and child development literature.

WHAT IS RESILIENCE?

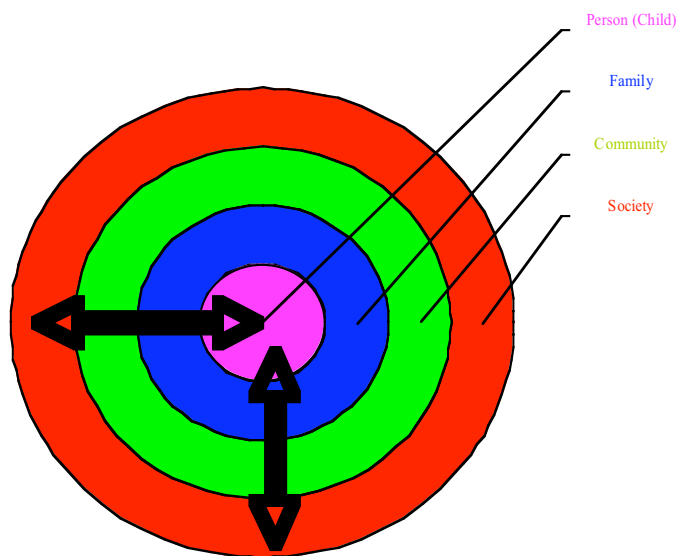
The concept of resilience in the domain of child and developmental psychology has been defined as the ability to function well notwithstanding stress, adversity, and unfavourable situations (Garmezy, 1985; Rutter, 1985; 1990). It involves being able to recover from difficulties or change by mobilising personal resources or by the support of one's family or social network provided in culturally meaningful ways, to function as well as before and move ahead with one's life (Barankin and Khanlou, 2007; Ungar, 2006,)

According to Garmezy (1985), resilient factors include the following:

- a) Personality characteristics such as autonomy, individual's self-esteem, positive social orientation;
- b) A warm, united and educationally consistent family;
- c) Availability of external support systems that encourage and strengthen the efforts of child. This factor is a social support which represents the support an individual can mobilise at moments of life crises

The development of resilience occurs from the interaction between the personal characteristics (temperament, learning strengths, feeling and emotions, self concept, way of thinking, adaptive skills, mental health, physical health), family-related factors (relation with parents and siblings, communication, parents' health, attachment, family structure), community related factors (support outside the family, friends, social network, culture, language, religion, ethnical group) social factors (socioeconomic situation, media influences, education, health, sports, socio-professional situation, political situation) as shown in figure 1 below.

Figure 1: Resilience Processes



In Africa, some studies have investigated resilience among children in difficult circumstances. For example, the Barbarin, Richter and Dewet study (2001) examined the effects of exposure to direct and vicarious political, family, and community violence on the adjustment of 625 six-year-old black South African children. Among other factors, positive family relationships were found to mitigate the adverse impact in all the assessed domains of children's functioning. McAdam-Crisp (2006) was interested in factors that can enhance and limit resilience for children in war zones (Ethiopia, Kenya, Rwanda). For her, it is very important to consider the cultural dimensions of mental health and resilience for vulnerable children in these African countries.

Resilience in African cultures: an example of the Rwandan culture

In the Rwandan culture, for example, the value system that frames the moral universe of the society conveys the notion of resilience. These values are *ubugabo*, *ubwenge*, *ukwihangana*, and *umubano*. Note that in the Kinyarwanda dialect, words

sometimes have several meanings and do not have an exact translation in western languages such as English.

Ubugabo is the quality of being a man. This includes the courage of accepting one's responsibilities and overcoming difficulties, respecting promises made and the capacity of starting a family. Parents teach their children what it takes to be a man from a very young age. A child who picks himself up when he falls down is praised in these words: *uli akagabo*, meaning you are *a person of courage*. The same goes for a girl who shows courage by taking on responsibilities in the family or by doing things considered extraordinary. Here, the goal of socialisation is to bring up children to become responsible and matured adults capable of facing and dealing with challenging circumstances.

Ubwenge has a broader meaning. It stands for intelligence, the faculty of knowing, experiencing, the ability of problem-solving, cleverness, and know-how. Most Rwandan tales relate to heroes whose lives reflect these values and who persevered in difficulties, thanks to courage, becoming wealthy and sometimes kings. Among other things, these tales encourage resourcefulness and initiative thereby enhancing the child's ability of problem-solving in difficult situations.

Ukwihangana, can be translated as meaning self-control which requires patience and a grip on one's emotions. Throughout the childhood of a Rwandan child, he learns how to exercise self-control, patience and to have good esteem of others as well as self-esteem, thus promoting the emotional and social development of the child.

The word *umubano* refers to social relations as belonging to a social group, solidarity and the idea of sharing. Social relations have an important role in the Rwandan society. For instance, a Rwandan saying mentions that *happiness is living with others and having friends*. A person is first considered as a member of a social group and then as an individual (*nta mugabo umwe*). An individual who isolates himself would find it difficult in getting social support in times of trouble and need. People help each other (*abantu ni magilirane*) and have a well developed social life in their immediate environment. Neighbours know each other, invite one another to social events, and share basic amenities like water and fire. They help one another in good and bad times.

Tales and proverbs play a key role in the socialisation of Rwandan children starting from an early age. The aforementioned cultural values are expressed in these tales and proverbs (Crépeau and Bizimana, 1979; Gasarabwe, 1988). The Rwandan society, having an oral tradition, uses such tales and proverbs in daily life to communicate and express ideas and thoughts. These proverbs talk about the need for children to have courage if they are to overcome difficulties, to be brave when faced with challenge for instance wild animals, and the need to bounce back after being hit by misfortune, not forgetting to be patient, social, intelligent, and to persevere in their efforts. Below are examples of such proverbs:

Courage (*Ugubiga ubutwari muratabarana*: go with any one who boasts of courage to the battle field.) The idea of resilience portrayed in this proverb is that of being courageous, mature, and responsible as well as having the ability to face difficult situations.

Effort (*Nzabinga iruta nzabaha*: saying I will plant is better than saying I will buy.) This proverb conveys the value of work, the fact of waking up very early to go to work, self reliance, having ambitions and believing in one's abilities.

Experience in difficult situations (*Utarabona ibyago aba ataravunga*: A person who didn't suffer, can't teach experiences.) The idea of resilience transmitted in this proverb is that of having the ability to overcome difficulties due to experience, also having matured as a result of experiencing difficult situations and thus gives meaning to these adverse situations.

Sociability (*Inda nini iguca ku nshuti*: He who thinks only of himself has no friends.) This proverb puts emphasis on the sociability of Rwandans as well as their social relations, in other words their solidarity values and the social support that allows Rwandans to live in community and avoid isolation and loneliness.

These proverbs and many others which convey the idea of resilience in the Rwandan society are used in daily life. To give a good example to follow or to explain something, Rwandans often refer themselves to the proverbs. The proverbs are taught to children by the family and at school in order to transmit values as mentioned above (courage, hard work, sociability, solidarity) and to teach them how to handle difficult situations.

Resilience, as a reality, exists in other societies and each culture understands it in their own way. Schools in Africa can play an essential role in fostering resilience in vulnerable children by drawing on the cultural values of the society in which the child lives such as encouraging the child using proverbs that boost courage and endurance in difficult circumstances.

Resilience in the guidance and counselling of the African child

Guidance and counselling of the African child entails helping him to deal with life challenges and adjust to difficult changes; facilitating the effective expressions of their emotions and an age-appropriate understanding of these emotions; and guiding the child in the development of personal solutions to challenges faced. It involves guiding the child to make right life choices by providing useful information and helping them to become aware of the wide range of choices available. Guidance and counselling program of the African vulnerable child can promote the aforementioned resilience factors that already exist in African cultures, namely, family and community solidarity, age group membership participation in collective action, courage, self control, responsibility.

Education professionals, in particular, teachers and education psychologists in institutions of primary education in Africa could develop the personal resources of

the vulnerable child in several ways. First, they could get the child to talk about his personal experiences and tell his life story. This gives the vulnerable child the opportunity to talk about his life, experiences, behaviours and problems without being overwhelmed with negative emotions. The child should be allowed to express himself in his own words and at his own pace. Speaking about himself will help him better understand his difficulties and failures and will lead him to discover his resources and appreciate his successes. What's more, the professional will understand the child better.

Second, they could encourage the vulnerable child to express her feelings and emotions. Being calm, expressing his feelings and emotions, being able to control her anger and frustrations are all qualities that can contribute to the resilience. The teacher can encourage the vulnerable child to express her feelings and emotions through discussions and role plays in the classroom. She could for example ask the children that have experienced terrifying situations to share their stories, to tell how they reacted in those circumstances and to talk about the attendant consequences on a relational and emotional level.

Third, using objective achievements, the vulnerable child should be made conscious of his abilities and competences (collection of knowledge, know-how and behaviour drawn from experience in a profession). His achievements in areas valued at school should be highlighted. A teacher can help the vulnerable child to do well at school by discussing with the parents in order to know how to promote the child's school attendance, supporting the latter's desire to succeed at school and helping him build a positive self-image. The teacher can motivate the child earlier on to make decisions and to find solutions to problems. Moreover, the vulnerable child awareness of his abilities and competences would impact positively on his self-esteem and self-confidence. The teacher can develop the self esteem of the vulnerable child by:

Giving him the opportunity to participate in activities that require responsibility and collaboration such as being the head of a class, coordinating group work;

Helping her to know herself better : be loved, appreciated, listened to and understood, being acknowledged and respected for who she is;

Suggesting to her role models so that she can project himself into the future: inviting to the classroom local successful people to talk about their experiences.

Promoting in the child the awareness of her abilities and qualities through different activities (sports, music, community work...).

In many African societies, the child at an early age takes on responsibilities and participates in adult tasks like building a house, looking after younger siblings and representing parents at a village meeting and this favours social maturity. Also, the socialisation of the African includes areas such as the development of character, personality, morality, physical skills as well as different other life skills. Resilience

could be promoted in the vulnerable African child by drawing on the African values of social maturity. Teachers should give the vulnerable child, for example, orphans, the opportunity to take on responsibility and they should be included in the decision-making of important matters that concern them.

Notions of resilience factors can also be integrated in the educational contents of the school curricula in Africa. For example, family values, solidarity (sharing, mutual aid, cooperation) and other important values (membership of the community, participating in community activities) in African cultures can be discussed in the civic education and moral lessons. Communication, creativity, humour, development of long-term goals, encouraging the vulnerable child to find meaning in her/his life can be taught to children through school activities like theatre, role play, and drawing and art lessons. Humour is regarded as a factor of resilience. According to Vanistandael (1998), humour is proof that an individual is conscious of his imperfections and suffering and that s/he has integrated and accepted them in a positive manner with a smile. Richman (1996) threw some light on the therapeutic effect of humour which involves creating a good atmosphere, communicating forbidden ideas, changing perspectives as well as stress and anxiety reduction. Humour is, however, closely linked to culture: each culture has its own humour and ways of relating stories. In some African cultures humour is appreciated through tales, games and dancing. The school can favour the development of resilience in the vulnerable child by providing creative and humorous activities as theatre, role plays, and humorous shows that are appreciated in the society in which the child lives.

Meaning in life makes living worthwhile, despite present suffering. The school could help a child to discover meaning in life in different ways. This includes school work, engagement in a humanitarian cause, encouraging the child to make plans, having long-term goals and proposing strategies to achieve them, and helping him to integrate in a desirable social context. Associations for young people such as scouts, Catholic youth association, prayer groups play an important role in this respect. Actors in the educational setting can also guide the child in developing a life project as well as having a vocational project. They can help them to create a list of long-term goals and work out with them effective strategies required to achieve those goals. Furthermore, they can provide information on the choices available to the child and the possible consequences of these choices.

Some social resources which can contribute to the resilience of African child are facilitating access to education and promoting school success, involving the family, peers and the community in the psychosocial and affective support of the vulnerable child and providing a model and a trustworthy confidant for the child. Education professionals in collaboration with other key players (parents, association, non governmental organisations etc.) should develop programmes that will increase access to education for the vulnerable child and sustain school attendance. Such

programmes should include services like tutoring, financial support, medical and social support. These professionals can develop the resilience of the vulnerable child by encouraging his successful performance at school. The school, the parents' associations in collaboration with the teachers could, for example, put in place activities that aim to support children with learning difficulties (help with homework, support at school, sessions to catch up on schoolwork). The teacher can motivate the child to be motivated for school and to perform well by having warm and encouraging behaviour towards the child.

Family, peers and the community can be involved in the psychosocial and affective support of the vulnerable child. Parents and the extended family, consisting of maternal and paternal uncles as well as grand-parents play an essential role in the socialisation of the African child. In most African societies, grand-parents are considered as being indispensable agents of culture transmission. The young child aged 4 or 5 who has started asking questions concerning the world around him would often be sent away to live with his grandparents. The latter initiate the child into a world of tales, myths, traditional beliefs, folklore literature and history. On the community level, the village progressively initiates children to the social life of the community by creating different age-groups. The child receives his education in different groups that get larger and larger as s/he grows older. The participants of these groups include members of the family, age mates of the child, and other members of the community. The activities of the family, of the age-mates and the community coincide and are meant to reinforce the feeling of belonging to each of these groups. Thus parents, extended family, neighbours, peers and members of the community all have a role to play in making sure the vulnerable child receives affection and that professionals working to meet these children needs get support. In Sierra Leone, for example, the integration into the society of former child-soldiers was made possible by the community. The community listened to their stories and accepted them (Williamson, 2006).

Finding a person in family or in community, that the child can trust and confide in would help him to overcome his difficulties. Listening to somebody that is suffering implies that the listener accepts the sufferer as he is and believes in his worth. There are various examples of young people or children who were able to overcome difficult circumstances just because they had the good fortune of meeting someone that made them believe in themselves. The child could find a trustworthy person outside the school. Moreover, the search for a role model is very important for the vulnerable child especially for adolescents. Identifying with certain social figures could make them feel good and serve as a source of motivation in realising "one's" ambitions. The school, for instance, could organise meetings in which vulnerable children will meet those social figures that are well-known in the community and could serve as social role models.

CONCLUSION

The aim of this chapter was, first, to explain the concepts of vulnerability and resilience in Africa's social contexts. Second, the chapter attempted to describe the role of the teacher and the school in helping the vulnerable child in Africa to develop resilience. Vulnerability is closely linked to the concept of resilience which is the capacity to overcome adversity. Resilience, however, takes on different forms in different cultures. We have illustrated this with forms of resilience in the Rwandan society. The vulnerability of the African child is the result of several factors notably famine, poverty, wars, conflicts, diseases such as HIV/AIDS. Notwithstanding, the African child has personal and social resources from which to draw in the struggle to overcome these challenges. The teacher and school have an important role to play in promoting the resilience of the vulnerable child. As explained in the previous pages, the main elements that can be developed by teachers in order to enhance the resilience of the schoolchildren in Africa are for instance, solidarity, membership of the community, participating in community activities, responsible behaviour, self reliance, the ability to face problems, resolve them and to predict the consequences, creativity and humour, having life goals, the ability to make plans for the future, the possibility to have a role model to identify with, access to education and performing well at school, incorporating the family into school activities.

The concept of resilience opens an opportunity for professionals in education to embrace a dynamic approach that is centred on the child's resources with the aim of aiding the child to face the difficult and stressful events in her/his life. The training curricula of actors in the education sector, in particular teachers and educational psychologists, should include learning to use interventions with resilience in order for them to be well prepared to give psychological support to those vulnerable school children. Interesting models to guide such interventions include that of Barankin and Khanlou (2007) and Dass-Brailsford (2005).

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PART VIII

CONTEXT-SENSITIVE EDUCATIONAL RESEARCH

In a certain sense, Section Eight gives science away by increasing research capacity in student teachers through unprecedented exposure to training research tracks “made easy”. It is a welcomed addition to research efforts on Africa; it provides useful information on how to think about, design, carry out, and report student research on African educational ideas and practices. For research to play a significant part in development, it must be relevant to the problems unique to the society. In addition, the researchers must be provided the tool to effectively design their models, conduct the research and successfully disseminate their results. The extent to which teacher education in Africa include a research track is at best doubtful.

It is for this doubt that Part Eight concentrates on sensitizing student teachers on what research is and how the educational research process should unfold. In Chapter Twenty Eight, Therese Tchombe and Bame Nsamenang outline and explain the key components of the research process. Chapter Twenty Nine by Paul Oburu explains what relevant classroom research entails and how teachers can engage in such research. Chapter Thirty is a pragmatic “journey approach” to action research in which Dorit Roer-Strier and Roni Strier not only present the Journey Approach but also outline the principles of action research this approach engenders. While exemplifying the approach, they also discuss its methodological challenges and merits. Bame Nsamenang and Therese Tchombe, in Chapter Thirty One, prime students on how to write out research undertaken to satisfy the requirements for a university or college dissertation or thesis.

Chapter 28

SCIENTIFIC RESEARCH IN EDUCATION

Therese M.S. Tchombe and A. Bame Nsamenang

CHAPTER OBJECTIVES

After careful study of this chapter, we expect the reader to be able to:

- 1) Identify and describe each component of the research process and explain the difference between student research and professional research;
- 2) Draw a flowchart of the research process, specifying core tasks for each step;
- 3) Analyze core concerns that confront student researchers;
- 4) Demonstrate research skills by preparing a research proposal on own chosen researchable problem.

INTRODUCTION

The word research derives from the French *recherche* and *rechercher*, where *chercher* means “to search”. Therefore, research can be defined as the search for knowledge or any systematic effort designed to discover, establish or ascertain facts. Scientific research relies on the application of the scientific method to address curiosity or uncertainty (Amin, 2005). The scientific method is a way to ask and answer scientific questions by making observations and doing experiments or designing and carrying out studies. Philosophy of science looks at the underpinning logic of the scientific method, at what separates science from non-science, and the ethic or “attitude” that is implicit in science. There are basic assumptions derived from philosophy on which the scientific method is founded - namely, that reality is objective and consistent, that humans have the capacity to perceive reality accurately, albeit with lenses that may capture not exactly the same data, and that rational explanations exist for elements of the real world (Kuhn, 1996). Rationality is ideology-bound, however. These assumptions are from methodological naturalism and they form the basis on which science is grounded. For example, logical positivist, empiricist, falsificationist, and other theorists have claimed to give a definitive account of the logic of science, but each has in turn been criticized, perhaps because the accounts are draped in specific ideologies or interpretations of the universe.

The scientific method is the process by which scientists, collectively and over time, endeavor to construct an accurate (that is, reliable, consistent and non-arbitrary or not-subjective) representation of the world. It is a process for experimentation that is used to explore observations and answer questions. Scientists use the scientific method to search for cause and effect relationships in nature. In other words, they design an experiment so that changes to one item (variable) cause something else to vary in another item (variable) in a predictable way. Just as it does for a professional scientist, the scientific method will help you to focus your education question, construct a hypothesis, design, execute, and evaluate your experiment. Recognizing that personal and cultural beliefs influence both lay and scientific perceptions and interpretations of natural phenomena, the use of standard procedures and criteria

aims to minimize those influences. As a famous scientist once said, “Smart people (like smart lawyers) can come up with very good explanations for mistaken points of view.”

STEPS OF THE SCIENTIFIC METHOD

The six major steps of the scientific method are:

Ask a Question

The scientific method starts when you ask a question about something that you notice or observe: How, What, When, Who, Which, Why, or Where? And, in order for the scientific method to answer the question it must be about something that you can measure, preferably with a number. You must distill the question or problem into a researchable, measurable form. What precise problem is to be studied? What facets of it will be studied?

Do Background Research

Rather than starting from scratch in putting together a plan for answering your question, you want to be a knowledgeable scientist using library and Internet research to help you find the best way to do things and insure that you do not repeat mistakes from the past. Have others studied it; where and what did they find and what does it mean for your present study? What compelling reasons justify your study of the problem (i.e., the rationale) and what value will the results of the study yield (i.e., the significance)? What are the general purpose and specific objectives of the study?

Construct a Hypothesis to explain the problem

A hypothesis is an educated guess about how things work or they are related: “If [*I do this*] , then [*this*] will happen.” You must state your hypothesis in a way that you can easily measure, and of course, your hypothesis should be constructed in a way to help you answer your original question. A hypothesis should state the relationship between the variables under investigation, namely, the independent variable(s) and the dependent variable(s). In physics, the hypothesis often takes the form of a causal mechanism or a mathematical relation. In education, it takes the form of an informed guess that best explains or shows a relationship between variables that entangle an educational problem. It could simply be the best guess conjectured to answer an education question that research sets out to obtain data to confirm or falsify it.

Test the hypothesis

Your experiment tests whether your hypothesis is true or false. It is important for your experiment to be a fair, objective test. You conduct a fair test by making sure that you change only one factor at a time while keeping all other conditions the same. You should also repeat your experiments several times to make sure that the

first results were not just an accident. The experimental tests of the predictions could be carried out by several independent experimenters and properly performed experiments.

Analyze the data and draw a conclusion

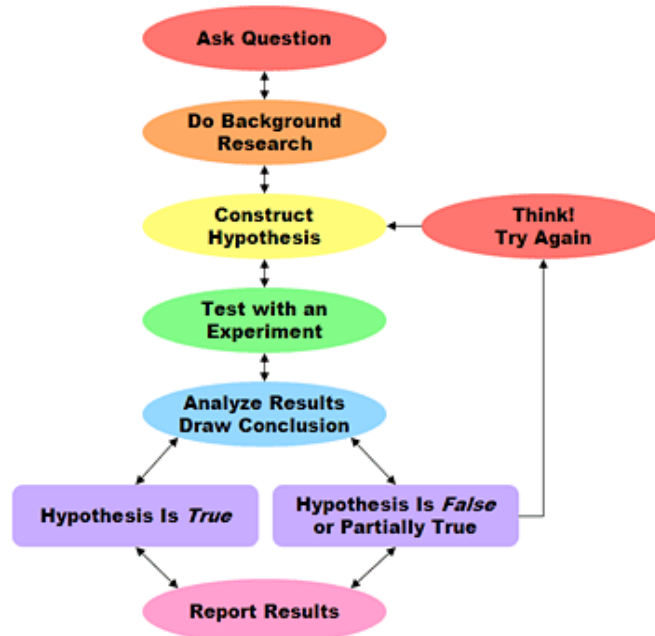
Once your experiment is complete, you collect your measurements (i.e., data) and analyze them to see if your hypothesis is true or false. Scientists often find that their hypothesis was false, and in such cases they will construct a new hypothesis starting the entire process of the scientific method over again. Even if they find that their hypothesis was true, they may want to test it again in a new way. Even though we show the scientific method as a series of steps, keep in mind that new information or thinking might cause a scientist to back up and repeat steps at any point during the process. A process like the scientific method that involves such backing up and repeating is called an iterative process. The iterative cycle inherent in this step-by-step methodology may go from point 3 to 6 back to 3 again (see p. 446). We are all familiar with theories which had to be discarded in the face of experimental evidence. In the field of astronomy, the earth-centered description of the planetary orbits was overthrown by the Copernican system, in which the sun was placed at the center of a series of concentric, circular planetary orbits. Later, this theory was modified, as measurements of the planets motions were found to be compatible with elliptical, not circular, orbits, and still later planetary motion was found to be derivable from Newton's laws.

Communicate the results

To complete your science-fair project you will communicate your results to others in a final report and/or share it with colleagues or a community of scholars. Professional scientists do almost exactly the same thing by publishing their final report in a scientific journal or by presenting their results at a scientific meeting.

Overview of the Scientific Method

The scientific method is intricately associated with science, the process of human inquiry that pervades the modern era on many levels. While the method appears simple and logical in description, there is perhaps no more complex question than that of knowing how we come to know things. We are told that the scientific method is one of several ways of knowing. It differs from other forms of knowing in its requirement of systematic, orderly experimentation. Scientists use the scientific method to search for cause and effect relationships in nature. In other words, they design an experiment so that change to one variable produces change in a predictable way in another variable. For details, refer to the link: http://www.sciencebuddies.org/science-fair-projects/project_scientific_method.shtml.



Diagrammatic Sketch of Research Steps

If the experiments repeatedly bear out the hypothesis it may come to be regarded as a theory or law of nature. If the experiments do not bear out the hypothesis, it must be rejected or modified. What is key in the description of the scientific method is the predictive power (the ability to get more out of the theory than you put in the hypothesis or theory), as tested by experiment. It is often said in science that theories can never be proved; only disproved. There is always the possibility that a new observation or a new experiment will conflict with a long-standing theory.

TESTING HYPOTHESES

Experimental tests may lead either to the confirmation of the hypothesis, or to ruling it out. The scientific method requires that an hypothesis be ruled out or modified if its predictions are clearly and repeatedly incompatible with experimental tests. Further, no matter how elegant a theory is, its predictions must agree with experimental results if we are to believe that it is a valid description of nature. In physics, as in every experimental science, “experiment is supreme” and experimental verification of hypothetical predictions is absolutely necessary. Experiments may test the theory directly (for example, the observation of a new particle) or may test for consequences derived from the theory using mathematics and logic (the rate of a radioactive decay process requiring the existence of the new particle). Note that the necessity of experiment also implies that a theory must be testable. Theories

which cannot be tested, because, for instance, they have no observable ramifications (such as, a particle whose characteristics make it unobservable), do not qualify as scientific theories. Most theories in human science disciplines are tested indirectly, for example, through biological markers or by inference from behavioral outcomes.

No measurement, and therefore no experiment, can be perfectly precise. At the same time, in science we have standard ways of estimating and in some cases reducing errors. Thus it is important to determine the accuracy of a particular measurement and, when stating quantitative results, to quote the measurement error. A measurement without a quoted error is meaningless.

RESEARCH QUESTIONS AND METHODS

The design of education research is a contentious topic. At one extreme are experimentalists (and policy makers) who believed that unless research involved a randomized trial, it was not scientific and not worth doing. At the other extreme were postmodernists who didn't put much stock in scientific research of any kind. Defining scientific research by method is wrong minded. It's the question—not the method—that should drive the design of education research or any other scientific research (Shavelson, and Towne, 2010). That is, investigators ought to design a study to answer the question that they think is the important question, not fit the question to a convenient or popular design. The research design has to follow the question. There are a lot of important questions in education for researchers to address. These questions could be descriptive, they could be causal, or they could be about mechanism. In a program of research, all three types of questions should be included. In this case, a program of research would embrace multiple methods, each fitting the particular descriptive, causal or mechanism question at hand. Most scientific research questions are of three general types: (1) What is happening? (2) Is there a systematic (causal) effect? And (3) what is the causal mechanism or how does it work?

The question—what's happening?—asks for a description. We could ask this question in a materials science laboratory or in a middle school. We could describe the years of experience possessed by elementary school teachers in any African country, or the types of science instruction students receive, or the changes in students' mathematics achievement over a decade. In these cases, statistical estimates of population parameters could be obtained from available national surveys. Or we could describe what school; home and community look like through the eyes of an inner-city youth using ethnographic methods. Or we could describe different approaches to the assessment of learning in colleges and universities that have been nominated as "outstanding" using case study methods.

Questions about effects are, ultimately, questions about causal effects. Did x cause y ? Three points about studying causal effects seem appropriate here (Shavelson, and Towne, 2010). First, in dealing with causal assertions we are always trying to

rule out all the possible counter hypotheses that we know of at the time. As a research program moves along, new challenges (counter hypotheses) arise and get ruled out; in this way confidence increases in the causal interpretation. Oftentimes we don't know all the counter hypotheses; challenges arise with novel counter-interpretations, and research and debate continues. This type of debate—hypothesis/counter-hypothesis—is the basis of science and should be looked upon positively and not as “backbiting” among scholars with different views when the issue is one of interpretation; it is backbiting when personal attacks are made. A second point has to do with the role of description in causal studies—what's happening? When feasible, descriptive research should be used in causal studies to help us understand, as fully as possible, what “treatments” were actually implemented, and to reveal what possible causal mechanisms might be operating. And the third point is that establishing a causal effect may be necessary when possible but not sufficient in policy and practice. We need to understand how interventions were articulated and implemented in diverse contexts with whom, under what conditions with what resources in order to design more than superficial education policy.

The third type of research question focuses on the mechanism that creates a causal effect (Shavelson, and Towne, 2010). For example, reducing class size seems to have a salutary effect among teachers. But what is the mechanism that causes the effect and why does it persist? Is the effect due to an increase in the number and personal nature of teacher-student contacts or to less off-task student behavior or to the level of student engagement (Finn, Pannozzo, and Achilles (2003)?

RESEARCH PROCESS FRAMEWORK

In general, a framework is an actual or conceptual structure intended to serve as a support or guide for the building of something that expands the structure into something tangible or useful. A framework may be for a set of functions within a system and how they interrelate; the layers of an operating system or process; the layers of an application subsystem; how communication or operations should flow at some level of a network; and so forth. A framework is generally more comprehensive than a protocol and more prescriptive than a structure. A framework is flexible and can be adapted for similar steps to products that may vary in quality. In other words, any researcher can adapt the process framework we sketch here to output, i.e., produce differing degrees of quality research projects. So, this framework outlines one way of thinking about the process and actual conduct of scientific research, particularly in partial fulfillment of the requirements for academic qualifications such as teacher training, and undergraduate and graduate research.

Although such student research must comply with the rigors of the scientific method, it is basically a training exercise to improve research proficiency. This contrasts professional or research that is designed to produce knowledge and understand or resolve identified problems.

1. Turn your idea into a research question, but where do you start? Decide on a general area of interest. Why does this area interest you? Answer the questions: What is your aim (in general terms)? Are you going to test a hypothesis? If yes, clearly state your hypothesis in the form of an answerable question or series of answerable questions. If no, what are you trying to do? Explore a new area to get basic understanding of something we currently have little knowledge of? Investigate an area in which we do have knowledge but in a new/novel way? Explore the relationship between two phenomena for the first time? Is your idea novel? Why does it matter?

Discuss your ideas with others. Ascertain who might be your supervisor or mentor: talk in detail with that person about your potential research project, preferably with a written outline of your initial thoughts, generally referred to as project idea. What is your research agenda? How and when will you develop a comprehensive research proposal?

2. Review the Related Literature: It is essential that existing sources of evidence, especially systematic reviews, are considered carefully prior to undertaking research. Do not try to re-invent the wheel, i.e., repeat what has been done? Research which duplicates other work unnecessarily or which is not of sufficient quality to contribute something useful to existing knowledge is considered unethical.

Work out a *systematic search strategy* that lays out plan of action of how to search literature. For example, make a reading list of texts, journals, abstracts, websites, etc. Internet search engines may be helpful but beware of incomplete information. You must develop and deploy critical appraisal skills to figure out how the literature you review fits your study and if and how your research proposal will be important to users. What you select to report must be truly and centrally “related” to your research question. Libraries and the Internet are a very good source of information and help for the review of literature.

The literature review is best organized in three sections, namely, the theoretical perspective (existing theories and concepts that explain the problem under study), empirical perspective (actual research that has been published on or around the problem) and conceptual framework of the present study. The conceptual framework is a researcher’s conceptual outlook or mental picture of her or his study constructed from theoretical ideas and concepts teased out of the theoretical and empirical literature and articulated into a logically coherent statement that explains the nature of the present study. Together with the results of the study, it is a researcher’s original contribution to the field.

3. Design the Study and Develop Methods: Consider the effect of your research on the participants and how you will involve them. Does the research design and methodologies pose practical or even ethical problems for those taking part or site of the study? Brainstorm about and if possible engage with users whilst designing your study to ensure your study works well in the real world. Engagement

should be as early as possible in the process. Does your research require the use of mixed methods (see Strier and Strier, Chapter 30, this Volume)? A research design may be longitudinal or cross-sectional, or other designs.

A longitudinal study is research that involves repeated observations of the same items over long periods of time — often many decades. Longitudinal studies are often used in psychology and education to study developmental or achievement trends across the life span, and in sociology to study life events throughout lifetimes or generations. Longitudinal studies make a series of observations more than once on members of the study population over a period of time. Cross-sectional studies (also known as Cross-sectional analysis) form a class of research methods that involve observation of all of a population, or a representative sample, at a defined point in time. They differ from case-control studies in that they aim to provide data on the entire population under study, whereas case-control studies typically include only individuals with a specific characteristic, with a sample, often a tiny minority, of the rest of the population. Both are a type of observational study. Cross-sectional studies may be used to describe some feature of the population, such as prevalence of an illness, or they may support inferences of cause and effect. Unlike cross-sectional studies, longitudinal research tracks the same people, and therefore the differences observed in those people are less likely to be the result of cultural differences across generations.

Do you know the most appropriate method for your research project? What method(s) will give you the most useful data for the project you are working on? What type of sampling technique will give you the participants who will give you the most useful data for the project you are working on? Are sampling methods probability or non-probability? Are you familiar with the statistics you may need to use and will your research instruments yield data for those statistical tools? If not, consider consulting a suitable statistician or revising your knowledge of statistics for educational research, for example, attend a course on statistics and data analysis.

Do you know the difference between quantitative and qualitative research methods? Which research method is most appropriate to your research project? Do you know how to design a questionnaire for survey research? Have you considered collaborating with other researchers? What is “Intellectual Property” and what does it mean to a researcher?

Are you aware that all educational research projects have ethical implications and need to be reviewed for conformity to standard operating ethical procedure? The elements may include harm, potential danger and appropriate language.

4. Writing your research proposal: To start writing your research proposal you need to first talk with your supervisor and sponsor, if any. The responsibility for developing a proposal that is scientifically sound and ethically apt lies on the researcher; the advisor is only a guide. No two proposals are the same, but they will all have a similar structure:

- i. Title;
- ii. Abstract/summary;
- iii. Background or rationale of the project;
- iv. Aims/objectives;
- v. Experimental design and methods;
- vi. Ethical considerations;
- vii. Benefits of the study;
- viii. An estimate of resources, costs and timescales or activity timetable and milestones.

5. Peer Review: Arrangements for peer review must be commensurate with the scale of the research. Every proposal for professional research must be subjected to independent peer review by experts in the relevant fields who are able to offer advice on its scientific quality and suitability. For student research projects the university supervisor may provide an adequate level of review. The normal peer review process in student research is to present and defend a research proposal to faculty and peers in a departmental or faculty research seminar.

6. Collect and collate the data: Researchers bear the day-to-day responsibility for the conduct of research in terms of:

- i) Ensuring that research follows the agreed protocol (specifications).
- ii) Making sure that participants receive appropriate care while involved in research.
- iii) Protecting the integrity and confidentiality of records and data generated by the research, as the appropriate use and protection of research participants is paramount in the research setting.

In so doing you must beware of own and/or other researchers' biases and seek statistical advice if necessary. Data collected in the course of research must be retained for an appropriate period to allow further analysis by the original or other research teams subject to consent and to support monitoring of good research practice by regulatory and other authorities. Reporting any failures in these respects is the most ethical thing to do. When conducting your research take steps to seek feedback from your participants. This will help you overcome practical problems you could not have foreseen and will help to ensure your project runs well and meets its objectives.

7. Analyse the data and interpret findings: Quantitative research techniques generate a mass of numbers that need to be summarised, described and analysed. Characteristics of the data may be described and explored by drawing graphs and charts, doing cross tabulations and calculating means and standard deviations. Further

analysis will build on these initial findings, seeking patterns and relationships in the data by comparing means, exploring correlations, performing multiple regressions, or analyses of variance, as deemed necessary. Advanced modeling techniques may eventually be used to build sophisticated explanations of how the data addresses the original question. Although methods used can vary greatly, the following steps are common in quantitative data analysis:

- a. Identifying a data entry and analysis manager (e.g. SPSS).
- b. Reviewing data (e.g., surveys, questionnaires, etc) for completeness
- c. Coding data
- d. Cleaning data
- e. Conducting data entry
- f. Analysing data (e.g., sample descriptive, other statistical tests).

Qualitative data analysis describes and summarises the mass of words generated by interviews or observational data. It allows researchers to seek relationships between various themes that have been identified or relate behaviour or ideas to biographical characteristics of respondents. Implications for policy or practice may be derived from the data, or interpretation sought of puzzling findings from previous studies. Ultimately theory could be developed and tested using advanced analytical techniques. Although methods of analysis can vary greatly, the following steps are typical for qualitative data analysis:

1. Familiarisation with the data through repeated reading, listening etc.
2. Transcription of interview etc.
3. Organisation and indexing of data for easy retrieval and identification
4. Anonymising of sensitive data.
5. Coding (may be called indexing).
6. Identification of themes.
7. Development of provisional categories.
8. Exploration of relationships between categories.
9. Refinement of themes and categories.
10. Development of theory and incorporation into pre-existing knowledge.

The last step of data analysis consists of interpreting the findings to see whether they support your initial study hypotheses, theory or research questions. Data interpretation methods vary greatly depending on the theoretical focus (i.e., Qualitative or Quantitative research) and methods (e.g., multiple regression, grounded theory). You should seek further advice for this step from and/or consult:

- i) Your supervisor/Other experts, especially a statistician
- ii) Computer Package Manuals (e.g., SPSS) and methodology textbooks
- iii) Other sources of help

What are the implications of your research findings for educational and other purposes?

Report on the Study and Disseminate Findings: The next step after the data have been collected, analysed and interpreted is writing up the research. What you need to consider when writing up your research is discussed in Chapter 31 of this Volume. Are you writing up your research for publication? Have you chosen how and where to publish your results?

Are you writing it for presentation at conferences or seminars? Are you presenting your research findings to an audience or organization? If so, what kind of audience or organization? Will you be making your findings known to users? Who and how? Researchers should publish and disseminate their findings outside of the academic arena. Results must also be made available to all those who could benefit from them (e.g., patients, care professionals, the general public) and more so to the research participants in language and manner they will understand and make sense of them.

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Chapter 29

**RESEARCH AND ITS RELEVANCE TO GENERATIVE
LEARNING IN AN AFRICAN CLASSROOM**

Paul O. Oburu

CHAPTER OBJECTIVES

The prime aims of this chapter are to:

- 1) Help student teachers grasp the meaning and processes involved in initiating, designing and completing classroom based research projects;
- 2) Equip teachers with appropriate classroom based research skills that would enable them meet the emergent and diverse learner needs;
- 3) Expose the relevance of research to generative learning processes in an African classroom setting.

INTRODUCTION

Classroom research is an activity that still confuses and invokes several meanings in the minds of many. According to the more traditional and commonly used scientific research approaches, inquiry is perceived to be an objective, empirical, cyclic, systematic, well-structured and accompanying tool comparable to a well planned journey with stated purposes and plans of actions. The “journey” begins when a problem requiring solution is identified and then proceeds onto establishment of procedures aimed at sorting out the problematic issue. This is usually followed by generation of theories or possible explanations to observed relationships and ends with a tentative empirical generalization of obtained findings to other similar or near similar situations or specifying specific areas requiring further investigations (Frankfort-Nachmias and Nachmias, 1996; Dana and Yendol-Hoppey, 2009).

To an average classroom teacher whose training and role functions are not specifically geared towards such formalized and predictable research process knowledge generation procedures, classroom based inquiry may thus be perceived as an add-on, abstract, peripheral and elitist undertaking that supposedly eats up useful instructional time and efforts that could otherwise be effectively channeled to the delivery of didactic knowledge (Dana and Yendol-Hoppey, 2009). Consequently, in order to initiate teachers into formalized research practices, there is need to first help teachers contextualize the relevance of research to teaching-learning processes and then convincing them that classroom inquiry is a necessary tool for teaching-learning purposes.

Additionally, there is also need to help them perceive the process as a possible, predictable, relevant and formal undertaking that can effectively be used alongside their formal teaching duties to generate ‘new’ and relevant knowledge, clarify unknown concepts to their students, and evaluate the effectiveness of learning and teaching programs (Dana and Yendol-Hoppey, 2009). These authors suggested that active involvement of teachers into classroom based research was a necessary ingredient of teaching-learning practices since classroom learning was not a static process but a dynamic undertaking aimed at equipping both teachers and learners

with appropriate life skills. Such positive attitudes towards research as a relevant tool would increase teacher competency and enable them monitor and control the quality of didactic processes in their own classrooms and also believe in themselves as individuals with keys to their own professional destiny and development.

The competency enhancement skills afforded to teachers through their involvement in classroom based research will likely increase the development of generative learning processes characterized by increased teacher ability to transfer knowledge learnt in one context to another, openness to new experiences, curiosity, positive risk taking behaviors and less rigidity. This in the long run would increase teacher relevance and predispose them into becoming change agents and active producers rather than consumers of knowledge. In addition they will also assume new roles as implementers of own policies generated by teacher experts possessing relevant and up to date insider perspectives of actual classroom needs (Dana and Yendol-Hoppey, 2009).

According to the more traditional and academically inclined research frameworks, inquirers are expected to have rigor for details about planning and not leaving anything to chance so as to be able to generate relevant and high utility knowledge. This necessitates that a researcher possesses perquisite knowledge and competency of the existing literature so as to identify specific gaps in the current literature and answerable topics with additive contributions to present and future academia and practicality to a wider audience (Dana and Yendol-Hoppey, 2009). These research benchmarks adopted in traditional academic research processes usually take on different connotations especially when teachers who lack the time, resources, and background knowledge and are less inclined to academically oriented inquiry practices get involved in research. Consequently, there is need to de-contextualize research from an elitist activity that is the concern of academically inclined inquirers to an all inclusive activity that can be incorporated into the repertoire of daily teacher activities.

TEACHERS AND CLASSROOM RESEARCH

The research procedures described below are meant to specifically help the reader grasp the processes and activities of initiating, designing and completing classroom based research projects. Essentially, they will be answering the ‘What’, ‘Why’, and ‘How’ of the classroom research process using less complex and straightforward procedures with potential benefits to improvements in learning outcomes and teachers’ own professional development. These approaches that teachers can utilize to collect data in their classrooms may broadly be categorized into inquiry, planning, acting, developing and reflection stages (Mertler, 2006).

The inquiry stage begins when an alert, curious or knowledge ‘expectant’ teacher reflects on her/his own practices or notices what is different, hindering or promoting classroom teaching-learning practices and is motivated to understand more or look

for solutions to the problem so recognized. At any one time, prospective classroom researchers will always have many potential ideas worth investigating. However, they may sometimes be overwhelmed by the seemingly unlimited research possibilities. It is thus important for teacher inquirers to always remember that not all topics are worth their efforts and not all research endeavors are authentic, meaningful or have implications for policy issues.

As a hint or cue to problem identification, the teacher may focus on teaching practices, student achievements, expected learning outcomes, classroom environments, and things that have been bothering him/her or cause of concern but s/he seems not to understand relationships between the identified problems and observed factors or variables. Viable research topics could also emanate from observing the child and his or her background, curriculum content, teacher's classroom role occupancy, and personal experiences within or outside classrooms including common themes that emerge as result of discussions and brainstorming sessions with colleagues (Walker, 1985). Other possible sources of research problems include classroom observation notes kept by teachers, documented 'research findings' from popular media, searches from the World Wide Web (Charmot, Barnhardt and Dirstine, 1998) and complaints from or exchanges in the school community.

In order to further refine the identified research problem, Charmot, Barnhardt and Dirstine, (1998) suggested that the teacher inquirer needs to answer the following questions:

Is there an issue, own teaching practice, theme or problem that is less understood or interesting and would motivate inquirers to find solutions to?

What is it about the topic, theme, problem or issue that is interesting?

What will be the potential benefits of carrying out research on the identified focus area to classroom learning and teaching practices?

Assuming that a researchable topic has been identified and questions formulated the next step would involve the teacher researcher in developing a research plan. The planning stage is composed of strategies aimed at identifying and stating the problem in clear and specific terms, limiting the research problem, reviewing related literature and then developing a research plan, or simply discussing and planning with colleagues. In order to increase knowledge base and study focus, it is necessary that the concerned researcher makes further reflexions, consults or brainstorms with others and also reads widely about the problem. Reading or consulting extensively could either increase researcher knowledge of the problem, generate further interests and reflective practices on how best to find solutions to identified problems. It is imperative that the concerned teacher always asks him/herself the following questions while doing a literature search, reflecting on the topic or when having out of class focus group discussions:

1. What do you already know about the issue or identified problem?
2. What is it that you still do not know about the issue, problem or theme? The existence of a gap between what is (the actual) and what should be (the ideal situation) should be an indication that a problem worth researching on exists.
3. How will your study deviate from or add-on knowledge already gathered on your area of focus?
4. How will you collect your data?
5. What kind of information will you collect?
6. Do you have adequate skills and resources to gather and analyze obtained research evidence?
7. Are there concrete changes, activities or outcomes that could be derived from your work?
8. How would you proceed to implement or reorganize yourself to be able to implement the obtained findings?

At the planning stage, it is imperative that the researcher decides on how to gain access to those who will provide the information or data (data sources), where and when to collect data, the nature of information and strategies or patterns that can be used to collect the required data. The nature of information to be collected will however be a function of researcher's attitude towards knowledge. For example, researchers who believe that obtained knowledge needs be objective, hard and tangible have high allegiance to methods of natural science (e.g. Physical sciences) that places emphasis on advanced statistical procedure (quantitative approach) to analyze the obtained information. The commonly used quantitative data collection techniques include examination of class documents and records, questionnaires, rating scales, checklists and teacher made classroom tests (Mertler, 2006). Others who consider knowledge to be subjective and unique will reject ways of natural sciences and insist on making detailed description of the research problem using less detailed and formalized procedures including assessment of themes that emerge even in words used (qualitative approach).

The most commonly used qualitative data techniques include structured and unstructured interviews, observational schedules developed by teachers and also by analyzing records of daily classroom activities or journals. Other factors that might influence the nature of obtained data include inquirer's stated interests and inquisitiveness at unraveling little understood themes, resource availability and finally research attitudes and skills. For more information on specific data collection strategies, readers are advised to refer to the chapter developed by Strier and Strier (Chapter 30 in this Handbook).

Beginner researchers may not be aware of procedural planning and negotiations involved in getting people's permission to get them involved in data gathering strategies. Just like in the academically oriented research processes, negotiating for research access is usually a continuous, unassuming and all-inclusive procedure. For example, apart from gaining research authorization from school and other regulating authorities, it is necessary that the concerned researcher also obtains informed consent from parents and the children. Sometimes researchers are at pains as to whether parents' consent should be assumed to be representative of the children's wishes or whether initial consents obtained from participants at the beginning of a research program should be assumed to be adequate for all the subsequent encounters.

According to Walker (1985), teacher research roles are further complicated by their special relationships with their students and these children's parents. The author noted that the complicated teacher-parent and teacher-student relationships may lead to a situation where teachers expect that parents and their children will always be in favor of their research intentions. Similarly parents and children can also involuntarily be coerced into participating or providing favorable answers either to please the teacher or out of their fear of not disappointing their children's teachers. Consequently, negotiations for access with interested parties should always be a continuous process that extends beyond the consent-attainment and implementation of research process and existing teacher-parent and teacher-child relationships.

Trainee and practicing teachers interested in classroom based research should always remember that while their involvement in inquiry processes can afford them the right to conduct and acquire information, they must strive not to encroach on the rights of their participants. Their privileged position as these children's teachers notwithstanding, they have to undertake complicated balancing acts in order to remain professional, relevant and focused. For example, their need to collect information should not override these participants' right to informed consent, self-determination, privacy, confidentiality and dignity (Frankfort-Nachmias and Nachmias, 1996).

The acting stage is composed of research plan implementation, data collection and analysis. This is followed by the developing stage where the researcher is required to revise, recast or make improvements on teaching and learning practices on the basis of obtained research findings and a reflection stage that involves the sharing, dissemination and reflections on the findings.

In summary, it would be worthwhile to note that apart from enabling teachers to generate 'new knowledge'; teacher involvement in classroom based inquiry processes requires teachers to skillfully fit the research process into their daily teaching programs. This should be done without sacrificing their teaching-learning roles. To be able to achieve this particularly difficult endeavor, teachers need to cultivate in themselves skills that would enhance ingenuity, flexibility and the development of reflections, questioning stances in themselves. This in the long run could enable teacher researchers plan the process, develop assessment tools, find solutions to

already specified research problems and then make generalizations about how the present circumstances (i.e. observed relationships) relate to each other and also to an abstract future that is perceived to be a mathematically and numerically constant phenomenon. The researcher is also required to determine in advance the implication of a research endeavor to policy issues and practices, develop an action plan based on the obtained findings, communicate results and be prepared to be challenged while communicating the results locally and also in academic outlets such as professional conferences, workshops and academic journals (Mertler, 2006).

IMPLICATIONS OF INDIGENOUS MODES OF INQUIRY FOR CLASSROOM RESEARCH

In most contemporary African classrooms, teachers find it increasingly difficult to integrate research activities within their already overloaded programs and requirements. African teachers' limited involvement is not a unique occurrence. For many centuries, contributions of African indigenous knowledge base have always been problematicized, misunderstood, misrepresented and sometimes overlooked (Aluma, 2004). More often than not, indigenous African research inquiry approaches, have often been misrepresented as antagonistic rather than complementary to modern forms of inquiry. Sometimes indigenous knowledge has been devalued as lacking scientific validation, non-systematic 'trial and error' research paradigm with limited output and relevance to modern forms of inquiry. The overriding perceptions of such paternalistic mindset has always been that knowledge bases of many traditional African societies are still underdeveloped, valueless, unplanned, fossilized, backward looking, and antiquated (e.g. Hamel, 2004).

These misrepresentations, partly due to Africans' limited involvement in the more formal forms of inquiry, widespread ignorance of traditional research processes, and also to the domination of Western research paradigms erroneously assumes that there were and still are no research traditions and processes worth reporting about in the traditional African contexts. This connotes that research capacity enhancement policies and attitudinal shifts about the possible benefits of classroom research to teachers' daily interactions and professional development could enable them become experts capable of designing their own research agendas and also accomplish predetermined objectives within mathematically or numerically specified time.

As a consequence of these misrepresentations and differing research paradigms, the evolution of effective teacher classroom inquiry practices must thus begin with an African reenactment of specificity in planning of research activities. In most indigenous African societies, a communal and participative knowledge generation approach characterized by a life-long and more global research agenda was adopted (Mkapa, 2004). This was in contrast to the formal perception of research as systematic, planned and well structured process of sharing, challenging and applying knowledge. In the traditional African contexts, knowledge generation served a

utilitarian purpose of finding solutions to localized problems and overcoming present environmental constraints. This required individuals to mainly focus on the present needs or problems of immediate concern (Mbiti, 1992). The author attributed the preoccupation with the present needs to the silent and indifferent concept of time that exists in most traditional African mindset.

According to Mbiti (1992), greater involvement of Africanists in research endeavors could also require extensive adjustments in traditional time precept. In African thought process, time is perceived as a two-dimensional phenomenon consisting of a long past and an indefinite present. The future is virtually a non-existent phenomenon due to its abstract nature. Any future planning could be viewed as a futile activity. This is in contrast to the traditional and more formalized research approaches that adopt a 'journey' or linear view of research and three dimensional perception of time as consisting of indefinite past, an active present and infinite future (Mbiti, 1996). The utilitarian precepts that predominated in the traditional modes of knowledge generation implied that until African researchers develop their own research agendas that extend beyond a 'cut and paste' competency enhancement procedure tailored on modern research paradigms, Africa will always be at the periphery of cutting edge research due to apathy to technologies outside the scope of local resources and immediate utility (Aluma, 2004).

In the modern classroom contexts where teachers and students are daily exposed to diversity and complexities of teaching and learning, and also to knowledge paradoxes and information superhighways, the short-term focus on satisfaction of basic needs while appropriate adaptive strategies in both the traditional lifestyles and modern classroom contexts may not be sufficient for transformational purposes (Dana and Yendol-Hoppey, 2009). This suggests that teacher researchers need to focus on strategies that are likely to make them change agents rather than consumers of knowledge, search outwardly for relevant problems by going out of their daily routines to determine themes worth researching on either from their daily and often taken for granted interactions with children, their role related problems, and felt difficulties or by evaluating their own belief systems and practices (Dana and Yendol-Hoppey, 2009; Bates and Pardo, 2009). Teachers also need to develop inquisitive minds and get involved in action research so as to be able to remain relevant in a more globalised world. Knowledge currency, obtainable through active involvement in classroom inquiry rather than passivity or assumption of unquestioning stances, would thus represent an appropriate adaptive strategy for teachers daily exposed to well informed children and constantly changing circumstances.

One other probable policy level strategy that could be used in the less predictable African context would be to mainstream classroom research as a requirement for all teacher trainees and also incorporate indigenous knowledge generation approaches into modern classroom research agendas with the aim of reducing the apparent disconnect between knowledge generation, policy implementation and appropriate generative learning processes (Bates and Pardo, 2009).

An additional strategy that would involve African based researchers in overcoming the apparent overreliance of African based researchers on oral traditions and demonstrations as methods of data presentation rather than on documentary evidence (Steiner and Oviedo, 2004). Traditional African modes of inquiry placed much emphasis on oral transmissions of knowledge (Steiner and Oviedo, 2004). The lack of well structured outlets to challenge and disseminate accumulated knowledge that has persisted into contemporary research agendas has also meant that the rich communal heritage that can form a basis for classroom based research processes will always remain untested or lost with the deaths of their bearers. In such circumstances, indigenous knowledge will always remain relics of long gone eras and somewhat stationary for as long as basic requirements are satisfied (Aluma, 2004).

Secondly, in traditional African research agenda, data driven decision making process has always been the exception rather than the norm and knowledge generation is viewed as an inclusive activity for all and sundry. Accordingly, planning and initiating classroom based research processes in African context would thus require a paradigm shift and possession of prerequisite skills and knowledge of relevant theories pertaining to the research focus. Such an approach also requires the establishment of technical structures that might go beyond the individual teacher's research proficiency.

However, one of the more positive attributes of traditional African classroom contexts was that the approach adopted in knowledge generation served the purpose of extending research beyond formalized settings and also made inquiry an all-inclusive rather than exclusive activity for skilled personnel. This also guaranteed that research output will always be relevant to the local needs. This in essence is a clear departure from the systematic, purely technical; evidence based and formalized straightjacket academic oriented forms of inquiry that place little emphasis on short term relevance of research output to socio-cultural habits of the indigenes and much on specificity, long term solutions to problems and well-structured systems of data collection, knowledge documentation and dissemination (Aluma, 2004).

In traditional African classroom contexts where relevance is likely be defined in terms of what is perceived as requiring immediate attention such that felt problems always define what is considered relevant and important, classroom based inquiry that incorporates indigenous modes of knowledge gathering strategies can enable concerned persons to extend, and reinvent traditional approaches to satisfy both short term individual and local needs. In such traditional contexts, there may be no need for outward search for problem generating issues since problems worth researching on will always be readily available so long as one has an eye for details (Easton, 2004; Sibisi, 2004; Aluma, 2004; Mbiti, 1992). The paradoxical status of teachers in the African classroom research contexts is that while they have peripheral bearing on institutional decision making processes even in their own classrooms

and sometimes on matters directly affecting them, involvement in classroom based research requires that they must by necessity be active decision makers in classroom research process.

Furthermore, it is likely that enactment of Africentric classroom research agendas could enhance both practicing and trainee teachers' capacity to collect, utilize and disseminate research data sets available in classroom settings and local contexts. Such an approach would enable teachers to gain a comprehensive understanding of what classroom research entails and also become generators of 'new and relevant' knowledge obtainable from classroom settings and local contexts. Teachers with enhanced research capacity skills will by design be expected to effectively meet the individual needs of children under their care and enact appropriate knowledge delivery strategies in their respective classrooms. In the long run, both groups of teachers would acknowledge the usefulness of integrating indigenous knowledge and action research approaches into their daily classroom interactions.

CONCLUSION

Engaging African teachers into classroom research planning activities is a complex but critically important undertaking that requires a change in the mindset on the relevance of research, science and technology and philosophical realignment of indigenous modes of African thoughts. A change in attitude especially in regard to the value attached to knowledge generation, utilization and dissemination may also be a necessary prerequisite to research capacity enhancement.

Mainstreaming classroom inquiry into regular learning and teaching processes would thus benefit from the well tried out knowledge acquisition strategies in the traditional knowledge bases. Unless such entrenched paradigm related differences are acknowledged and addressed accordingly, classroom research will always appear as an elitist and or irrelevant endeavor to teachers with limited research skills and bearing on institutional decision making processes.

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Chapter 30

**THE “JOURNEY APPROACH” TO ACTION RESEARCH IN
SERVICE OF EDUCATION AND THE COMMUNITY**

Dorit Roer-Strier and Roni Strier

INTRODUCTION

The objectives of this chapter are:

- 1) To present the Journey Approach;
- 2) To outline the principles of action research embedded in this approach;
- 3) To exemplify the Journey Approach while focusing on methodological challenges;
- 4) To discuss the merits of the Journey Approach for education and community.

For many people, the concept of research seems remote, static and rigid. Memories of research courses tend to be associated with mathematics, statistics and experiments. In this chapter, we propose a different conception of research aimed to equip teachers and their communities with "actionable knowledge" (Argyris, 1996; Strier, 2007). "Actionable" or "do-able" knowledge is the knowledge that generates culturally-based action that offers new perspectives, contributes to practice and empowers change. This kind of research invites teachers, students and others to tell the story of their cultural context, to raise questions for which they do not have answers and to discover the different perspectives held by people in their communities regarding problems and their solutions.

This kind of research is based on the grounds of what some scholars call Action Research (Mills, 2000), Participatory Research (Parke, 2001) or Emancipatory Research (Boog, 2003). In this chapter, we propose a kind of research that we hope may be relevant to teachers in multicultural contexts. The proposed research takes into account both the cultural context and the perspectives of its multicultural participants. We call this research "The Journey Approach". We believe that this kind of approach can be carried out by all professionals (teachers, community activists, social workers, nurses, etc). The Journey Approach aims to find solutions to everyday problems and to create change, through learning and utilizing knowledge which is systematically gathered.

Both authors of this chapter are descendents of immigrants now living in Jerusalem, a holy city for three major religions and many religious sects. The people of Jerusalem have both similar and different ways of perceiving their world. In our private lives and through our research, we have learned to listen carefully to the views of the different people around us. We have studied people from different religions, races and ethnic groups, and have learned to be aware of their different viewpoints and theories about the world. Our research is dedicated to describing their perspectives in a way that conveys the similarities and differences found between the various reports. This lifelong investigation, "the journey", was always carried out in the context of the cultures in which we lived and investigated. With all due respect to universals, we believe that we are shaped by our cultures, which act as the background on which our pictures are drawn, while we choose the colors and creatively re-shape the contours of our own cultural landscape.

TRIANGULATION IN RESEARCH

Some of you may be familiar with the metaphor of the elephant in the room. We will use this metaphor in the context of a group of teachers, whom the authors invited to work as a research group, to look for ways to remove the elephant from the room. This research was not aimed merely at theoretical implications (collecting data and knowledge, or learning about animals) but rather, at practical “do-able” knowledge that will bring about change (getting the animal out of the room...).

The teachers began by sitting in different corners of the room to collect data about the elephant through observation. Each teacher described the elephant from his or her own angle. One saw only the tail, another saw the ears, another the trunk, and one saw the animal from the side. When they came together to share the knowledge and analyze the data they had collected in their observation, each had a different description of the elephant, and therefore, a different suggestion as to how to get it out of the room. The teacher who saw the tail suggested the door and the one who saw the ears suggested the window. The teacher who saw the animal from the side said that there was no way to get such a large elephant out, since the windows and doors were too narrow.

Only after they had assembled the whole picture from the different perspectives did one of them say: “Well, we missed some important knowledge. We have to invite one more teacher to participate in our group. It must be a teacher from this area, who knows the local history and can tell us how the elephant got into the room in the first place”. Scholars termed what the teachers in this research group did, “triangulation”. They use this term to argue that “looking at something from several different points gives a more accurate view of it” (Neuman, 2000, p. 521). Qualitative researchers use the term triangulation to describe the use of multiple perspectives and strategies to study the same phenomenon. It is a means of overcoming bias and enhancing rigor (trustworthiness, validity) (Denzin, 1989). The combination of approaches and perspectives is seen as one approach that can produce a ‘many-sided kaleidoscope’ and an in-depth picture of the subject under study.

In the research literature, we can find six different kinds of triangulation: methodological triangulation, data triangulation, investigator (analytic) triangulation, theory triangulation, interdisciplinary triangulation and participant triangulation.

1. Methodological triangulation (use of different methods and ways to gather or examine data): Methodological triangulation usually entails a variety of data collection methods, such as in-depth interviewing, in which the researcher asks questions and documents participants’ answers; participant observation, in which the researcher becomes a part of the research reality, and as well as observing and documenting, also tries to understand the meaning the interviewees attribute to it; and focus groups, where small groups are created to discuss the research questions. Triangulation can also include a combination of qualitative and quantitative methods (Grinnell and Unrau, 2005). Triangulation is a means of using the strengths of one

method to offset the weaknesses of another. Used together, the researcher obtains a more comprehensive picture of the phenomenon under study. Teachers may use triangulation methods in their everyday work. One example is when they teach how water turns to ice or vapor, depending on a temperature change. They can demonstrate this and have the children observe the transformation (observation), they can ask the students to read about it and then ask them to describe the change in order to test what they have understood about it (interview), or they can ask the students to draw on their own experiences and discuss together in groups how water turned into something else and how the phenomenon was explained in their environments and cultures (focus group). When combining different methods, students will have more opportunities to learn about the ways in which water can change. Similarly, triangulating different methods will enrich the researcher and enhance the community's options to learn about the questions that interest them.

2. Data triangulation (multiple data sources): With data triangulation, different data sources, within the above or other methods, are used. For example, one might triangulate transcriptions of different interviewees about the same topics, field notes on observations of the same site during different time periods or from different locations, or a newspaper report and participant observation notes on the same event. Teachers use data triangulation when trying to get to know a class member better. They can compare the child's grades and reports about his or her behavior in the classroom with the parents' reports of the child at home and in the community. Comparing the different data about the same child from different sources helps obtain a more holistic and reliable picture.

3. Investigator (analytic) triangulation (multiple observers, coders): In this type of triangulation, two or more researchers observe and/or analyze the same phenomenon. It is believed that this method of analysis may overcome the biases that can occur when only one person analyzes the data. People can see or read the same thing and yet interpret it differently. When a group looks at the same text, they can discuss it and reach agreement or outline different interpretations. This is similar to the case in which several teachers discuss a child's behavior problem after watching him fight with another child in the school yard. They all have their ideas and previous knowledge of the child in different classes. Some may know the child's family and have further information that explains the child's frustration. They can come to one or more conclusions based on this discussion.

4. Theory triangulation: Theoretical triangulation refers to the use of different theoretical perspectives to interpret findings. In the kind of research that we present in this chapter, we expand the meaning of theory to include different participants' theories about the world. For example, how people explain and predict human behavior based on their cultures, and on their spiritual, religious or traditional theories and theories they have learned at home, at school or in other educational settings.

5. Interdisciplinary triangulation (collaboration of researchers from different disciplines): Interdisciplinary triangulation can introduce the researcher to discourses that are not dominant in one's own discipline, such as those from art, sociology, history, dance, architecture, and others. This kind of triangulation is extremely important in the Journey Approach, which is especially oriented to investigate complex social questions in a cultural context. To receive the full scope of the cultural context, it is important to look for collaboration of different disciplines. In the example brought later in this chapter, the contribution of the collaboration of different disciplines, such as education, nursing, social activists, etc., will be apparent. In the above example, in which teachers try to give meaning to the child's behavior, a multidisciplinary team (e.g.: math teacher, art teacher, language teacher, sports teacher, nurse or physician) may contribute, by viewing the children's behavior and performance with different subject matter, which provides the child with different challenges. In the first case, namely, in the "elephant situation", a good civil engineer or an experienced magician could really make a difference.

6. Participant triangulation (use of different participants to obtain information and enhance rigor): Participant triangulation is based on the collaboration and comparison between the research participants' perspectives. According to this approach, the researcher is not alone in analyzing data, interpreting the results and looking for ways to translate the knowledge into action.

Janesick (2000) proposes the term "crystallization" to describe the different modes of triangulation. Crystals are seen as prisms that reflect externalities and refract within themselves, creating different colors, patterns and arrays, casting off in different directions. Accordingly, the different kinds of triangulation or crystallization are seen as the simultaneous display of multiple, refracted realities.

Triangulated findings have been described as convergent, complementary, or dissonant (Flick, 1998). Findings are convergent or congruent when similar results are produced from two or more data sources or methods. When this occurs, the findings of one substantiate the findings of the other, thus supporting the validity of the results. This occurs when, for example, two interviewees refer to the same event as a crucial turning point or when two teachers agree on the way to encourage a child in school. In contrast, complementary findings are those in which different parts are combined so as to create "a more complete picture" of the whole. Accordingly, findings obtained in one way are partial and cannot be understood until they are completed by information obtained through another means. For example, when two participant observers of the same event, sitting at different sides of the room, combine their observations, they are able to obtain a fuller, more integrated understanding of the event. Or when teacher and parent discuss a child's behavior and the information they both have contributed to a better understanding of the child. Another possibility is dissonance or "unexplainable divergences". This occurs when findings produced by two or more methods or data sources are incompatible and challenge expectations. For example, the findings that a child is

“smart” and “not smart” are dissonant. In cases like this, the researcher is advised to explore whether the methods used were responsible for producing different results or whether changes need to be made in the way we explain the findings to accommodate the difference. In the “smart-not smart” example, the concepts can be used respectively to explain teacher evaluation of the child’s perceived social functioning in contrast to his or her achievements in standardized tests.

Guiding Principles of the Journey Approach

Action research or the Journey Approach is based on the following guiding principles:

1. Researched knowledge is not real estate: Research reports and results are often seen as the property of the researcher, the research institute where the study was executed or the institute that funded the study. At other times, they are seen as the property of the journal or book in which they are published. As a result, data became a commodity, inaccessible even to the participants of the study. The participants provide information, but never see the results of the study in which they participated. The Journey Approach attempts to change this reality by claiming that the knowledge is not owned by the researcher, but is shared and belongs to us all (teachers, community and world).
2. Everyone is involved: Given that research is, in fact, a shared journey, researchers are called upon to reduce the exclusionary barriers to genuine participation and to provide participants with a sense of genuine control over the research process. According to this approach, participants are invited to take part in formulating the questions and to decide on the ways the data should be collected, to agree or argue with the findings to reach a consensus, take part in formulating the conclusions and apply the recommended programs or actions.
3. Knowledge should be actionable: This approach is committed to the production and implementation of actionable knowledge, namely, knowledge that generates action and change. The dialogical nature of the inquiry fosters a sense of critical consciousness of researchers and participants and lays the foundation for shared, informed action based on the outcome of the process.
4. One size does not fit all: The Journey Approach is concerned with the cultural contexts in which the research takes place. Research is not conducted in a vacuum or a laboratory. According to this approach, the cultural, historical, social and political context is to be taken into account at every step of the research. The research questions, participants, answers to the same research question and actions taken to remedy problems addressed by research could be very different in different cultural contexts.

In the following case study, we will try to illustrate the concept of triangulation and the four principles of the Journey Approach.

CASE STUDY

Cultural context

This study took place in a school in a farming community, in a rural area that was undergoing tribal rivalry, in which some people were killed and wounded and others were forced to leave their homes.

Formulation of research question and research goals

The teachers in this school complained that their students were not achieving the grades expected by national standards. They decided to conduct a study to find out more about this problem and to look for ways to change the situation. They formulated a research question together with the principal, some students, some parents, the village nurse and an educational NGO in the village. The question was: "Why are the students' school grades so low"?

Methodology - collecting the data

The methodology used for the study was to ask all the participants, both members of the school and the community, for their views on this matter. Three teachers were chosen to go and interview as many participants as possible.

Data collected

Here are some examples of the answers they received:

Principal: "The teachers in the school are not motivated enough. They do not push the students hard enough".

Teacher/1: "The children are lazy. Their parents do not motivate them enough".

Teacher/2: "I really want my students to do well. Sometimes I stay with them to help with homework, but neither the principal nor the parents appreciate my efforts. These children need more support and encouragement, and so do we, the teachers".

Parent /1: "I want my child to be educated and have better grades, but he sometimes gets to school late and they don't let him in the class. He has to help me bring things to the farm in the mornings. Sometimes, I need him all day long".

Parent/2: "My son has to walk for over two hours to get to school. So he is tired and falls asleep, but the teacher thinks he is not interested and that he is stupid".

Student /1: "I like my teacher. She wants me to do well in school. She thinks I am smart and can go to university. But I have to help my mother. I am the eldest. My father died and I am now father to my five brothers and sisters. I work after school to help my mother".

Student/ 2: "Children in my school do not get good grades, because if they do, the others will be jealous and they will not be liked".

Nurse: "Many children are hungry and others do not get good nutrition. Children who are under-nourished cannot concentrate in school".

Official 1: "Our village is still suffering from the results of the fighting. Children are afraid. Some have nightmares and others have to take on adult roles because their parents died".

Data Analysis

After all the information was gathered, the teachers made a list of the emerging common themes and central points that were in consensus. Below are some examples:

1/ Conditions that challenge the students' ability to thrive:

1. distance from school
2. war-related traumas
3. children's roles and responsibilities out of school
4. children's motivation and social pressure
5. parents' support
6. nutrition

2/ Conditions that challenge the teachers' ability to thrive in their role:

1. lack of support from the school
2. lack of support from parents
3. students' attendance problems

After analyzing the themes, the participants were asked to offer solutions. The following were some of the solutions offered:

Official/ 1: "I suggest that the school receive some of the food brought to the village from the human rights organization, so that the children can eat properly".

Nurse: "I suggest that the children participate in preparing the food, and this opportunity can be used to teach them about good nutrition".

Teacher/1: "I suggest teaching the children about measuring and calculating, while preparing the food".

Principal: "I suggest meeting with parents (possibly through PTA meetings) to raise their motivation to educate the children, finding a shared meaning (why good grades in school are important) so that parents and teachers can encourage the children using the same rationale".

Teacher/2: "I suggest creating support for the teachers in the school, by collaborating and getting more positive feedback from the principal".

Student /2: "I suggest encouraging the children who do well in school and encouraging others to respect them".

These are only some of the solutions offered. Some were actionable and others were more difficult to apply. This example was aimed at shedding light on the concepts and principles mentioned in this chapter. First, it highlights the meaning of "triangulation": When different participants have different views of a problem, and where looking at something from several different angles provides a broader, more accurate view of it. Methodological triangulation was apparent in comparing data from the interviews with participants and from observations in the school and the community. Another option could be if some of the data would be gathered in small groups of parents or students (focus groups). Data triangulation in our example could be comparing participants' ideas, former school reports and children's grades. Investigator triangulation is seen where the group looked at the results of the study, discussed them and reached agreement. Theory triangulation is seen in the participants' different points of view and explanations as to why the children did not do well in school. Interdisciplinary triangulation is shown through the fact that views from different professional domains (teacher, nurses, activists, etc.) were compared. Participants' triangulation refers to the collaboration and comparison of perspectives of the research participants (teachers, parents, students, etc.). All the participants were asked for their opinions at each stage of the research.

From this example, we can also see the formulation of shared ownership. The knowledge gathered in this study is not owned by one researcher, but belongs to all the participants. The participants in this example received a sense of control over the research process. They formulated the questions, analyzed the data, reached consensus over the themes and recommended certain actions and programs to change the situation. This process could be adopted by teachers who wish to study various topics with their students. They can formulate the research questions together with the class, use different modes of data collection (method and data triangulation), have the students analyze the results in small groups and then compare the results with the teacher's evaluation (investigator triangulation).

The manifestation of actionable or do-able knowledge can be learned from the actions that followed this study. Several actions took place, such as workshops with parents and children. In these workshops, the issues of the community trauma and effects on the children and parents were addressed. Meetings were aimed at creating support and increasing motivation related to school attendance and performance. A nutrition program was built and implemented in the school. This program was operated as part of the curriculum by the nurse, in collaboration with two other teachers. They used the program to teach the students how to prepare their food, to teach them about nutrition, health-related issues, and how to deal with measures and calculations. This program expanded later when the principal initiated building a vegetable garden on the school premises.

The garden provided the nutrition program with fresh vegetables and gave the children experience in farming. These "actions" were found to be very rewarding

for both teachers and children. Parents very much appreciated that their children were fed in school. As this was a great help, their motivation to send the children to school increased. The principal was also very proud of the new programs that received much attention from other schools in the area, who wished to implement similar programs. The study changed the principal's perceptions of the teachers. His appreciation and the teachers' increased involvement with the school and community was rewarding for them all. The principal and teachers were proud of their school. In addition, the NGO who was involved in the research process used the data collected in this study to formulate a grant proposal for further implementation of the research recommendations.

As to the principle of "one size does not fit all", we learned from the example that the violence in the area where the research took place was a major contributor to the research problem, and hunger needed to be considered. The context-related nature of the study was very important and a different context would surely elicit different outcomes. The answers to the same research question and the actions taken could be very different in different cultural contexts.

Some readers will probably ask themselves whether the students' grades improved. Let us look at the Bible story of King Saul. He was just a young farmer when his father sent him to look for some missing donkeys. While looking for the animals, he met the prophet Samuel, who appointed him as king. There is a saying about King Saul that he was "looking for the donkeys and found the kingship". In the Journey Approach to research, the main challenges may turn out to be different from the ones for which you were searching. Since there is no preconceived hypothesis, new information can be surprising and new realities encountered might lead the researcher in new directions. The discovery is one of the most exciting parts of the Journey Approach. When applied to education, the teachers, children or learners may make new discoveries about themselves and their communities which bring new insights and innovations.

In our case study, teachers and their community began the journey with a quest, looking for a way to improve their students' achievements. They ended up discovering new and exciting ways of enhancing their students' learning and improving their well-being. The Journey Approach can be rewarding for its participants in many ways. It can be applied to many questions in the school curriculum. It can teach children how to formulate questions that interest them and look for solutions in systematic ways. It creates a "community of concern", in which participants can be supported. It opens a door to new, creative programs that are tailor-made for a specific school in its specific cultural context.

One of the most important merits of this approach is the principle that involving everyone may lead to understanding and tolerance of differences. The concept of triangulation is based on the perception that many points of view help

to create a holistic outlook. According to the triangulation and Journey Approach perspectives, no point of view is superior to another. Therefore, in classes with children from different cultural, religious and ethnic groups, giving voice to the views of students will prepare the ground (with the tolerant and supportive help of a teacher) for accepting differences and tolerating cultural diversity in the classroom.

CONCLUSION

The search for knowledge and the ability to share knowledge are elemental for the teaching professions. This is why we believe that teachers have both the needed orientation and the essential motivation for developing the Journey Approach to aid their profession and their communities. We hope to learn from your new ideas and ways of implementing the Journey Approach across cultures and professions.

EXERCISES FOR THE LEARNERS:

Exercise 1

In a PTA meeting, discuss a topic with parents that they wish to research, in order to come up with a new program for supporting the school. Create a group of several parents, a teacher and students, who will research the topic (assess needs and solutions from different perspectives, and analyze them according to the categories that emerge from the data). In a follow-up meeting, present the knowledge to the participants and discuss the solutions. Outline those on which there is agreement; discuss their priorities, the actions needed for their implementation and the resources available.

Exercise 2

Discuss with your students an area of possible investigation relevant to an action or a project that can be implemented in the classroom or the school. Define a research question together. Discuss with the students different methods of obtaining the data. Teach the students how to gather data, collect all the answers to the question and teach them how to organize the results. Discuss different solutions. Outline those on which there is agreement; discuss their priorities, the actions needed for their implementation and the resources available.

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Chapter 31

WRITING RESEARCH DISSERTATIONS AND THESES

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INTRODUCTION

This chapter is on learning in research and reporting it in academic or scholarly writing. We make four distinctions in research reporting. Educational institutions around the world require students, particularly those in graduate studies, to carry out and report a completed independent research project. We refer to this as student research, which is usually completed to fulfill partial requirements for graduation from an academic program of a college or university. There is also research that is undertaken as part and parcel of professional work or as the sole task of professional job specification. This is professional research, commonly called research and development (R and D). Professional research that is reported to institutions or prepared for peer review publication outlets (submitted to publishing houses and print and online journals) is the third category of research. A fourth category is incidental research, a function of documenting exciting or exotic experiences, which is tourist or itinerant research. The specifications these four categories of research follow vary. The focus of this chapter is on the first genre, student research, executed in partial fulfillment of academic requirements. As such, student research basically is a learning process by which the student is nurtured to transition into the scientific research community. The most basic transformative private attributes for this developmental academic transition are independent thought, self-direction in decision making and commitment to systematic procedures.

The main thrust of the chapter is on publication writing, because the research student is being trained into what the scientific community thrives on – dissemination of research-generated knowledge through publication outlets and other scientific forums. Our archival research relied a lot but not exclusively on Wikipedia (2010), shrp.umdj.edu/programs/psyc/.../ (2010) and the *Publication Manual of the American Psychological Association* (APA, 1994) which provides detailed information about the entire process of publication – from organizing, writing, keying and submitting your manuscript, to seeing the accepted manuscript through production and publication or defense. Dissertations and theses typically require more details than scholarly publications, yet they adhere to the same basic scientific writing principles. It is perhaps in your interest to consult the most recent version of this *Manual* and other relevant handy textbooks for such details.

Researchers communicate their results and help accumulate knowledge through conference papers, reports, online journals and print journals or books (Rudner, and Schafer, 1999). While there are many rewards for having research disseminated in a scholarly outlet, the preparation of an outstanding research report is not a minor task. This genre of writing is usually serious, based on closely-investigated knowledge, and posits ideas or arguments intended for a critical and informed audience. It usually circulates within the academic world ('the academy'), but academic writers are increasingly urged to address the ordinary audience outside academia.

All scientific research involves systematic observation, description and analysis as well as experimental research. Accordingly, scholarly writing follows an objective stance, to clearly identify a researchable problem and state its purpose and significance, and to organize with adequate detail so that other scholars could try to reproduce or replicate the results. Thus, the chapter focuses on the knowledge, skills and strategies needed to plan, write and review a college or university dissertation or thesis. That is, on what it takes to produce a dissertation or thesis research report. As such, we expect the learner who studies this chapter to be able to:

Recognise the meaning and purpose of academic writing, with keen focus on the dissertation and thesis, the importance of working effectively with the supervisor and the challenge of managing time, finances and other aspects effectively;

Describe different types of research and what the student researcher ought to master in order to execute her or his research effectively.

Lay out a comprehensive structure for writing up the dissertation or thesis as well as the institutional and other regulations governing such formal academic work.

Evaluate own performance against a list of guidelines and rules for students to adhere to when writing thesis or dissertation research.

WRITING VARIOUS ACADEMIC PRODUCTS

You may be familiar with the principles of essay writing, the most common form of academic writing, but it is worth reviewing briefly what an essay is really designed to do, and looking at how various types of research reporting may echo but also differ from a standard essay. The word essay derives from the French infinitive *essayer*, "to try" or "to attempt". In English essay first meant "a trial" or "an attempt", and this is still an alternative meaning. The definition of an essay is vague, overlapping with those of an article and a short story. One definition is a "prose composition with a focused subject of discussion" or a "long, systematic discourse". Different subject disciplines may emphasize different features, but broadly speaking, an essay is a continuous piece of writing, arranged in clearly demarcated paragraphs, in which an argument (a clear line of thought) is developed, in response to a central question or proposition (thesis in advanced essay writing). An essay is a short piece of writing that is often written from an author's personal point of view. Essays can consist of a number of elements, including: learned arguments, observations of daily life, recollections, reflections of the author, literary criticism, and political manifestos (Wikipedia, 2010)..

A research paper is a longer essay involving library research. It is a type of academic writing that needs a theoretical and methodical framework. The steps in writing a research paper are choosing a topic, finding information, defining thesis or central message, making a tentative outline, organising notes, writing the first draft, revising the outline and draft and editing and formatting the finished paper.

When selecting a topic for an essay or research paper, have something that interests and challenges you, as your treatment toward the topic may well influence the amount of effort and passion you put into it. Keep away from subjects that are too technical and those that have a limited range of references. Gathering and interpreting valuable data or information, documenting details, developing and organizing ideas and conclusions and communicating them clearly — all these tasks and experiences will prove to be an essential and rewarding part of your education. But you must also have a positive outlook and ability to accomplish it—writing a research or term paper is more than just having knowledge—these are the secrets to having a good, even an exceptional, research paper.

The word “thesis” comes from a Greek word meaning “position”, and refers to an intellectual proposition. It can also refer to central claim (thesis) of an essay or similar work. The line of argument is supported by evidence you have acquired through research, which you are required to analyse, and which supports or contradicts the various perspectives explored in the course of that argument. The essay then reaches a conclusion in the final section, which pulls together the threads of your argument, supporting, qualifying or rejecting the original thesis.

“Dissertation” comes from a Latin word that means “discourse.” In a general sense, the term “dissertation” can also mean, a treatise on some subject, without relation to obtaining an academic degree. A dissertation or thesis is a document submitted in support of candidature for the award of a degree or professional qualification presenting the author’s research and findings. In some countries and universities, the word thesis is used as part of a bachelor’s or master’s research. In the United Kingdom, a “Thesis” is a more common term for a research report associated with PhD and doctoral studies at the highest education level, whereas “Dissertation” is more commonly used to describe an undergraduate research paper or a master’s level research report. The reverse is true for the United States. The convention varies across countries.

Like the thesis, a dissertation contains a detailed exploration of evidence. The evidence referred to may comprise evidence from published texts, for example, if you are exploring the literary texts of a particular writer, or it may consist of primary data gathered by your own, first-hand research, for example, an educational study of attitudes to sex-based issues in education with research methods such as interviews and questionnaires. You are required to be clear about the nature of the methodology you will use for gathering the evidence – why are you collecting data or analysing evidence in *that* way rather than in another way? It must be underpinned throughout by awareness of theory – your argument should be placed within the context of existing theory relevant to the central research question. It has to be presented in a professionally finished manner. You are required to follow precise institutional specifications as well as conventional norms about the format, layout and stylistic requirements of dissertation or thesis reports. Make sure that you know exactly

what these are. Please remember that the contents of this chapter are generic and that it is important to ensure that you adapt them to meet the particular requirements of your discipline and university or college and probably the research supervisor. But what do you require to accomplish this important writing task?

PRE-WRITING KNOWLEDGE AND ORIENTATION

Why do graduate students not manage to get rolling on the dissertation any sooner, or keep rolling once they get started? Partly because the dissertation is a completely new experience that is much larger and more independent than any previous academic work. The dissertation is a new kind of academic project, unlike anything else you have done. It is the academic project that marks your transition from student to scholar; hence student research is basic training in the process of scientific inquiry and academic writing. But the dissertation is not a one-shot deal. Unlike the elaborate study strategies you developed in order to pass series of exams, doing research and writing the dissertation enables you to start developing a set of valuable research and writing skills. Thinking analytically, synthesizing complicated information, writing well, and organizing your time and resources will all serve you well regardless of the career you begin.

If you choose a career in academia, the systems of support, research strategies, work schedules, and writing techniques that help you do the dissertation will help you write books, articles and lectures for many years to come. Writing a dissertation is a lot like writing a book. It is, by definition, a self-directed process. There are usually no weekly deadlines from professors, no regular discussions with classmates, no reading assignments, no one telling you what to do — you are on your own, writing something longer than you have ever written, and doing it without a network; it is your project of which you are and should be master. This independence can make the process seem very intimidating.

Managing your topic

Remember that your topic is not carved in stone. A lot of people change their topics as they work, paring down certain parts of the project or adding others. Think about variables that could be cut down and how changes would affect the length, depth, breadth, and scholarly value of your study. Could you cut one or two experiments, case studies, regions, years, theorists, or chapters and still make a valuable contribution or, even more simply, just finish? While you want to keep your advisor and committee, if any, informed about changes in your focus, in some cases you do not have to follow strictly the research and writing plan that you suggested in your dissertation proposal.

But most universities expect and compel students to comply with the research proposal they presented to the department; as such modifications must be reported to the supervisor. Talk to your advisor about any changes you might or would like to make. S/he may be quite helpful to your desire to shorten an unwieldy project and may offer suggestions. Look at other dissertations from your department to get a sense of what kind of topic produces an acceptable dissertation—you may find that it is not the kind of huge masterpiece you were imagining and that you can work on a much smaller, more compact topic instead.

How to manage your supervisor

Since a dissertation is an individually devised piece of work, you will be assigned a personal supervisor, in some cases a committee, to support your research and writing. The onus of responsibility is yours to understand your supervisor and how best to work with her/him. It does not serve you well to be brash or rude and to imagine your rights without reflecting more on your obligations. Do not delay in having your first meeting with her or him, as it is vital to discuss not only what topic you will start by exploring, but also how you can best work on your dissertation. In order to help your supervisor help you, have a go at the short self-analysis reflection below and take your responses with you to your first meeting.

At this stage in your graduate career, you should expect to assume some independence. By the time you finish your project, you will know more about your subject than your supervisor does or committee members do. The student/supervisor relationship you have with your advisor will necessarily change as you take this big step toward becoming his/her colleague. But what does this mean?.

Talk with your advisor about how the two of you should work during the dissertation process. You might ask questions like: How often should I be in contact with you about my progress? Do you prefer to see whole drafts of chapters, relatively polished drafts, or are you happy to see smaller chunks of less-well-formed writing? If I give you a draft of a chapter on Monday, what do you think the turn-around time would be? Do you want to see the chapters in the order I write them, or in the order they will wind up?

Tell your advisor what kind of feedback would be most helpful to you. Sometimes an advisor can be giving unhelpful or discouraging feedback without realizing it. Letting him or her know, very specifically and very politely, what kinds of responses will be helpful to you at different stages of the writing process can help your advisor know how to help you, but this must be done cordially and with respect, as it certainly is not a right.

Keep your advisor informed. Advisors can be most helpful if they know what stage you are at, what problems you are experiencing, and what progress you have made. A weekly, bi-weekly, or monthly meeting or progress report can prove helpful.

Talk to other students who have the same advisor. You may find that they have developed strategies for working with your advisor that could help you communicate more effectively with him or her.

If you have recurring problems communicating with your advisor, you may request to make a change, if permissible. You could change advisors completely, but a less dramatic option might be to find another committee member who might be willing to serve as a “secondary advisor” and give you the kinds of feedback and support that you may need, but this must be handled most cautiously.

Work on time and financial management

Writing a dissertation can be very demanding in terms of managing your time and the process itself. It is a major piece of work and you are likely to have months before it is due and ready for submission, so the dissertation sometimes causes problems even for people who are normally good at meeting deadlines. Effective time and resource management would be a way to ease some of the external stresses of graduate school.

Draw an activity timetable or plan each day as well as a budget. Block out 30 minutes, an hour, 3 hours, or whatever time that you want to work on the dissertation. Choose a plan that works for you. Some people like to schedule their daily dissertation work in terms of hours and minutes worked; others in terms of “tasks completed” or “pages written”. Figure out which works best for you. Find a calendar, chart or other scheduling device that you like. Refer to it each morning to get a sense of what you plan to do each day. Stick to your schedule. When you make a promise to yourself that you will work for a specific period of time, keep it. Become someone you can count on. Even when you are dedicated to your dissertation and have no problems with your topic, advisor or committee, you can have trouble getting your dissertation written. Simple exhaustion, financial stresses, peer pressure, and family responsibilities can seem to conspire to keep you from doing the work that you need to do. In such circumstances, be your best counselor or seek external assistance – talk to someone, trusted friends or peers, and your supervisor especially.

One of the first steps in writing a dissertation is to read other dissertations. Study the different parts of the dissertation. Most are divided into the following sections: Chapter 1: The Problem and Introduction, Chapter 2: Review of Related Literature, Chapter 3: Methodology, Chapter 4: Results, and Chapter 5: Discussion. The best way to handle the problem is to divide it into smaller steps. Sectioning the dissertation process will make it easier and it will get finished before you even know it. Well, not quite. The point is that it is always easier to do one step and then another one.

If you know that you have a problem with independent work, or if you think that such a major undertaking will cause problems, make sure you read the *Being an*

Independent Learner Guide, which is full of practical advice about keeping on top of your work. You might also want to look at Section 3.1 in this guide, which is about organising your weekly schedule, and mapping out the weeks available to you. You may check whether any or all of the statements in the learner guide reflect your time use and work organization.

A crucial facet, often taken for granted by student researchers, is research funding and financial management. Research funding is a term which connotes funding obtained through a competitive process, in which potential research projects are evaluated and only the most promising receive funding. Such processes, which are run by government, corporations or foundations, allocate scarce funds. Most students in Africa have no access to such funding opportunities and therefore must rely on private funding of their research, usually by family, hence the compelling necessity for prudent management of very scarce resources. The most cost-effective way is to prepare a research budget early in research planning, with details of source(s) and every task of the research process.

Competition

Competition is rampant among graduate students for research funds, if any, for rapid progress with research and multiple human relation challenges. This competition for whatever reasons can lead to a cut-throat atmosphere even violence that encourages hostility and feelings of inadequacy or inferiority that inhibit much-needed personal growth and peer support. But what can you do if you feel that competition within your department or program is hindering your ability to get work done?

First, talk to a concerned person. Next, remember that you are not in competition with the students in your department. Compete with yourself on your task completion timetable. Your only competition is more than likely with the graduate students at other universities who will be applying for jobs in your field at the same time you are. So you have nothing to fear from the other people in your department. After all, the people you go to grad school with will be the people who may recommend you for various positions one day, review your book favorably, or greet you with a warm smile at your field's years after graduation.

WHY SCIENTIFIC WRITING FOR STUDENTS?

Dissertations and theses have become an integral component of Higher Education, and are often included in final level undergraduate work and teacher training, as well as form an inescapable task of graduate studies. Higher education students are expected to complete dissertation or thesis research reports as a partial graduation requirement. Dissertations provide the student with an opportunity for independent work on a topic that particularly interests her/him. It is worth bearing in mind that a dissertation is *not* a piece of writing designed to reproduce information

available elsewhere, but something created anew and expressive of the candidate's *individual abilities* to access, obtain, analyse and synthesise data. In addition, the process of academic writing will, of itself, help you to learn; by enabling you master your discipline by working with concepts and information relevant to your subject, and thereby developing your intellectual skills as well as organizational and decision-making *savoir-faire*. It is also an effective means of research training, which helps to develop advanced intellectual skills such as evaluation, analysis and synthesis, as well as management skills.

Research report writing is the result of your research, analysis, and investigations, which you present in a written form, in conformity to specifications, which you are compelled to know and follow. The student feels that s/he has understood the background of the problem sufficiently, designed and effectively completed a study on it, obtained useful data, and can use those data to draw conclusions about a scientific phenomenon, process or principle. But how exactly does s/he write all that? What is your advisor and institution expecting to see?

You did an experiment or study for a specific educational purpose, and now you have to write it up for your advisor to review. When writing a research report, you must remember that the main purpose of this academic assignment is to communicate the results of research, field work, or any other scientific activity. Successfully written research report presents the concrete evidence of the research conducted and how this was done. In report writing, you also must consider clarity, organization, and content. Do not forget to check for the specific requirements and guidelines, as you may end up producing quality, but out of topic assignment. This is because colleges and universities follow a set pattern of guidelines and rules students must adhere to when writing their dissertations or theses. Such reports not only help to identify new areas of study but also carry forward research of previously published studies.

You and your supervisor are both part of a scientific community in the local, national and international levels, and the people who participate in this community tend to share the same values. As long as you understand and respect scientific procedures and values, your writing will likely meet the expectations of your audience—beginning with your advisor. As you begin and continue, answer the question: why are you writing this research report? The practical answer is “Because the college or university program requires that I do so”, but that is classroom or theoretical thinking. The report that you generate from dissertation or thesis research serves a purpose in disciplines and service areas (<http://www.articlesalley.com>, 2010). Generally speaking, people investigating some scientific question or hypothesis have a responsibility to the rest of the scientific world to report their findings, especially if these findings add to or contradict previous knowledge. As you can probably imagine, people reading such reports have three primary goals:

1. They want to gather the information presented.
2. They want to know that the findings are legitimate.
3. They evaluate the research report by some generally agreed norms.

Institutional specifications

Graduate students sometimes report that they feel bogged down by departmental and faculty requirements, graduate school regulations, and other bits of bureaucracy. Here are a few tips to keep you sane:

- Investigate graduation requirements early and plan a meeting with the responsible officer to clarify the regulations to make sure you are making appropriate progress in your research plans and work.
- Acquire and hold all the specifications. Keep a list or calendar of all the institutional regulations and requirements. Check things off as you complete them, and write down upcoming deadlines.
- Keep good records. If you are granted any exceptions to departmental or University rules or if you do anything unusual to fulfill a particular requirement, make sure that you get a letter or evidence stating that you have fulfilled the given requirement in writing and keep a copy of it. You never know when personnel can change. The next person to hold the job may not know about your exception and may not be willing to uphold it without written proof.
- Make sure, if you are using human research participants in your dissertation research, that you have followed all of the paperwork for ethical treatment.
- A final tip: follow the rules for margins, fonts, table formats, and so on in early drafts. It is much easier to write your dissertation with all the formatting correct than to have to reformat several computer files at the last minute.

WRITING THE DISSERTATION/THESIS IN SECTIONS

It is important to be clear about the structure of your research report, to ensure that your ideas are clearly and logically presented to your reader, so that your argument, with its supporting evidence, can be followed. A typical thesis has a title page, preliminary pages, an abstract, a table of contents, a body, comprising the various chapters, and a references section. Theses and dissertations vary in their structure and length in accord with the many different areas of study (arts, humanities, social sciences, education, technology, etc.) and institutional norms, often derived or premised on such universalistic conventions as those of the *Publication Manual of the American Psychological Association* (APA, 1994).

Proposition or thesis

High-quality scientific research is framed on a proposition or thesis that the researcher evaluates critically and rigorously. You must remember that you are

constructing an argument or defending a thesis, from the beginning to the end of your research and report. Keep your thesis – the statement you are defending or central argument you are asserting – in the forefront of your mind as you develop and execute your research and as you write. Think of this central idea, and the logical development of your argument (train of thought) around this, as being the central path of your dissertation, and make sure that you do not have sections or paragraphs which are somewhere in the undergrowth or bushes out of sight of the main path. Every paragraph should further the central argument, by providing another angle on it, additional evidence, and evaluation of that evidence in relation to the central thesis until your conclusion.

Maintaining academic principles: ethics, referencing and intellectual honesty

It is very vital with a dissertation, as with all academic work, that your assignment meets the required standards in terms of ethics, accurate referencing, intellectual honesty and writing style. All research must be carried out in an ethical manner, without exploiting others or breaking agreed ethical rules. Your own discipline will have a set of ethical standards to which you must adhere: make sure that you know what these are, and take advice from your supervisor about any ethical issues arising from the nature of your particular study. Make sure, too, that all of your references to other people's work are made accurate and in accordance with the academic conventions of referencing, citations and references appropriate for your subject discipline. It is vital that all ideas and arguments drawn from the work of others are acknowledged, to ensure that you are not open to accusations of plagiarism, or passing off the ideas or words of others as if they are your own, which is criminal. Your dissertation should be your work, made up of your evaluation of evidence relevant to your central argument. Remember to check the style and accuracy of your own writing. Communicate as clearly as possible, in a style appropriate for serious academic work, but avoiding the use of cumbersome sentence constructions wherever possible. Use short sentences and a simple but elegant writing style that is not only readable and logically coherent but also enjoyable and factual.

The sections of the research report that are identified below come from the most-cited style source for educational and psychological literature – the *Publication Manual of the American Psychological Association* (APA, 1994). The sections identified here are those for peer review journal publication. The student and teacher should resort to other sources, particularly institutional guidelines, for details of dissertation or thesis structure and contents.

Title

It is important that the title be both brief and descriptive of your research. Internet search engines will use the title to help locate literature. Readers make quick decisions as to whether they are going to invest the time to read your article largely based on the title. Thus, the title should not contain jargon or vernacular. Rather, the title should be short (generally 15 words or less) and clearly indicate

what the study is about. If in doubt, try to specify the cause and effect relationship in your key point or the core variables. Avoid trite and wasteful phrases such as “A study of ...” or “An investigation to determine ...”, just state the central substance of the work.

Abstract

The abstract, which is often written last, serves two major purposes: it helps a person decide whether to read the work and it provides the reader with a framework for understanding the work if they decide to read it. Thus, your abstract should describe the most important aspects of the study within the length provided by your institution. As appropriate for your research, try to include a statement of the problem, the people you studied, the target variables, the instruments, the design, major findings, and conclusions and theoretical framework. If pressed for space, concentrate on the problem, method, and especially your findings.

Introduction

You will usually start your report with a paragraph or two presenting the investigated problem, the importance of the study, and an overview of your research strategy. You do not need to label this section. Its position within the paper makes that obvious.

The introductory paragraphs are usually followed by a review of the literature. Show how your research builds on prior knowledge by presenting and evaluating what is already known about your research problem. Assume that the readers possess a broad knowledge of the field, but not the cited articles, books and papers. Discuss the findings of works that are pertinent to your specific issue. You usually will not need to elaborate on methods.

The goal of the introduction and literature review is to demonstrate “the logical continuity between previous and present works” (APA, 1994, p. 11). This does not mean you need to provide an exhaustive historical review. Analyze the relationships among the related studies instead of presenting a series of seemingly unrelated abstracts or annotations. The introduction should motivate the study. The reader should understand why the problem was researched and why the study represents a contribution to existing knowledge. Unless the study is an evaluation of a program, it is generally inappropriate to attempt to motivate the study based on its social importance. The dissertation profile in tables that follow is from shrp.umdnj.edu/programs/psyc/.../ (2010).

Summary Contents of Chapter One

Chapter One: Introduction and Background	
Chapter/Section	Guidelines
Introduction Context and Background of Problem	Topical area clearly identified Focus narrowed to problem area Research trends related to problem delineated <i>Comments:</i> Is the topical area of interest to you? How and why?
Problem Statement and Goals	Clear statement of the problem Study goals/purpose(s) are clearly specified <i>Comments:</i> Translate facets of problem into specific objectives
Research Questions or Hypotheses	Research questions or hypotheses are clearly stated Conceptual definitions provided for key variables or terms Study boundaries set or delimitations specified <i>Comments:</i> Base these on the proposition of thesis you will pursue
Need for Study/ Significance	Justification (both theoretical and practical need) addressed Likely impact on problem resolution described or value of results <i>Comments:</i> Compelling reasons for the study and value of its findings

Method

The method section includes separate descriptions of the sample, the materials, and the procedures. These are subtitled and may be augmented by further sections, if needed, as the institution requires (see the table below). The design of the study, whether it is a case study, a survey, a controlled experiment, a meta-analysis, or some other type of research, is conveyed through the procedures subsection. It is here that the activities of the researcher are described, such as what was said to the participants, how groups were formed, what control mechanisms were employed, etc. The description is sufficient if enough detail is present for the reader to replicate the essential elements of the study. It is important for the procedures to conform to ethical criteria for researchers (APA, 1992).

Summary Contents of Chapter Three

Methods and Procedures	
Chapter/Section	Guidelines
Paradigm and Research Design	Rationale provided for general paradigm Research design fully described Selection of research design justified Research design is appropriate for addressing the problem Role of researcher specified (participant studies only) <i>Comments:</i>
Variables and Operational Definitions	All variables clearly identified All variables operationally defined <i>Comments:</i> How your independent and dependent variables are linked
Units of Analysis or Subjects	Units of analysis/research participants clearly identified Methods for selecting units of analysis/participants described and justified Units of analysis/participant selection is consistent with research questions and design If human subjects, ethical protections assured <i>Comments:</i>
Instrumentation, Data Collection, Reliability and Validity	Measurement tools and/or methods are clearly defined and consistent with variable definitions Data-gathering procedures are outlined Reliability and validity of tools and procedures are established or addressed Data-gathering tools and procedures are appropriate for addressing the problem <i>Comments:</i>
Data Analysis Plan	Data analysis methods clearly described Selection of data analysis methods justified <i>Comments:</i>
Methodological Assumptions and Limitations	Methodological assumptions specified Study limitations clearly identified <i>Comments:</i>

Describe your sample with sufficient detail so that it is clear what population(s) the sample represents. A discussion of how the sample was formed is needed for replicability and understanding your study. The APA Task Force on Statistical Inference points out “how a population is defined affects almost every conclusion about an article” (Wilkinson, et al., 1999). Convenience samples are not unusual in scientific inquiry; their use should not discourage you from seeking a publication outlet for your report. A description of your instruments, including all surveys,

tests, questionnaires, interview forms, and other tools used to provide data, should appear in the materials subsection. Evidence of reliability and validity should be presented. Since reliability is a property of scores from a specific use of a specific instrument for a specific population, you should provide reliability estimates based on your data.

Results

As you carry out your research it is important to remember that the time you have at your disposal is limited, and that the effort you put into this aspect of your dissertation needs to be reflected in the end product. To this end it is essential to plan your strategy and think about the overall structure of your dissertation sooner rather than later. Try to ensure that your research effort is aligned with the way in which your dissertation will be structured. There is a paradox, however. The Results chapter is often both the shortest and most important part of your report. Your Materials and Methods section shows how you obtained the results, and your Discussion section explores the significance of the results, so clearly the Results section forms the backbone of the research report. This section provides the most critical information about your study: the data that allow you to discuss how your hypothesis was or wasn't supported. But it does not provide anything else, which explains why this section is generally shorter than the others.

Summary Contents of Chapter Four

Results	
Chapter/Section	Guidelines
Data Collection and Validation	Data are properly collected and recorded Confidentiality safeguards are assured Validity and reliability of the data are established <i>Comments:</i>
Data Analysis Application	Methods utilized to analyze the data are applied correctly Key statistical tests assumptions are addressed Data analysis answers all research questions All numeric results include appropriate variance and/or error estimates (for inferential statistics) <i>Comments:</i>
Data Presentation	The findings are logically, systematically and clearly presented Properly formatted charts, tables, and figures support the presentation <i>Comments:</i> Present the results that pertain to each hypothesis in turn.

Present a summary of what you found in the results section. Here you should describe the techniques that you used; each analysis and the results of each analysis, preferably in terms of your research hypotheses or research questions, addressed in turns one at a time. Start with a description of any complications, such as protocol violations and missing data that may have occurred. Examine your data for anomalies, such as outliers, points of high influence, miscoded data, and illogical responses. Use your common sense to evaluate the quality of your data and make adjustments if need be. Describe the process that you used in order to assure your readers that your editing was appropriate and purified rather than skewed your results. With today's availability of statistical packages, it is fairly easy to use very sophisticated techniques to analyze your data. Understand the techniques you are using and the statistics that you are reporting. Try to use the simplest, appropriate technique for which you can meet the underlying assumptions.

If you are going to use inferential statistics, you should determine the power a priori based on your anticipated distribution, design, and definition of practical significance. This information must stem from your related literature and not the data that you collected. If you fail to reach statistical significance, then this analysis can be used to show that the finding does not stem from low power. Where appropriate, compute and report effect sizes or, at a minimum, be sure you provide enough information so effect sizes can be computed. Effect sizes provide a common metric for evaluating results across studies and aid in the design of future studies. They will be needed by anyone who attempts a quantitative synthesis of your study

along with the others in your area of research. For most research reports, the results should provide the summary details about what you found rather than an exhaustive listing of every possible analysis and every data point. Use carefully planned tables and graphs. While tables and graphs should be self-explanatory, do not include a table or graph unless it is discussed in the report. Limit them to those that help the reader understand your data as they relate to the investigated problem.

Discussion

At this point, you are the expert on your dataset and an authority on the problem you addressed. In this section, discuss and interpret your data for the reader, tell the reader of the implications of your findings and make recommendations. Do not be afraid to state your opinions, but be discrete. Many authors choose to begin the discussion section by highlighting key results. Return to the specific problem you investigated and tell the reader what you now think and why. Relate your findings to those of previous studies, by explaining relationships and supporting or disagreeing with what others have found. Describe your logic and draw your conclusions, part of which may be what you believe is the main contribution of your study. Be careful, however, not to over generalize your results. Your conclusions should be warranted by your study and your data. Be sure to recognize the limitations of your study. Try to anticipate the questions a reader will have and suggest what problems should be researched next in order to extend your findings into new areas.

Summary Contents of Chapter Five

Discussion	
Chapter/Section	Guidelines
Consistencies with Prior Research are discussed	Consistency of the findings with previous research are identified and discussed Inconsistencies with the findings of prior research are identified The implications of any consistencies or inconsistencies with prior research are all explained The 'fit' of the findings into the existing body of knowledge is assessed <i>Comments:</i>
Quality of Discussion	Discussion is limited to the study's findings All statements made are supported by the data Discussion is clear, logical, and complete <i>Comments:</i>
Conclusions and Recommendations	
Conclusions and Implications	Conclusions are clearly stated Conclusions are based on careful analysis, synthesis, and evaluation of the findings Conclusions are consistent with and flow from the discussion Both theoretical and practical implications are identified and described <i>Comments:</i>
Limitations	Study limitations and delimitations are reiterated Strengths and weaknesses of the study are identified and discussed Potential improvements in the design or methods are described <i>Comments:</i>
Generalizations	Conclusions and implications are discussed in the appropriate wider context Generalizations are properly delimited to the methods used and subjects studied <i>Comments:</i>
Unanswered Questions and Recommendations	Questions raised but not answered by the study are carefully delineated All recommendations are based upon the findings and conclusions Recommendations point to logical and appropriate action <i>Comments:</i>
Summary	The overall study is succinctly summarized, to include its significance for the field of study <i>Comments:</i>
Mechanical and Stylistic Criteria	
Mechanical and Stylistic Criteria	Style format (APA) strictly followed Elementary rules of usage followed Elementary principles of composition followed Presentation well-organized and lucid <i>Comments:</i>

References: There should be a one-to-one match between the references cited in the report (in-text) and the references listed in the reference section, organized in alphabetical order by author surname.

Appendices are key documents and such aspects of the report as Tables that are not included in text but are appended to it.

Once you have done all this, take it to the next meeting with your supervisor to check that you are on the right lines.

CONCLUSION

For most students dissertation or thesis research is an awesome experience, but a manageable one if you understand clearly what it entails and make cordial and respectful consultation when in difficulty or doubt. Efficient budgeting and effective management of time, energy, and resources is an asset that every research student should master and use to good effect.

There is much to be gained from critiquing your own work and you need to develop that skill. By now you may have become used to doing this before submitting your assignments. If not, it is particularly important to do so with such a substantive piece of work as a dissertation. When you have written something that relates to your dissertation, always put it aside for a few days. In other words 'sleep on it'; then reread and edit it with a critical eye. Try to put yourself in the position of someone who is interested in your topic but knows nothing about it. Would it make sense to him or her? Have you used the best words to express the points you are seeking to make? Where does what you have written fit into the dissertation as a whole? Will the joints show; is it logically coherent? In considering these and similar questions you will often be surprised at the changes you decide to make in the interests of enhanced clarity and greater variety and elegance in the language used. The Three Rs of competent writing are revise, revise, revise. This is especially important with a substantial piece of work like a thesis.

It is safe to consult laid down specifications and regularly follow a checklist to ensure task completion and satisfactory progress toward the final product and endpoint. For this, as for the entire research process, self-discipline and goal-focused independent functioning are keys to success. Critical reflective private thoughts consistent with ethical concerns and institutional norms are priceless.

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PART IX

INNOVATIONS IN CURRICULAR REFORMS

Africa has made attempts to reform the systems of education it inherited from Western colonizers. Regrettably, the reforms have tended to be incomplete, such that the issue of educational relevance persists. The five chapters of the final section of this Handbook suggest or present case studies of innovative curricular reforms. In Chapter Thirty Two, Lysette N'geng, Dieudonne Etoua Azo'o, Tabe John Tambe, and Clébert Hotou, explore the ways through which the Cameroon government initiated the introduction of local knowledge into the primary school syllabuses and why the initiative did not succeed as was expected. The authors explain how teacher training improved professionalisation and how pedagogic materials and guidelines were developed for rural communities. Chapter Thirty Three by Florence Yuyen and Bame Nsamenang reveals agrarian livelihoods as the mainstay of African economies and laments the absence from school curricula of content on agricultural knowledge and skills. She suggests ways of how to incorporate agriculture and nutrition into the curricula of African schools. In Chapter Thirty four, Emmanuel Fomba addresses the mismatch between indigenous production lines, especially in the Bali Nyonga community, and the school curriculum in Cameroon, which emphasizes white collar education. As such, entrepreneurial culture is dormant. Drawing lessons from indigenous vocational life, the author proposes mainstreaming of vocational attitudes and behaviors through community engagement as a sustainable measure that can cultivate productive competence within the school curriculum. One of Africa's most urgent societal and political challenges today is the promotion and constructive management of human diversity. Byron Brown and Almon Shumba, in Chapter Thirty Five, present a case study of the rainbow nation that is South Africa. They appreciate the unifying role of the Right Honourable Nelson Mandela and see the school as a primary channel through which to implement any vision that seeks to foster social cohesion and the valuing of cultural diversity. In this chapter, the authors briefly profile the rainbow status of South Africa and sketch how the philosophy and moral values of Nelson 'Madiba' Mandela's humanistic psychology can be infused into the school curriculum, preferably through teacher education, to overcome the challenges of multiculturalism. The time is now for the curricula of African schools to include the teaching of various sources of regional and national diversity and multiculturalism as assets rather than divisive issues.

In Chapter 36, the concluding chapter of the Handbook, Traoré and Fonkeng overview Africa's performance on the MDGs and muse over the progress it would make after the "magical" landmark year 2015. The critical issue for future concern is whether Africa will contend herself with achieving the MDGs, which is doubtful for most, or would desire and indeed design visionary education for taking over its resources, mastering its development and functioning like a confident, knowledgeable competitor in the global community. The authors briefly introduce the educational perspective of the African Union.

Chapter 32

**INTEGRATING LOCAL EDUCATIVE PRACTICES
IN CAMEROON'S PRIMARY EDUCATION**

Lysette Ngeng, Etoua Azoo, John Tabe-Tambe, and Grebert Hotou

CHAPTER OBJECTIVES

After reading this chapter, the reader is expected to be able to:

- 1) Describe a theory on local educative practices;
- 2) Explain efforts to adapt primary school programs to local educative practices in Cameroon;
- 3) Discuss how local educative practices can be applied in the school system;
- 4) Design teaching activities and evaluate local educative practices.

INTRODUCTION

Since independence, many training programs in Cameroon have been initiated by the government and its partners. Unfortunately, these programs did very little in attaining their expected social and economic objectives. Evaluation reports of the curricula in Cameroon show that they failed to consider the aspirations of the local population, as well as their problem-solving skills and strategies. This has led to a number of undesirable consequences; notably, the difference between school knowledge and daily local practices, disharmony in training profiles, professional profiles and employment offers. Research on the development of local practices is becoming more and more important in Africa (e.g., Ngeng, 2007; Dasen, Gajardo and Ngeng, 2005; Nsamenang, 1992, 2005).

In this chapter, we summarize some specific theoretical ideas on local educative practices that inspired reform in school pedagogy. The reform process has gone through several stages since the 1970s and has stabilized since about 2000 with the production of new curricula.

The pedagogy units at the Cameroonian ministries of education (Basic, Secondary and Higher education) have played a pivotal role in efforts to adapt teaching to the needs of the community, as has the Institute of Rural Applied Pedagogy (IRAP). The IRAP's primary objective was to introduce elements of ruralization (rural realities) in the primary school curriculum, and to produce teaching materials and training outlines to this effect. This reform failed because it was very limited in its integration of local realities. It only focused on agriculture. We are trying to demonstrate what strategies were used, and how professional subjects and local practices were introduced in primary school education. If new subjects and contents are well structured, teachers' and learners' roles and responsibilities have to be well defined. Ngeng (2007) has presented an example of this in her research on the teaching and learning of pottery.

SOME THEORETICAL CONCEPTS ON LOCAL EDUCATIVE PRACTICES

Most programs and training manuals used in Africa are based on theories and research elaborated outside the African context. For instance, most studies on child development presented in universities and some specialized schools dealing with children are from abroad. According to these studies, child development is universal. However, recent research on cultural and intercultural perspectives shows that the development and the behavior of the child are influenced by the environment (e.g., Guerraoui and Troadec, 2000). According to Nsamenang (1992:138), the “discourse on Africa’s indigenous early child development is best undertaken within its own world view, which inspires a circular path to human ontogenesis in three phases, identifiable more by cultural imperatives than by the biological markers that trigger them.” Indeed, child development involves stages in which children participate in the cultural and economic life of the family and society. It concerns all of life’s dimensions (language, food, clothing, health, spirituality and world vision, etc.). Children develop through learning from rituals, daily routines, appropriate activities in their environment that prepare them for adult life.

In an informal interview Ngeng (2009:265) had with Dasen, the latter reiterated the importance of integrating elements of the local culture, such as family practices and local activities, into the school curriculum. At present these are not present in school curricula, necessitating educational research in this area. He says:

in educational science, almost all the studies and theories concern formal education. When we mention education, we generally mean scholarization, and that has become true everywhere in the world, even though school is in fact an extreme imposition of colonial practices. Education, however, is very vast, and represents the cultural transmission of knowledge in all areas. Studying what happens in formal institutions is not devoid of interest, but education goes far beyond that.

Many educational and cultural forums have attempted to revise training programs in order to incorporate new teaching contents, methods and evaluations designed to link learners to their given environment.

In Cameroon, the 1995 National Forum on Education strongly recommended the insertion of local knowledge and practices in the school curriculum to make the education system more relevant to the learners. Thus, Ntebe (2007: 58) stressed that:

The syllabuses will translate into reality the “new educational policy” defined by the State, and will be adapted to national conditions.

They will specify the length of study, and the overarching objective of the policy, namely to train men and women who are creative, productive and open to the world. They will no longer contain only knowledge, but will be presented in the form of curriculum guides. The syllabuses will present well-defined training objectives, relevant content and practices, proven methodologies, and an evaluation system that aligns with predetermined objectives. They will systematically include content on family life and human rights. They will allow the two official languages, national languages, and national cultures to have the prominence they deserve

The role of teacher training colleges (TTC) in rural applied pedagogy

The idea of rural education was proposed as a result of most children in rural areas not attaining a high level of primary education. Over 75% of the pupils enrolled in primary education (class two) did not reach class six. There were two main causes identified: firstly, the insufficient training of teachers, and, secondly, the lack of adaptation of the syllabuses to local needs. One strategy aimed at improving this situation was to include Cameroonian and African skills and practices into the curriculum. However, basing itself on the fact that the Cameroonian society and economy were basically rural, and ignoring the fact that urban areas were rapidly expanding, UNESCO proposed new content for teacher training focused only on rural practices (agriculture). Its innovation was limited to professional development courses on Negro African Literature and Universal Child Psychology for current teachers.

Three important questions are pertinent here. First, were these subjects really relevant to students living in urban areas? Second, how could the new subjects increase success in class? Third, what were the lessons for subsequent reforms?

THE INSTITUTES OF RURAL APPLIED PEDAGOGY (IRAP) AND THE RURALIZATION OF PRIMARY EDUCATION IN CAMEROON

To complete the role of the TTC, the IRAP of Yaoundé and Buea revised the primary school curriculum to include subjects based on the principles of ruralization of primary education. It put into place adapted programs and an integrated training that combined general knowledge with the practice of agriculture, animal husbandry, poultry, brick laying, carpentry, etc. IRAP focused on research that reformed the curriculum and produced new teaching tools (prototypes, manuals, educational

materials, fact sheets and teaching guides, etc.). Here, we have underlined some problems that led to the failure of ruralization project. First, IRAP faced the problem of leadership. The designers, practitioners, producers, researchers and trainers employed by the institute lacked coordination.

The main pedagogical problem was the imbalance between traditional subjects (French, Mathematics and Science) that had been “well developed” (Western style), and the new subject (rural practices), that was limited to the study of local milieu. Schools had started to teach different subjects (such as French and Mathematics) and skills through agriculture, using school farms. For example, in class six, the content consisted of practical work to improve the school environment. This practical work included the construction and maintenance of pipe-born water, latrines, rural school workshop, and cultivation of gardens on the school premises. The introduction of this content was seen as relevant to the ways of rural life, marking a great step towards the acquisition of agricultural know-how. But what about other artisanal trades?

According to theories on local educative practices, ruralization is one way to teach or learn through local practices. Other teaching methods can be created to adapt to another local area like the city. Then, the word “rural” that constitutes the biggest criticism of this reform, can be replaced by a relevant term. This means that different subjects (Math, History, Science, Geography, Language . . .) could be taught through local practices. The idea of teaching through local practices is good, but all the factors to enable the learner work independently and effectively after the training, is not taken into account. For example, in ruralization, factors such as the age to engage independently in farming, the land title, the access to credit were not considered.

PROFESSIONALIZATION AND INTEGRATION OF LOCAL PRACTICES IN PRIMARY EDUCATION

The primary idea in the professionalization of education was to introduce professional subjects in the school curricula. This would allow learners to meet the needs of the labor market once they left school. Here, we analyze some strategies used by policymakers to develop professionalization.

A Department of Educational Science was opened in the University of Yaoundé 1 to train teachers to meet this need. This department currently offers a Master’s Degree in Educational Science. Informal statistics show that 95% of students enrolled in the program are teachers. One wonders if this is an environment that allows them to think about their teaching practice. Work is underway to define the profile of this master’s program. However, it is important to underline that studies aimed at analyzing professional skills of the trainers are rare (Choy, Pearce and Blakeley, 1999).

Recognition of teacher knowledge is another aspect of professionalization. It is based on the concept of expertise. Many efforts are made to improve initial and continuous training of teachers. Today, over 15,000 teachers have been trained and recruited. However, work still needs to be done to improve working conditions. Primary school teachers are now able to get their academic credentials recognized, and have access to additional training. They are now able to pursue higher education. The Special Status of the Cameroonian Education Staff defines salary scales. However, this legal document does not mention teachers' rights and responsibilities on a professional level. Much work still has to be done to define the skill set required of a teacher. Certain documents have been drafted to define the responsibilities of principals and teachers, but these documents lack depth and vision.

The redesigning of curricula to adapt to national realities is the most striking feature of professionalization. In the 90s, the General Inspectorate of Pedagogy (GIP) responsible of Nursery, Primary and Teacher Education finalized the syllabi for primary education initiated by IRAP. The national syllabus for English-speaking primary schools in Cameroon contains three groups of new subjects: national languages, science, and practical activities. The introduction of national languages, hailed as a major revolution, is intriguing, since the content was not included in the syllabuses. Nevertheless, a few schools, for example, Lycée Général Leclerc in Yaoundé for Ewondo language, are experimenting with this idea. The need for a policy on national language teaching is urgent. Countries like Mali and Burkina Faso have succeeded in their national language program.

The science curriculum on its own is open to local practices. Contents refer to the observation, manipulation and experimentation of some daily life activities linked to health, environment, practical hygiene, agriculture, and the living milieu. The main innovation here is studying the natural milieu. The pupils are encouraged to solve problems and explain the procedures. However, as of yet, there is no direct link established between math problems at school and math strategies used in everyday life. The Math curriculum does not yet align with the beliefs of advocates of ethno-mathematics (e.g., Dasen, Ngeng and Gajardo, 2005). In this regard, South African researchers are much more advanced. Mosimege and Lebeta (2000) studied the mathematical concepts and their use to analyze the work of professionals of the Basotho and Lesedi villages invited to the school. They reported that with the collaboration of bamboo bed makers, they studied straightness, lines and angles. In addition, the introduction of a game of chess (Morabaraba) in class has permitted the study of squares, ratios and proportion between lines and squares to complete the table of games, logical deductions, etc (Nkopodi and Mosimege, 2009). All these activities were constructed with the participation of pupils who gave their perceptions of the game as they practiced. They also gathered information on the origin of the game, the local linguistic expressions used to describe the elements of the game, etc., which reflected the learner's society.

If the Math curriculum was conceived and taught as described above, through local activities, then teaching practical activities would be the initial step. Teaching of practical activities and entertainment related to the national culture, dance, music, singing, drawing, decorating and home economics essentially aims to develop local knowledge, thus integrating daily activities acquired outside of school, into the school domain (Dasen, 2004, Ngeng, 2007). The teacher offers empirical work to help students acquire knowledge. One of these tasks is to ask learners to meet professionals in their locality, identify artifacts and investigate the manufacturing processes in order to share experiences during the lesson. Another task is to have the pupil make an object of his choice with the material brought from home, and present his work to the class or an examiner. Listed below are some evaluation questions adapted to this orientation, and formulated for the primary school leaving examination.

- 1- Drawing and decoration:** Before you reach your home from school, there is a market by the roadside that causes many car accidents. Draw road signs to direct drivers and motorcyclists and to indicate the presence of a market.
- 2- Modeling:** Choose from the materials below, and identify with a cross what you would use to make mud bricks. With the aid of a mold, use the chosen material and make three bricks. 1- cement, 2- alcohol, 3- laterites, 4- petrol, 5- sand, 6- water, 7- engine oil, 8- mould.
- 3- Cutting and pasting:** Use newspapers and journals to cut images of your choice and prepare a scrapbook.

Instructions

Material could be prepared in advance before the examination day. There are other strategies based on decentralized management of staff and pedagogic units. They govern most relationships between teachers and their supervisors. All these innovations highlight the autonomy of teachers to construct learning situations and apply appropriate teaching methods.

- How to teach local practical activities in schools: examples in gardening and national culture

Table 1: Skeleton for the teaching of National Culture

Subject: National Culture (2000)		
Stages	Teacher's activity	Learner's activity
Revision	Asks questions to recall the last topic	Answers the questions
Simulation exercise	Announces the visit to a memorable place/local activity Tells a story about the new topic Asks pupils to fill the check list	Observes what happens Asks questions to understand better Fills in the observation grid
Analysis	Asks to say what the pupils observed and how they observed	Says what he observed and how he observed
Synthesis of discussions	Asks prepared questions to structure the summary	Answers the questions
Summary	Writes the answers on the board	Copies the summary on the exercise book
Evaluation	Gives some exercises to do Asks pupils to evaluate their work Corrects the exercises	Does the exercises Comments and evaluate his work Corrects the exercises

Table 2: Skeleton for the teaching of Gardening

Subject : Gardening (1970)		
Stages	Teacher's activity	Learner's activity
Preliminary of intensity: the garden project	Explains the objective of the garden project: to participate in a competition	Becomes aware of the task to compete for the best garden
Land preparation	Describes and distributes tasks	Studies the climate, soil, seasons and temperatures. Decides what to keep. Removes stones, roots and bush. Suppresses weeds
Improving the site system		Levels the field. Installs fences, hedges or walls. Digs drainage ditches. Installs the sprinkler or irrigation. Provides/ builds a garden, shed
Preparing materials and plants	Distributes tasks	Prepares seeds, tools and fertilizers
Planning work	Says what to grow, how, when and where to grow	Applies gardening methods Uses tools
Maintenance	Distributes care tasks	Treats soils / Heals plants Monitors and waters
Harvesting	Explains how to do harvesting storage and conservation	Does harvesting, stores and conserves.
Result	Informs pupils of the result of the competition	Is informed of the result of the competition

These cards are suggested by teachers and the skeleton can be changed according to contents and tasks. We argue that the best methods of teaching are derived from survey, observation, interview and practice. Pupils can exercise the methods with experts, resource persons or parents. A lesson based on these methods and carried out by children, is rich and exciting. This approach is observed in the teaching of the national culture, but absent for gardening (see table 2). In the 1970s, agriculture and gardening were practical lessons. Even if the teacher gave some theoretical orientations, students did it practically. Each school had a garden in which agriculture was practiced.

In the last decade, educational researchers have argued that teaching local practices in school not only allows pupils to perform tasks, but also allows pupils and teachers alike to develop pedagogical processes. Ngeng (2007) focused on this aspect in her observation of novice potters during their learning process. She analyzed the interactions between an expert potter and an apprentice. This analysis allowed her to categorize processes developed by the teacher and the pupil to improve task performance.

Types of teacher’s activities / Types of learner’s activities

This table lists and classifies processes according to three aspects (action, metacognition and verbalisation). The different types of assistance can be offered simultaneously. As far as teaching processes are concerned, the teacher provides support to the pupil with actions. These actions show the pupil how to proceed. Metacognitive assistance is the support offered by the teacher to the learner by carrying out actions or giving oral instructions, in order to control and regulate a task. Verbal assistance is any support given by the instructor orally.

Table 3: typology of processes

The teaching processes in an interactive situation assistance	Assistance by action	Scaffolding Modelling Demonstrating Adjusting learner’s action Pointing	The learning in an processes interactive situation	Action	Imitating Observing Carrying out instructions
	Metacognitive correcting	Controlling Evaluating Questioning Repairing and errors Helping by choosing and using tools. Designing and planning the task Explaining Providing help		Metacognition	Controlling Evaluating Questioning Choosing and using tools Designing and planning tasks Explaining Trials and errors Seeking help
	Verbal assistance	Instructing Encouraging Inviting to observe and be attentive			

Source: Ngeng, 2007 (pp. 64 – 65)

From the learner's perspective, the action and metacognition are categories of autonomy. The learner acts and thinks independently from the teacher. In the action phase, the learner shows that s/he can perform a task by him/herself. Metacognition refers to the set of processes that provoke self-awareness, and the procedures used to carry out and regulate the task. Ngeng (2007) emphasizes that some of the teaching processes reduce and disappear as the learner evolves in learning. For example, the progressive reduction of scaffolding shows that the learner is becoming more autonomous. All these processes should be used in classrooms.

CONCLUSION

In this chapter, we have described certain strategies used in the reform of school curriculum. The analysis of ruralization and professionalization strategies shows that we have not yet found a way to develop curriculum that adequately meets national needs. Teacher training programs have been greatly improved. However, including teachers' and students' informal experiences (in their families and communities) could be a way to further enrich the school program and the pedagogic documents.

EXERCISES FOR THE LEARNERS

1. Identify two theoretical concepts on local knowledge. Explain and criticise them.
2. Find three arguments to justify the introduction of local knowledge in the school syllabuses. Which aspect(s) of local knowledge would you like to teach? Why? How would you teach them?
3. Discuss three critical ideas on ruralisation or urbanization of school content.
4. Observe the teaching of a practical activity in class and verify if the teaching and learning processes identified in this chapter are applicable. Mention other processes suggested by the practice of this activity.
5. Identify two differences and similarities between the teaching of local knowledge in 1970 and 2000. Comment on the strengths and weaknesses of the teaching of farming or national culture and suggest a new skeleton.
6. Observe the development of a practical activity between an expert and a learner (novice) at home and explain to your classmate what and how the expert and the learner did.
7. What is professionalized teaching? Which strategies were used for a professionalized teaching? Identify and describe another strategy you think appropriate for a professionalized teaching.

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Chapter 33

**AGRICULTURE AS CENTRAL TO AFRICA'S EDUCATIONAL
DEVELOPMENT AND EFFECTIVE LEARNING**

Florence W. Yuyen and A. Bame Nsamenang

CHAPTER OBJECTIVES

By the end of this chapter, the reader should be able to:

- 1) State what rights-based participation as provisioned in the Convention on the Rights of the Child entails;
- 2) Explain the productive base of African economies;
- 3) Outline Africa's food production chain;
- 4) Describe ways by which to improve food yields and nutritional status and add variety to African family diets;
- 5) Rationalize the call for incorporation of agricultural knowledge and skills into all levels of Africa's education systems.

INTRODUCTION

Although the concern of this handbook is first and foremost educational, we have devoted this chapter entirely to aspects of the agricultural sector of African countries not only because Africa is a continent in which agrarian behavior engages the vast majority of the population but more because agriculture should ensure food security and adequate nutrition of schoolchildren that in turn determine effective learning. Most children in rural Africa and some in peri-urban areas combine schooling with socialization into a variety of agricultural productivity from an early age. Most Cameroonians are still more dependent on the food they produce and the animals they herd than on the goods they manufacture (Nsamenang, 1992). Is it not absurd, then, that knowledge and skills on agriculture and nutrition are not integrated into school curricula of most African countries commensurate to agriculture being the core of Africa's political economies?

Agriculture in general and school meals in particular contribute over the long term to combating poverty; they also help to reduce disease (FAO, 1997a). Agriculture provides a platform for directly addressing child health and nutrition, for example, through deworming schemes. It can also be a platform for other health interventions (see Brannen, Chapter 24, this volume). The extent to which education planners and curriculum experts in an Africa whose population survives on farm produce are aware of this state of their political economies is indeed doubtful. This chapter endeavors to summarize the essential elements and linkages between agriculture in general and food crops production in particular to the health of schoolchildren.

The possibilities for integrating nutritional considerations into the productive aspects of agriculture are extensive. Effectiveness depends on approach and attitude, rather than simply adding agriculture as an academic subject to the school curriculum. Regardless of the approach adopted, the work will be challenging, but also exciting, for both the teaching staff and the students.

Food security and nutrition involves a chain of activities or path from producer to consumer and the role of agriculture in human development in Africa. The chapter stresses the importance of linkages between agriculture and nutrition in the development of the continent and highlights the need for sub-Saharan Africa to develop its greatest assets: the productive capacities of its land and its people (FAO, 1997a), which should include capacitating schoolchildren in the food crop production chain. This invokes rights issues.

UNITED NATIONS CONVENTION ON THE RIGHTS OF THE CHILD

The need for any meaningful school system in Africa to participate in agriculture is highlighted. This would familiarize graduates from African education systems with the stark realities and livelihoods of their communities and countries. But we must understand and situate the participative role and productive capacity of Africa's young citizens within the *Convention on the Rights of the Child* (CRC). The *Convention* recognizes children's rights as citizens, who are capable of participating in the cultural affairs and social life of their families and communities. However, the participation must be "protected" from abuse within the provisions of the same *Convention*.

At this juncture it seems essential to call on teachers and their students to explore the full text of the *Convention* and the *African Charter on People's Rights and Freedoms* in order to know exactly what these "rights" are, and distinguish children's rights, obligations and protective factors and the role of different parties, including parents, the school and the State. The provision of "rights" in the *Convention* and *Charter* implies understanding and handling children as rights-holders capable of striving to achieve these rights if they are denied or violated. In addition, the right to participation is meaningful in the face of children's natural disposition to curiosity of participation in ongoing activities from an early age. This brings to the fore Africa's widespread productive participation of children in the subsistence life of family and community, most of them alongside with schooling. As such, we visualize the positioning of Africa's next generations as a reliable and hopeful bridge into an uncertain future to be best undertaken from a policy of creative integration of knowledge and skills acquisition on agriculture in African school curricula. Therefore, we should desist from current practices of condemning centuries-old productive roles of Africa's children as child labor, because this disables as much as 70% of the continent's population of young citizens (Nsamenang, 2008). Given the essential value of the school in preparing the next generations of Africans for a competitive world and the place of agrarian activities in survival, Africa should shrewdly blend children's participation in agriculture with schooling.

THE FAMILY: AFRICA'S MAIN PRODUCTIVE UNIT

The African family is the hub of childbearing and childrearing from which social relations ramify and within which prosocial values and productive skills are learned. In traditional Cameroon, as in much of Africa, the dichotomy between rural versus urban family life is obvious, although the family is still the main productive unit in which men and women play different, supportive duties. In rural communities, a cooperative spirit in family agriculture enlists various self-help efforts or local support systems that farmers use to organize and manage farm work and land tenure practices. This involves collective ownership and local knowledge and techniques of labor mobilization and crop production that varies from one ethnic community to another. With the Nso of Cameroon, for example, labor mobilization during the cropping and harvesting seasons are sometimes collective and rotational. A group of farmers or families work on each member's farm in turns until everyone's farm work or harvest is completed. The "modern" version of this system is common initiative groups of thrift societies. Features of the system carry implications for the concept of cooperative learning wherein a study group of students could support and reinforce each other by handling one another's difficulties. Of course, this has to be figured out well to demarcate instructions so that school assignments are completed by individual students with the support of peer mentoring.

Local farming practices are needs-based. Actual farming behaviors and activities take place in a specific place – fields, soils, and crops – and at a given time determined by the weather, season, cycle of pests, and the main reason for farming a particular crop in a given community with its needs, nutritional tastes and social attitudes and eating practices. Farming reflects the particular cropping patterns and centuries-old local farming techniques. They also vary with the climate and the nature of the landscape and are tuned to the social and cultural values and food habits of the local community, both of which go a long way to determine the nutritional status of the people. All these vary from one family and community to another. When men, women, and children worked together for family subsistence, family members kept close to each other and children had a clear picture of their parents' lives and occupations. Survival and productive skills are nurtured from early childhood. This permits children to learn comportment and practical skills directly from their parents. How, then, can teachers be inspirational models and senior students helpful mentors?

FAMILY FOOD GARDENS

Farming occurs on land, of course. It is therefore important to understand the local land tenure system vis-à-vis national land laws. These should be taught in school so that children become aware of the national land tenure system and how farmers acquire, retain or give up farmlands. Therefore, it behooves the teacher and students to explore the land ownership system of the community of their school and the land laws of the country that drives agricultural activities. In most countries,

this is complicated in the sense that before nation-states were created in Africa there were and still there are land-owning and landless families. But in most African countries today, the State assumes ownership of all land, although somehow families still retain sort of ownership of the land of their ancestors, which the State can 'take over' at times of need.

In sub-Saharan Africa, agriculture constitutes the livelihood of 69 percent of the economically active population (FAO, 1995). Farming is labor-intensive and mainly the labor of the extended family is used. Farming practices are delicately adapted to the physical environment and social organization of the labor force of the family and community that either sustains or does not support them (www.eoearth.org/article/Agriculture_and_development_in_Africa, 2010). Farm fields are found in diverse landscapes, such as coastal forest areas, the savannah ecology, and the Sahel. The social systems consist of settled populations and migratory societies. For example, livestock, found mainly in the savannah and Sahel vegetation belts, is mainly in the hands of semi-nomadic populations. The injection of the productive orientation of childhood care and education into the academic content of school curricula is the more required as peasant agriculture remains the major employment sector in a continent which continues to prepare children mainly for white-collar employment in economies with very high literate unemployment rates.

Food security, food self-sufficiency, sociocultural beliefs and practices, eating habits as well as poverty alleviation play vital roles in the practice of food crop production and diet variety. The produce must however satisfy the immediate food consumption needs, have an acceptable taste, and be socioculturally acceptable. This has great implications for the success of food policies designed to ensure food self-sufficiency that entail using improved seeds, mineral fertilizers, chemical products for pest, weeds and disease control known to produce crops with altered taste and hence socioculturally unacceptable. This is a complex matter that requires sensitive understanding in every community and nation.

The productive capacities of natural resources on the continent depend on the productive capacities of its people. In rural communities producers and consumers live in the same household and are often the same people. The way rural households function and make decisions and their visions of the future have long been recognized as essential information for planners and policy-makers in the agricultural sector. It needs to be recognized by curriculum planners as well. What is less frequently recognized among policy planners is the significance of the consequences of different levels and patterns of consumption and the effects of agricultural decisions on the household food security and nutritional status of both the producers and the consumers in rural and urban areas, especially the nutritional status of schoolchildren.

In Cameroon, as in much of Africa, farming practices are context-bound. Small-sized farm holdings are family-owned, with the main crops cultivated being food staples to feed the family, but with growing interest to market the surplus. Along the traditional food crop base is the modern sector characterized by use of improved seeds, mineral fertilizers, phytosanitary products for control of pests, diseases and weeds, modern farm tools and machinery and hired labor. The farm sizes are medium to large scale and owned by elite farmers, private companies or/and development corporations with some of the main crops produced being rice, sugar, fruits, vegetables, and vegetable oils. The produce from this sector is mainly for sale. Agricultural crops are 'divided' by sex, meaning that men and women cultivate different crops. In general, men and women work together to produce the bulk of food crops, but women are the primary producers of food crops, while men engage in the cultivation of the so-called 'cash crops'. But today and for various reasons food crops have gained added commercial value over 'cash' crops to the disadvantage of men farmer, as the prices of 'cash' crops in the world market has slumped drastically, as Africans persist in the international division of labor as junior partners who consume expensive manufactured Western goods and cultivate cheap cash crops such as coffee, cocoa, tea, cotton, tobacco, rubber, etc. and minerals for Western industries. As a result, the export-oriented nature of agricultural produce leaves most African economies dependent on Western economies. The extent to which this pattern of externally motivated farming accounts for longstanding famine in some parts of Africa has not been analyzed.

THE FOOD CHAIN: PRODUCTION-TO-CONSUMPTION LINKAGES

To nourish is "to sustain with food"; food is a necessity of life, and all creatures must eat to live (FAO, 1997a). Food acquisition is therefore a major preoccupation of all animals. Cultivation of the soil and domestication of plants and animals are widely recognized as major developments in the progress of human societies that have diversified their food acquisition strategies. During the past three decades the growth of global food production has been faster than the increase in the world's population, yet hundreds of millions of poor people do not share in this abundance. Food production at the macro level is linked to food consumption and nutritional status at the micro level (i.e. the household and the individual) by a complex network of interactions. Understanding how these interactions work can be an important stage in addressing the problems of poverty, food insecurity and malnutrition and identifying actions to attain nutritional wellbeing. Food insecurity or lack of access to a nutritionally adequate diet in a household or community can take various forms. For example, chronic food insecurity exists when food supplies are persistently insufficient to supply adequate nutrition for all individuals. Low-income groups, such as the urban poor, rural landless and smallholder farmers and pastoralists, are the most vulnerable to food insecurity. Such groups often lack sufficient income

and/or cannot produce enough food for adequate nutrition. Even though total food supply may be secure in a country or a region, households or individuals may not have access to adequate food. In other words, sufficient supply at the national level does not necessarily guarantee access at the household level. Household food security, however, is only possible in a situation that ensures adequate national or local food supplies. This relationship shows that it is very important for policy-makers to distinguish food security at the national, regional and household levels

Transitory food insecurity occurs when there is a temporary decline in access to adequate food because of instability in food production, food prices or incomes, as occurred, for example, during the serious droughts in the Sahel and the Horn of Africa from 1983 to 1985 and in southern Africa in the early 1990s. Transitory food insecurity is not necessarily a one-off event, as witnessed in the Horn of Africa, which has been threatened by recurrent droughts since the early 1980s. The distinction between chronic and transitory food insecurity refers to the time dimension of the food problem, i.e. whether it is persistent or short-term. A further distinction between national and individual insecurity can be made, which refers to the macro and micro dimensions of the problem. National food insecurity exists when a country is unable to meet its domestic food requirements through production, imports or run-down of stocks and reserves. National food security is not the same as national self-sufficiency. Although supply security can be achieved through a policy of self-sufficiency, it can also be achieved through food imports or by a combination of imports and domestic production. Few countries are entirely self-sufficient with regard to food. The degree to which staple food supply needs should be met through imports rather than domestic production remains a key policy issue in African countries. Discussion of this issue is, however, beyond the scope of this chapter.

BOOSTING AGRICULTURAL PRODUCTION TO IMPROVE FAMILY DIETS

The poor diet that most African children eat is one of the main causes of African poverty and underdevelopment. Poverty stems from lack of a balanced diet and as a result, poor or bad brain development. To conceive and execute good strategies, one requires good working brains with analytical thinking and reflection as key processes. Good brains feed on good food. Good food or improved diet improves health, learning and academic achievements. Agriculture is a key economic activity that provides employment and livelihoods to the majority of Africans and could serve as the basis for Africa's industrialization. About 203 million people in Africa or 56.6 percent of the total labor force were engaged in agricultural labor in 2002 and in most African countries agriculture supports the survival and well-being of up to 70% of the population (www.eoearth.org/article/Agriculture_and_development_in_Africa, 2010).

Native foodstuffs like egusi, a light green melon, that provide a wide range of nutrients have been available in Africa from antiquity, but many remain relatively untapped, unimproved—or are disappearing—because science has not focused on improving them. Egusi is known for the richness found in its seeds. Egusi seeds are rich in vitamins and minerals—a bonus in a region where getting enough nutrition is a daily hassle. But because egusi is not easy to process, it's not eaten as widely as it could be. As a result, production remains a local, farm-by-farm phenomenon, and not a success story in the ongoing war against malnutrition in Africa. Too much of the effort to feed Africans has been based on large-scale farming of staple crops, such as maize and rice and lunch packages to schools. Aid agencies and national governments have not focused enough on developing a variety of food plants, often overlooking valuable crops in their midst. Part of the problem is the perception that people need calories and protein but many people need the nutrition of a wide variety of foods.

Many local people cultivate native food plants in their gardens and farms. Children often eat wild fruits, like those of the marula tree, the juice of which contains four times the vitamin C of an orange. The know-how of the local people of the world is huge but it is underutilized and needs to be explored for cost-effective harnessing. It is somewhat disconcerting that, at a time when the nutritional science in the West is focusing on local, fresh, and a large variety of foods, we are not seeing it in Africa. The school is the place not only to change this but also to introduce food variety into the diet. The school farm should introduce and lead a needed food crop variety and dietary revolution. We leave this to each school system to determine how best to achieve in and for the local context and its population. The school farm should feature locally produced, farm-fresh foods such as fruits and vegetables, eggs, honey, meat, and beans on their menus, even if it only guides students to a balance diet. Schools should also incorporate nutrition-based curriculum and provide students with experiential learning opportunities such as farm visits, gardening, and recycling programs. The result would be students' access to fresh, local foods, and farmers have access to new markets through school sales. Farmers and the population are also able to participate in programs designed to educate children about local food and agriculture. Farm to Schools in the UK and USA provide models for positively influencing children's eating habits through school cafeteria improvements, hands-on nutrition education, and community involvement and support (Wikipedia, 2010). The last decade has witnessed a tremendous spike in nutrition- and health-related diseases in Africa, especially those affecting children. In response, there have been numerous initiatives undertaken to combat the growing rates of childhood nutrition-related diseases. The Farm to School is one such initiative, and it also has the added benefits of supporting small farmers, local agriculture, and local economies (Wikipedia, 2010).

From a nutritional point of view, many otherwise nutritious food crops are “the lost crops of Africa.” Such food plants are often present in the landscape,

however, not truly “lost”, but they are not being used sufficiently to make a dent in Africa’s food problem. Should schools and researchers not be provided an incentive and a legitimization to work with these plants? School farms and research agendas should discover the “lost crops” and help boost the production of variety of food crops across Africa. African countries may soon face new agricultural challenges – ones that may be met with the help of native food plants. Environmental and climatic changes, both sudden and gradual, impact agricultural productivity and directly affect the livelihoods of many Africans. With climate change staring right at us, Africa’s invisible and “lost” crops are on the doorstep of science, just waiting to be worked with. This can be good sources of cash as well as balance diet. Nevertheless, in improving food items we must know that until native foods gain wide acceptance they are often looked down upon by various populations, native and otherwise. It is kind of like the peanut and the melon seed, among other food crops, that have been available for centuries but are not suitable dietary use. Innovative school curricula should be designed to reverse all this and more.

Traditional diets are formulated based on local staple usually cereal grains such as maize, sorghum, millet and rice and roots and tubers such as yam and cassava. Food habits are based on cultural values and to add variety to the local diet entails not only research but more crucially changing consumption patterns and introducing new tastes. Maize, like most other food crop, processing in West Africa is based on traditional indigenous technology, which utilizes local raw materials, and in most cases, local equipment. These technologies are simple, with most of them having been developed through experience in the production of products of desirable quality. Maize, for example, is processed into a wide range of foods and beverages ranging from weaning and children’s breakfast porridge to adult main meals and snack foods. Evidence indicates that it is quite possible to improve the nutrient quality and acceptability of these cereals and legumes and exploit their potentials as human foods by adopting newer scientific processing methods. In doing so, it is essential to take into account the fact that many brands of low-cost proprietary weaning foods have been developed from locally available high calorie cereals and legumes in tropical Africa. Most African cereal grains lack two essential amino acids, lysine and tryptophan, thus making their protein quality poorer compared to that of animals. Germination or fermentation has been reported as ways of improving cereal-protein quality (Babu, 1976). Research has documented increased lysine and tryptophan in germinated corn, improved vitamin content of germinated sorghum and maize and increased amino acid and vitamins of fermented blends of cereals and soybeans. Adding value to local food staples involves knowledge of the nutrient contents and values of local foodstuffs, with the objective of improving them. Improving on human nutrition therefore requires changes in all of the factors cited above and more and this involves difficult cultural changes in knowledge, attitudes, and practices. How should the school link with suitable specialists to get this knowledge to students?

It would be erroneous to assume that only people who live at or below the poverty level suffer from malnutrition, and hence are susceptible to physical and mental underdevelopment. Food likes and dislikes, food fads, ethnic backgrounds, habits, and income all influence the dietary patterns of rich and poor alike. It is therefore evident that to supply merely an abundance of food to combat malnutrition would be only a partial attack upon a complex problem. It has long been known that if a food supplement is to be successful in nourishing a malnourished population, it must be acceptable to the people for whom it is intended. Changing food fads and habits even in malnourished populations is extremely difficult. Therefore, nutrition education is of the utmost importance to any nutrition program regardless of country (Dayton, 1969).

The next step for achieving greater success with African crops is to link communities with technical know-how to others who understand specific food plants. For example, a company in Austria has developed an efficient method for extracting oil from a rare type of pumpkin seed. That technology may be adaptable in the case of the egusi seed. Getting the Austrians to work with African countries would be an important step toward increasing consumption of the wholesome egusi melon. Multiply that by several other projects and you begin to have an overall effect on hunger and primary industrialization.

Many agricultural schemes have been undertaken in almost every African country and their socioeconomic impact have been judged to be successful, but whether the impact was translated to improvement in the nutritional status of women and children remained unknown (Richards, 1985). This means being able to maintain the quality of a food crop at harvest or to change the form and characteristics of the final product thereby improving its shelf life and its nutrient content. Of course, there is considerable local knowledge and technology in the food production and consumption chain, which ought to be explored, understood and enhanced. Across Africa, this is done through local crop preservation and food processing and packaging either by increasing the quality of the finished product or the number of products from the staple food crop or both mainly to reduce post harvest losses. The main aim is to preserve food for periods of scarcity so as to ensure regular food availability. African schools and schoolchildren must be part and parcel of this knowledge generation and preservation chain. In other words, improving the nutrition of people is not a simple technical process that is easy to effect. It is for this reason that we need to plan the integration of a lot of new knowledge and skills into school curricula, if the African school would become a true partner in development and healthier citizens. The “new” school knowledge and skills should focus on how to prevent post-harvest losses and enrich nutrient values in local starchy staples (cereals, roots and tubers), among others, with legumes, vegetables and vegetable oils. This implies determining which knowledge and processes should be integrated into which level of the education system, so that pupils and schoolchildren are aware of how agriculture serves their nutritional status and their expected contributions to it.

AGRICULTURE, FOOD SECURITY, AND NUTRITIONAL STATUS

The section is concerned with the interactions among agriculture, food security and nutrition in sub-Saharan Africa. It focuses mainly on understanding basic terms. Understanding the terms and how they affect a family's and country's productive capacity and its ability to feed future generations is a critical matter for all, including schoolchildren.

Food security: Food security may be defined as access by all people at all times to the food needed for a healthy life (FAO/WHO, 1992a). Essentially, in order to achieve food security a country must achieve three basic aims. It must:

1. Ensure adequacy of food supplies in terms of quantity, quality and variety of food;
2. Optimize stability in the flow of supplies;
3. Secure sustainable access to available supplies by all who need them.

Adequate food availability at the national, regional and household levels, obtained through markets and other channels, is the cornerstone of nutritional well-being. The challenges are income for and knowledge levels of the right foods to buy. At the household level, food security implies physical and economic access to foods that are adequate in terms of quantity, nutritional quality, safety and cultural acceptability to meet each person's needs. Household food security depends on an adequate income and assets, including land and other productive resources owned. Food security is ultimately associated with access to nutritionally adequate food at household level, i.e. the ability of households or individuals to acquire a nutritionally adequate diet at all times. As noted earlier, the achievement of household food security may not necessarily result in improvements in the nutritional status of all household members. Access to nutritionally adequate food guarantees neither adequate food consumption by all individuals within the household nor the appropriate biological utilization of the food consumed. How does household food security then relate to human nutritional status, as expressed in biological or physiological terms? The answer is that household food security can be translated into good nutritional status if household members have nutrition security, a condition that combines:

1. Access to nutritionally adequate and safe food;
2. Sufficient knowledge and skills to acquire, prepare and consume a nutritionally adequate diet, including those to meet the special needs of young, active schoolchildren;
3. Access to health services and a healthy environment to ensure effective biological utilization of foods consumed.

Actual nutritional well-being is then determined by a number of interrelated factors, which besides food security include health and sanitation, adequate supplies of safe water, parents' education, time to prepare food and care of vulnerable individuals within the household. Household food security is thus one of the prerequisites for good nutritional status.

Nutrition and nutritional status:

Nutrition is the science that explains the role of food and nutrients in the human body during growth, development and maintenance of life. In its broader context, nutrition has also been defined as being concerned with "... how food is produced, processed, handled, sold, prepared, shared, and eaten and what happens to food in the body - how it is digested, absorbed, and used" (King and Burgess, 1993). Nutritional status refers to the nutritional state of the body, as expressed according to scientifically tested parameters such as weight, height, age or combinations of these. Using these parameters, an individual can be assessed as having good or poor nutritional status. More than anyone else, schoolchildren need this knowledge to monitor their own development.

Factors influencing nutritional status:

Nutrition security is influenced by a wide range of factors that may lead to inadequate or excessive nutrient intakes or may impair nutrient utilization. The factors most directly influencing nutritional status are grouped under the categories of food security, health, emotional state, and knowledge and care. Each of these is essential to attain good nutritional status, and they often interact with each other. To ensure optimal nutritional outcome, simultaneous action in all four areas is needed, requiring not only well-coordinated efforts at household and community levels, but also appropriate national development policies and strategies to support local efforts. National development policies, including macroeconomic and agricultural policies, though usually not included in the domain of nutrition, can also affect nutritional well-being. Emotions affect nutrition in that emotionally disturbed children hardly feed well and physiological triggers of emotions may impair nutrient utilization.

Household food security and nutrition:

In sub-Saharan Africa, where approximately 70 percent of the population lives in rural areas, crop and animal production, fisheries and forestry activities are direct sources of food and provide income with which to buy food. Increased and diversified production of food for family consumption or as a source of income is a basic prerequisite for improved household food security. Better home and community food processing, preservation and storage and access to marketing facilities can also contribute to household food security by alleviating seasonal shortages in food supply and stabilizing market prices. The school should understand these issues for its community and students. How can local agricultural practices and technologies lead to the establishment of small-scale agro-processing industries to significantly increase employment and income-generating opportunities and thus

positively affect household access to food? Food safety and quality, secured through effective food quality control at all stages of production, processing and handling, also influence nutritional well-being. With regard to infant nutrition, the extent of breastfeeding is important, and hygienic preparation and handling of food are crucial for disease prevention and proper child growth.

Health and nutrition:

Various infections, notably diarrhoeal and respiratory diseases, measles, malaria, intestinal parasites and infection with human immunodeficiency virus (HIV)/AIDS have a strong impact on nutritional status. The interaction of infection and inadequate food consumption causing growth retardation in children leads to a vicious circle, the malnutrition-infection complex. To break the circle it is necessary to improve environmental health conditions by addressing problems of contaminated water, insanitary disposal of human and household wastes, and poor food and personal hygiene in homes and places of food processing and marketing. What roles should we figure out for schoolchildren and students in infection and disease prevention through personal hygiene, healthy habits and environmental sanitation?

Knowledge, care and nutrition:

Malnutrition can occur even when a household has access to adequate amounts of nutritious foods as well as access to sanitation and health services. While adequate incomes, greater food availability and expanded health services are necessary for adequate nutrition, they will not bring about improvements unless households are able to take advantage of them. In this context, sufficient knowledge and the ability to care for vulnerable individuals are of critical importance. Care consists of the time, attention and support provided in the household (mainly by the mother and daughters and to a much lesser extent by the father, but this could change if we reform school curricula) and in the community to meet the physical, mental and social needs of growing children and other family members.

Chronic undernutrition and nutritional deficiencies:

The chronically undernourished are defined as those people whose estimated average daily energy intake over a year falls below that required to maintain body weight and support light activity (FAO/WHO, 1992). The appropriate term used for the estimate is “chronic dietary energy deficiency” or “chronic undernutrition”, reflecting the proportion of the population that has inadequate access to food.

Children who do not eat well are very hard to discipline and to concentrate on learning tasks. Such day-to-day observations by school teachers and administrators of the relationship between inadequate nutrition and behavior and ability to learn in school are substantiated by scientific studies. For example, twenty Cape Town, South Africa, children were studied for 11 years, beginning in 1955. The study was based on the hypothesis that the ill effects of undernutrition are determined by (1)

its occurrence during the period of maximum growth and (2) the duration of undernutrition relative to the total period of growth. Evidence is cumulative and impressive that severe under-nutrition during the first 2 years of life, when brain growth is most active, results in a permanent reduction of brain size and restricted intellectual development (Scrimshaw and Gordon, 1968).

FOODS, NUTRIENTS AND DIETS

This section summarizes information on different foods, their nutrient content and their physiological role in the body. A balanced diet is a basic developmental requirement; an essential factor for wholesome child development. The body requires not only a balanced diet but also sufficient fuel foods during its growing years so that a good foundation is laid for both physical growth and brain development. Malnutrition in infancy or early childhood distorts growth and development and thus the functioning of the entire human system. Adequate nutrition requires pre-knowledge of the nutrients and several interrelated factors of the local food production chain, including knowledge of nutrients in each food staple, its cultivation process, preservation, eating habits, food processing techniques, cooking methods and utensils, and timing of cooking. Each of these factors affects the final nutrients in any food consumed. Some of the common practices used locally to enrich the nutrition of infants, children, pregnant women and adults vary from community to community depending on their staple foods and tastes, existing natural fauna, flora and game.

Food groups

Foods, like crops, can be classified and grouped in various ways. Agriculturists divide crops into field crops, plantation crops, commercial crops, horticultural crops, forage crops and grasses. Such groups usually overlap, and particular plants may appear in more than one group. In nutrition, a number of different ways of grouping foods have been tried. Food groups may be based on the major nutrient content (e.g. fatty foods, starchy foods, protein foods); the role of the foodstuffs in human nutrition (e.g. energy foods, protective foods, body-building foods); individual nutrients (e.g. carbohydrates, fats, vitamins, protein); or commercial value (e.g. cereals, roots and tubers, nuts and seeds, fruits, leafy vegetables). All foods from plants and animals contain a mixture of nutrients. Refined white sugar, which consists of 100 percent carbohydrate (sucrose), is the exception. While it is possible to classify some foods according to major nutrients, most foods fall into several categories. The need for diversity in food production and consumption cannot be overemphasized, especially in relation to household food security. Individual food security, expressed as a balanced and adequate diet, also depends on diversity. The basis of the advice often given in nutrition education for family meal planning is: "Select at least one food from each of the food groups". However, other factors including cost and acceptability must also be considered.

Nutrients in different types of foods

Food	Rich source of	Moderate source of
Cereals	Starch, fibre	Protein, B vitamins, many minerals
Starchy roots and fruits	Starch, fibre	Some minerals, vitamin C if fresh, vitamin A if yellow or orange
Beans and peas	Protein, starch, some minerals, fibre	B vitamins,
Oilseeds	Fat, protein, fibre	B vitamins, some minerals,
Fats and oils	Fat	Vitamin A if orange or red
Dark- to medium-green leaves	Vitamins A and C, folate	Protein, minerals
Orange vegetables	Vitamins A and C	Fibre
Orange fruits	Vitamins A and C	Fibre
Citrus fruits	Vitamin C	Fibre
Milk	Fat, protein, calcium, vitamins	
Eggs	Protein, vitamins	Fat, minerals (not iron)
Meat	Protein, fat, iron	
Fish	Protein, iron	
Liver	Protein, iron, vitamins	

Source: *King and Burgess, 1993.*

Why teaching about the three food groups is not recommended:

In the past, health and nutrition workers used the idea of the “three food groups” (energy foods, body-building foods and protective foods) when they taught mothers how to plan meals. Now teaching about food groups is not believed to be the best way to help families improve their meals and prevent undernutrition, for the following reasons.

Many foods belong to more than one group

Most foods are mixtures of nutrients. Cereals are in the energy food group, but they are an important source of protein and B vitamins as well as starch. Milk is usually in the bodybuilding group, although it contains as much fat as protein, and it contains calcium and several vitamins. Groundnuts are also rich in both energy and protein.

People need to eat both starch and fat

Starchy foods and fatty foods are both in the energy food group, so it is not clear that people need both.

A meal of one food from each group may not be balanced

The concept of the three food groups suggests that a balanced meal could be made from margarine (an energy food), cheese (a body-building food) and a banana (a protective food), or from sugar, an egg and a lemon. These would be strange meals, and they would lack several nutrients.

Important problems are left out

The concept of the three food groups only addresses the mixture of foods. It does not explain about the amounts of food that people need, or about bulky weaning foods, or about feeding children often.

Most women do not use the idea of the three groups

Many women know about the three food groups, but most admit that they do not regard them, because they often cannot afford to buy the foods and they do not plan meals in that way.

Source: *Adapted from King and Burgess, 1993.*

The Major Nutrients and their Functions

Eating is a natural and essential activity. When there are constraints in the food system and access to food is restricted on economic, social or cultural grounds, basic nutritional needs for energy and essential nutrients may not be satisfied. To understand human nutrition it is necessary to know the nutrient requirements and to understand the function of food and nutrients in promoting and maintaining growth, health, activity and reproduction. An understanding of nutrient functions is particularly relevant in the prevention and control of nutrient deficiency diseases and protein-energy malnutrition (PEM). Most animal species require a number of essential dietary factors which can be classified under chemical groupings such as carbohydrates, proteins, fats, vitamins and minerals. Dietary fibre and water are

sometimes added to this list. A simple classification of dietary constituents is given in the Table below. Vitamins and minerals may also be described as micronutrients. A healthy diet supplies adequate but not excessive quantities of all these nutrients. Personal requirements vary depending on individual body size, age, sex, physiological status, lifestyle and health status.

Simple classification of dietary constituents

Constituent	Use
Water	To provide body fluid and to help regulate body temperature
Carbohydrates	As fuel for energy for body heat and work
Fats	As fuel for energy and essential fatty acids
Proteins	For growth and repair
Minerals	For developing body tissues and for metabolic processes and protection
Vitamins	For metabolic processes and protection
Indigestible and unabsorbable particles including fibre	To form a vehicle for other nutrients, add bulk to the diet, provide a habitat for bacterial flora and assist proper elimination of refuse

Source: *EAO, 1997h*.

Nutrients as Energy Sources

Some nutrients are interchangeable for meeting certain of the body's needs, depending on the metabolic state of the body. Carbohydrates are often divided into starches and sugars, which are both classified as "energy sources". Fats are also very concentrated sources of energy, as is clear to any farmer who includes sunflower seed, groundnut cake or soybean meal in livestock rations. Protein may also be converted into energy if the body is starved of food, but this is an inefficient use of protein. Therefore, nutritionists normally classify only starches, sugars and fats as energy foods. Fibre, especially in the form of cellulose, is not digested in the same way as other nutrients. Most fibre stays in the gut to facilitate the digestive and excretory processes and subsequently passes out of the body in the faeces. Soluble fibre, of which there is little, ferments in the large intestine and produces fatty acids and other substances which the body absorbs and uses for energy.

CONCLUSION

As animal protein is expensive and unaffordable by most families, students must grow into awareness of local sources of proteins in farm crops and fruits that can add variety and quality to their diet. The natural vegetation zones - forests, savanna, etc – are sources of nutritive and medicinal plants, game and vegetables, which students must be educated to exploit sustainably. Kitchen gardening can serve as local reserve for leafy spices and perishable vegetables as well as market gardening, which is gaining ground as a new economic sector in spite of its suffering from inappropriate application of chemical inputs. It is essential to outsource and promote local knowledge on pest and disease control and organic or compost manure. The school farm is where students can learn these knowledge and skills and use them to introduce variety into family diets, hence as the channel for improvement of nutritional status.

The chapter calls not only for keen awareness of local food conditions by students and pupils but also for research into local food crops, food consumption patterns, and processes of taking on new food tastes to extend local food variety. Research carries great potential to domesticate new crops, fruit plants and vegetables and game to yields and add variety, particularly on the “lost crops of Africa”. Nutrition improvement programs should target the entire family to enable everyone’s sustainable involvement, particularly the womenfolk, but gradually enlarge to engage men. Involvement of schoolchildren must be planned within rights-based provisions of UNCRC and the African Charter on People’s Rights and Freedoms. The principle of the chapter is the Chinese proverb: integrate fishing skills into the education system for long-term outcomes; don’t offer lunch rations to stunted or undernourished African schoolchildren.

LEARNERS’ EXERCISES

1. Select and analyze local food staples regarding how they are produced, transformed, cooked for and consumed by children and adults, their sociocultural values, and losses along the production chain.
2. Debate: Africans should improve the productivity and nutrient values of their food crops and stop depending on imported food aid and food supplements.
3. What are the take-home messages of this chapter for you? Outline a strategic plan of how you would proceed so that the school and its local community could gain maximum benefits from the central message of the chapter.

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Chapter 34

**COMMUNITY ROLE/ENGAGEMENT IN VOCATIONAL
COMPETENCE DEVELOPMENT**

Emmanuel M. Fomba

CHAPTER OBJECTIVES

The objectives of this chapter are to:

- 1) Analyse the pedagogical implication of *du;ti fa'*, *du'ti mva'ni* and *n'sib* in facilitating effective transition from school to work life;
- 2) Examine the role of family and community socialisation in developing vocational attitudes and behaviours;
- 3) Highlight the role of community engagement as a learning strategy capable of promoting sustainable life skills and employment;
- 4) Explain how indigenous survival strategies can complement schooling to facilitate adaptability of school leavers to emerging occupational challenges.

INTRODUCTION

The transition from childhood to work life encompasses the developmental transition from childhood to adulthood. The transmission of work values to children as future workers and responsible citizens is critical in all cultures. With the recognition that “education is currently becoming the most important contributor to national economic growth ... in both developed and developing countries” (Derebssa, 2006: 123), emphasis on learning for work should be at the heart of education strategies. With ongoing debates, Technical and Vocational Education Training (TVET) has been identified as an effective means of empowering young people to engage in productive and sustainable livelihoods in their communities. To the African Union (2007) one of the most important features of TVET is its orientation towards the world of work and the emphasis of the curriculum on the acquisition of employable skills. Though institutional learning has dominated vocational educational thinking and strategies Nsamenang (2005a:328) highlighted that “in Africa today, both traditional African and foreign ways of thinking and educating children are available and useful, though they sometimes produce conflict situations”. This implies considering the value of African epistemology as a sustainable measure of developing vocational competence in contemporary education especially with regard to emerging occupational challenges.

Although institutional and participatory approaches are often used, education is dominated by schooling; detaching learners from community realities and promoting deficits in vocational, entrepreneurial values and ultimate productive competence. Despite current focus on TVET, unemployment of school leavers is on the rise due to learning strategies that are not responsive enough to occupational demands of society. Though present African labour market is witnessing a mismatch between labour demand and supply, the teacher is generally recognised as the sole facilitator of learning, and considered as a fundamental resource in training future workforce. Often blamed for difficulties in school-to-work transition, educational systems have been seriously accused for neglecting indigenous learning strategies

that have aggravated the unemployment crisis of Africa's young people today. Fomba (2009a) therefore expressed the need to go beyond current vocational initiatives in science and technology education to a holistic vocationalisation of schooling as an optimistic option in sustainable education and livelihood.

Much has no doubt been written about modern and indigenous education, national systems, pedagogical approaches and learning outcomes, but just a few scholarly works or references have been made about the critical role of indigenous vocational learning in future work force preparation. In this chapter I subscribe that the school is an integral part of the community, and learning through community engagement is an integrative and meaningful approach to developing vocational attitude and behaviour of potential workers. This requires an integrative education system capable of promoting knowledge, psychological independence, wealth creation and societal sustainability (Fomba, 2009a, p.27). Drawing from the experiences of learning through community engagement, I employ the concepts and practices of *du:ti fa'* (work learning), *du'ti mwa'ni* (book learning) and *n'sib* (peer work) as a competence-based model for the analysis and development of vocational competence in school life.

The indigenous learning strategies I am proposing in this chapter concurs with the desire of the African Union (2010) to harmonize TVET in Africa in order to transform it into a major activity for African youth employment and development. Socialisation of children in vocational activities within the family and community is therefore seen as having enormous advantages since they develop problem solving skills through real life challenges. The approach also advocates the place of global knowledge values in developing competence to cope with the rapidly changing world of work. Both schooling and traditional learning aim at developing generic skills to catalyse knowledge discovery and technology for local and global challenges. In a continent blessed with abundant resources as Africa, training teachers to stir up enterprise skills in the young is indispensable in human capital development strategy for the education sector and beyond.

PARTICIPATORY PEDAGOGY IN BALI NYONGA, CAMEROON

Despite current pressure from schooling, traditional vocational training approaches are employed by a greater portion of African families and communities in developing responsible intelligence. This builds on the argument that "antiquated indigenous education has survived till today and continues to be useful, showing no signs of disappearing from the education landscape" (Nsamenang, (2005a: 277). Based on experience, I present the practice of participatory pedagogy in Bali-Nyonga, Cameroon, which has proven sensitive to productive competence development with direct link to the labour market. This pedagogy is wrapped up in community practices since the transmission of work values to children has long been considered as the primordial responsibility of the family and community. Such human development strategy is common through sustainable livelihood activities such as farming,

carpentry, mechanics, craft, fishing, animal rearing, blacksmithing and petty businesses such as trading. Investment in life skills through traditional preparation strategies has been drawn from the firm belief that young people are agents of change with the potential of taking a leading role in socio-economic development of their communities as they transit from childhood to the world of work.

With particular focus on the pedagogy of community engagement in Bali Nyonga, key practices have drawn from *Mungaka*, the local language for analysis and they are *du'ti fa'* (work learning), *du'ti mwa'ni* (book learning), and *n'sib* (peer work). Generally the concept of *du'ti* implies learning, studying, skills development and the knowing process in any domain. Learning in context is in response to the requirements of *fa'* (work) and strongly determined by training needs of the people. An extension of the concept and practice of work is *fa'mukali*, (white man's work), expressing the need to develop the necessary skills for "office work" or white collar work. The power of these indigenous concepts lies in their interplay to bridge the knowledge-doing gap and render learning more utilitarian. This strategy is capable of generating indigenous knowledge values at local level, with inherent opportunities for innovation and use in the global community.

The concept of *du'ti fa'* (work learning), implies a measure of functional education. Historically, *du'ti fa'* (work learning) has been the main strategy for developing life skills by Africa's forefathers, and even today with the advent of institutional learning. The learning content of *du'ti fa'* (work learning) derives from the sociocultural and economic realities of the community. In hunting for instance skills are acquired on how to hunt, preserve and market game and in some cases mend hunting traps and treat hunting dogs. Active pedagogy also involves caring for domestic animals, fetching firewood and water, trading petty articles, helping in household chores and caring for younger siblings. "Instead of playing with doll, children care for real babies [and] in addition to working in the family gardens, young children have their own garden plots" (Nsamenang, 2005b: p. 334). Both male and female children are involved although due to cultural values, there is gender based inclination to particular activities. *Du'ti fa'* (work learning) is integrative and mostly occurs within the framework of traditional apprenticeship training. It exposes children to vocational opportunities, occupational orientations, available resources and how to create wealth by naturally processing learners from "job seekers" to "job creators". In the process, problem learning life skills are generated, and upon completion learners graduate immediately into occupations and do not fall prey to unemployment like majority school leavers.

Du'ti mwa'ni is literally understood as "book learning" and denotes formal education, schooling, formalized or institutional learning. *Du'ti mwa'ni* came into force with the advent of colonialism, and book based learning is today the main mechanism for developing occupational competence, and also the main framework for transferring knowledge and skills to future generations of the workforce. Within this learning context, processes in workforce preparation is reinforced by the notion

of *nda nwa' ni* (school), literally meaning “a house of books”. Although void of meaningful community engagement, *nda nwa' ni* has gained prominence as a great instrument in promoting elusive inclusion and in preparing the young for prestigious white collar jobs that are scarce in the job market today.

N'sib is a peer work activity that draws its strength from the spirit of communalism, indigenous solidarity and social capital base. *N'sib* (peer work) is a cultural practice inherent in cooperative learning among community members; and peer-tutoring is a major learning strategy with special focus on observation and imitation. Cooperative ventures are highly recognized and appreciated in the community as a utilitarian facility among peers with subsequent implications on work perception through community engagement. *N'sib* as a learning strategy also builds on the basic principles of human relations, teamwork and social facilitation. Common practices constitute clearing, planting, harvesting, building houses and traditional thrift and loan initiatives. Through real life activities, learners accept risks, share, discuss, tolerate, employ creativity and learn how to manage immediate and extended real life conflict. As a way of communal work life, the practice of *n'sib* (peer work) has the potential of catalysing social intelligence and collaborative attitudes in the young. With community actions, young peers are curious and excited to socialize and participate in communal work activity as a rite of passage, while generating learning in different contexts for the development of work skills necessary in exploiting available community resources.

A CRITIQUE OF PARTICIPATORY PEDAGOGY IN CAMEROON

With the advent of schooling, preparing future workforce generally shifted from family and community socialisation to academic settings in order to meet up with the demands of colonial occupational requirements particularly public service jobs. Since then vocational competence development has been dominated by foreign knowledge values lodged within the four walls of a classroom. Although there are some provisions for practical engagement with community realities, they are merely in principle and remain as mere paperwork. Which is perhaps why Nsamenang (2005a: 277) lamented that “African precepts and knowledge systems have been unconscionably excluded from policy and remedy, even by the African political class and education elites”. The national education system is therefore remotely controlled by external forces and national education goal is most often frustrated by western ethnocentric dogmas. This is the case with the Anglo-Saxon and French education heritages that today, adversely affect personnel planning and development, curriculum design and educational practices at all levels of national education life. Educational systems are also vulnerable to the infiltration of foreign knowledge that is at times counterproductive to local problems due to the legacy of development aids, especially technical assistance. This is evident with manpower training, knowledge production and dissemination, which instead reinforce endemic psychological dependence and hinder the development of generic skills in context.

This at times promotes conflict of learning values, confusion and frustration; thereby aggravating relevance and quality crisis. But in most situations, transition to work life is blocked due to “job-seeking syndrome that is often attributed to deployment of foreign training models that do not promote the development of indigenous knowledge and technology” (Fomba, 2009b: 47). Too much dependence on foreign knowledge implies another dimension of mental colonisation that distances education from community realities, which is in turn detrimental to the development of human capital. Deficiencies in vocational programmes and methodology have been exposed through technology transfer crisis, rising unemployment and social exclusion of school leavers.

Although Cameroon is endowed with immense natural resources, the nation has been in distress since the economic downturn of the late 80s due to elitist civil service and limited productive capacity for private sector (Fomba, 2009b:49). Analysis of vocational education cannot undermine the crisis since it influenced labour market situation and employability dispositions of school leavers especially with the squeeze in public service employment. Also, it promoted labour market uncertainty, expressing an urgent need for vocational thinking among policy makers and educationists as a measure of sustainable employment and consequent development of the informal sector. Since the crisis aggravated the employment situation the labour market has since then been characterised by the public with despair and feelings of insecurity due to the conscious absence of desired jobs, low wage earning due to under employment and political propaganda on job creation by school leavers. Although a few institutions have inbuilt work-based learning components for practical applications, they suffer from operational deficits due to inadequate and inappropriate resources. The issue of personnel and more precisely, trained personnel cannot be overemphasized, and this accounts for the poor development of vocational competence necessary in exploiting indigenous resources, eradicating poverty and consequently, wealth creation by school leavers. Also, present school strategies run short of knowledge and skill packages that can be responsive enough to sustainable employment and growth of informal sector economy as being advocated by the Government. Learning practices are dominated by theoretical orientations with little or no practical engagement at community level, and this nurtures the tension relating to the application of white collar skills to blue collar jobs experienced by school leavers in Cameroon.

The increased growth in numbers of school intake in Cameroon is recognised, but training has not met expectations due to glaring disparity between the skill base of school leavers and changing work requirements. This is a paradox as compared to apprentices of occupational socialisation who immediately transit into occupations as soon as they complete their training programmes. It is a paradox that school leavers search for white collar positions in enterprises created by “illiterates” and individuals with low level education status. The ineptitude of educational systems to develop vocational attitudes and behaviours questions vocational education

strategies, and the future of vocational institutional learning as an optimistic employability mechanism being advocated in policy statements. Due to unfavourable entrepreneurial attitudes derived from institutional learning, many school leavers remain endemic job seekers of scarce white collar positions while non school leavers venture successfully and dominate the informal sector (Fomba, 2009b: 51). From the Cameroon experience it is evident that the entrepreneurial spirits experienced by “illiterates” are yet to be inculcated in “educated persons;” implying a conspicuous missing link in schooling-for-work strategies. One could challenge that orthodox institutional learning strategies have outlived their usefulness, and this is evidenced by the dominance and success of apprentices in venture activities in the private sector. Although apprenticeship operators and facilitators are said to be of low status they have valuable methodological approaches that respond appropriately to delivery system and programme goal that is usually tailored directly towards the labour market. Again, responses from educational authorities have been inadequate and unsustainable, stimulating alternative reflections on the role of informal vocational education in skills development. Apart from curriculum deficiencies there is acute shortage of resources at all levels of academic business. The problem of infrastructure and didactic materials also frustrate realisation of the curriculum and poses as one of the main reasons why schooling cannot embrace occupational socialization as a measure of subsequently informing classroom learning strategies. It could therefore be argued that both general education and TVET in particular has failed to produce the relevant skills necessary for effective transition of learners from school to work life in African agrarian societies since learning is dominantly classroom oriented.

The journey from school to work is a sign of self-fulfillment that is highly dependent on vocational development (Fomba, 2009b: 52), but this is the reverse with Cameroon education due to the gross neglect of participatory pedagogy. As responses to meaningful development of vocational competence through community engagement, some research and scholarly works have analysed contemporary and indigenous African learning systems. There is no doubt that foreign based learning strategies fit into African realities with lots of difficulties due to top- down approaches that are grossly insensitive to local labor demands and endogenous economy. In this vein, Nsamenang (2005b: 335) posited that “whereas indigenous African educational traditions endeavour to connect children to their local contexts and activities of daily life, the school tends to separate and distance them”. Institutional science is taught in the context of Eurocentric paradigm, arrogance and disdain for local knowledge (Emeagwali, 2003), and this cannot adequately facilitate the exploitation and discovery of knowledge that will inform local realities. This undemocratic approach to learning renders schooling an act of depositing and a subversive force that transforms learners into receiving objects and kills creativity (Freire, 1971: 58). Despite the difficulties faced by institutional education in developing vocational awareness, the African Union (2007) exalted that there is a fresh awareness among policy makers in many African countries and the international

donor community of the critical role that TVET can play in national development. This is an entry point and requires a diligent resourcing of local and global training strategies capable of nurturing the young to face changing occupational profiles and demands.

Attempts at bridging existing labour market demand-supply gap have provoked debates on reinforcing vocational education as a mechanism for wealth creation and meaningful living. It equally builds on the proposition of Serpell (2007) that the cultural validity of an educational theory depends on its sensitivity power to address a given community task. Going “native” has therefore become an inclusive approach to institutional learning and the development of responsible intelligence in the young. This concurs with Nsamenang’s (2004: 231) view that “African children are educated or educate themselves as they take part in or observe the life of their families or communities, given that in reality, education translates into the gradual acquisition of knowledge, skills and attitudes appropriate to life in one’s community and family over the course of ontogeny”. This traditional learning approach has recently been re-echoed by the African Union (2007: 43) that “vocational education is a delivery system that is occupation-specific, emphasizing direct practical employment skills and may not necessarily follow the standard curricula”. It is an alternative way of knowing with the potentials of complementing existing provisions in formal learning delivery systems and methodology. The approach is legitimately understood as indigenous vocational education responsible for training children in gainful activities in subsistent economies (Nsamenang, 2004: 330). Since community engagement is also entrepreneurship oriented as a measure of enterprise creation and management, entrepreneurship development has of late been recognised as a core value in sustainable education (Fomba, 2009a: 28), and training initiatives related to job creation and venture activities have become a viable component of transformative pedagogy. Given the understanding that indigenous knowledge has become an important challenge for 21st century policy makers and educators (Emeagwali, 2003), the deployment of formal and informal education strategies is being advocated for education for sustainable development.

HOW BALI NYONGA COMMUNITY PARTICIPATORY PEDAGOGY CAN INFORM VOCATIONAL EDUCATION

The experience of participatory pedagogy in Bali Nyonga is a strong indicator that African traditional education strategies have much to offer to schooling, and subsequent development of relevant vocational competences. Derebssa (200: 125) found that participatory pedagogy encouraged children to learn a trade, participate in income-generating activities, and by so doing acquired valuable skills such as customer relations. In the current context, the learning-work relationship is central to the process of skills development with a key link to the practices of *du’ti mwa’ni*, (book learning) *du’ti fa’* (work learning) and *n’sib* (peer work). Going-native has become a necessary strategy in functional education, and the pedagogical implication of

local concepts are being appreciated as highly sensitive to local problems, with possibilities of innovating indigenous technology for consumption in the global community.

Du'ti fa' (work learning) has been perceived as a core component of the competency-based approach to functional education that catalyses discovery and exploitation of indigenous resources. The force of *du'ti fa'* is assessed in terms of situated learning and consequent transfer of knowledge and skills to lifelong endeavours. Considering advantages, Nsamenang (2009b: 332) explained that “Child work inculcates practical social values and the acquisition of cognitive, social, economic and other competences and productive skills”. It therefore conforms to learner’s interest, growth needs and the changing labour requirements. Though *du'ti fa'* (work learning) is seemingly manual and heavily loaded with motor activities, work based learning also generates cognitive and affective skills. Children reflect on prior materials, current practices and future expectations according to their worldview and this determines their attitudes and motivation towards learning. Ngara (2007) further clarified that indigenous ways of knowing shape the background cognitive structures, which the average African child brings to school. In the same light Serpell (2007) highlighted that an errand affords an opportunity for the child sent to prove her potentials in assuming responsibility. Since occupational socialisation implies problem learning, the role of flexibility and creativity in knowledge transfer from learning situations to social enterprises becomes very critical. In this process the teacher becomes a learner, a facilitator and a catalyst. In the process, alternative ways of knowing are needed to catalyse the African intellect that is necessary for technological development and exploitation of resources. Textbooks are not a monopoly of knowledge, and tacit knowledge grounded in oral tradition, observation and discovery is essential for technology development. Although *du'ti fa'* is experientially dominated and deprived of responsive external knowledge values, a systematic training culture is necessary as a measure of balancing participatory pedagogy and instructional model in academic settings.

Du'ti nwa'ni, (book learning) has been embraced in the global age as an instrument of social, political and economic inclusion. Book-based learning is more gender-sensitive and exposes learners to global knowledge and technology, which stimulates critical faculties about restrictive and regressive contexts. Explicit knowledge values are formal and can be disseminated formally across individuals, institutions and societies to test validity. The transmission of universal values is therefore essential in challenging unproductive learning practices, and in reinforcing indigenous survival strategies in the development of human capital. Despite its limitation, Ngara (2008) as well acknowledged the contribution of Western knowledge systems to the development of modern Africa. Although *du'ti nwa'ni* is touted here as a primary survival strategy, learning in a “house of books” alienates learners from local contexts and frustrates knowledge transfer through community engagement.

The practice of *n'sib* (peer work) promotes the development of responsibility and social intelligence. Peer tutoring reinforces the idea of traditional academic work groups; and transcends the development of personal skills to interpersonal and communal competence. Learners develop the capacity to accept risks, share and discuss knowledge, employ creativity in problem-solving ventures and learn how to manage conflict. As a communal work culture *n'sib* ensures productive competences and collaborative attitudes among peers. Although the later is difficult since the focus of *n'sib* is on responsive action, it requires guidance and innovation through systematic learning principles, and the training of facilitators is a prerequisite. Research programmes are also necessary and such studies could constitute appropriate frameworks for reflecting on prior learning strategies, testing innovations and creativity and integrating them into contemporary vocational programmes.

CONCLUSION

Vocational education has been perceived as a core value in training for sustainable development through vocational competency development, but for training strategies that cannot respond appropriately to emerging occupational requirements. Again, the global knowledge economy has recognised knowledge and technology as invaluable assets, and balancing participatory and instructional pedagogy is critical in the training of teacher educators for necessary skills development in children. Focus on children owes much to the fact that young minds are more flexible in developing attitudes and skills that are responsive to new economic opportunities (Fomba, 2009a: 27). This justifies the deployment of *du:ti fa'* (work learning), *du'ti mva'ni* (book learning) and *n'sib* (peer work) as framing concepts for participatory pedagogy capable of developing productive competence in the young. Although occupational socialisation has often been associated with child abuse, respect of the child's integrity is a necessary precondition for engaging with community actions and practices associated with child abuse should be checked and reproached accordingly. The point of interest is to "think global and act local", and learning outcomes should be justified with a wholesome personality capable of coping with and withstanding emerging global challenges.

With the understanding that the child is the starting point of the curriculum, the primary context of community engagement is the community. Although this is evident, the child requires global knowledge values to seize opportunities in a wider context. This expresses a need for Institutional cooperative learning Strategies that connect with family and community realities, and with some implications on the global community. Since context-specific life skills are lost on the way through school, an integrative curriculum will respond to local and global challenges without compromising Africa's progressive values and identity. Ngara (2007:8) advocated that "a true pedagogy of liberation, among other things, will restore African dignity as the true basis for mainstreaming productive competence on the continent".

Engaging with the community is the only strategy to restore lost values that have survived African forefathers since time immemorial, and also a proactive strategy to combat endemic psychological dependence of the young on white collar jobs. Activity based learning as a sensitive strategy could also promote resiliency by encouraging young people to face the realities of poverty and economic exclusion. This approach will certainly demystify the psychological barriers inherent in white collar mentality of academic elites and learners. Policy makers, parents, teachers and students require a change in attitudes towards the valuing of indigenous knowledge and the resuscitation of traditional vocational learning values for integration into school life. This should also be informed by research activities especially on indigenous frameworks that have been identified as having contributory power to school life. Teachers/facilitators have a major role to play as they sensitively apply the themes invoked in this chapter, and take note of critical emerging issues for discussion and validation in their different contexts. This will certainly uplift the image of African traditional vocational education; methods and practices in teacher training for the proper transmission of work values to children to enable them exploit Africa's immense resources and create wealth.

LEARNER'S EXERCISES

Examine the following questions to assess your understanding of the chapter.

1. Examine four vocational activities you have carried out, skills they have developed in you, and how they can generate employment and income.
2. Identify three vocational activities you know in your community, and explain how they can help you or your learners to better understand classroom lessons.
3. Identify the knowledge and skills developed in school and explain how they can help you to become self-employed and self-reliant.
4. Analyse why school children are not interested in family and community vocational activities and what could be done to encourage them.
5. Debate, with illustrative examples: Participatory pedagogy should/should not be adopted in Africa's school systems.

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Chapter 35

**MANAGING AFRICA'S MULTICULTURALISM:
BRINGING THE "MADIBA MAGIC" INTO THE AFRICAN
SCHOOL CURRICULUM**

Byron Brown and Almon Shumba

CHAPTER OBJECTIVES

The objectives of this chapter are:

- (1) To construct and present the Nelson (Madiba) Mandela humanistic psychology and “Madiba Magic”;
- (2) To highlight some of the challenges of multiculturalism experienced in multicultural societies and schools;
- (3) To illustrate how characteristics of the “Madiba Magic” might be infused into the school curriculum via teacher education as a strategy to manage some of the challenges that multiculturalism poses in African schools and the wider society.

INTRODUCTION

One of Africa’s most urgent societal and political challenges today is the promotion and constructive management of human diversity. In terms of race and ethnicity, Africa is immensely diverse. As a rainbow nation, South Africa exemplifies the rich diversity that defines the African continent. Much of the diversity is variously reflected in our languages, clothing, music and foods. These are connected to African customs, traditions, legends, myths, folklore, beliefs, superstitions, spirituality, philosophy, values, and lifestyles. Cultural diversity is not just visible in the wider society but also in spaces closer to future generations, like classrooms and schools.

In post-apartheid South Africa, for example, the Constitution recognises the cultural diversity of the country. The preamble to the Constitution states that “South Africa belongs to all who live in it, united in our diversity”. It promises to “lay the foundations for a democratic and open society...and to improve the quality of life of all citizens” (RSA, 1996, p. 1). This would seem to commit the South African government to, amongst other things, the implementation of policies and programmes aimed at fostering social cohesion, solidarity and the valuing of cultural diversity. We see the school as the primary channel through which to implement this vision. In this chapter, therefore, we briefly profile the rainbow status of South Africa and endeavour to sketch how the philosophy and values of Nelson ‘Madiba’ Mandela’s humanistic psychology (Nsamenang, 2004; Pence and Nsamenang, 2008) can be infused into the school curriculum (via teacher education) to overcome the challenge of multiculturalism, not only for South Africa, but also for the African continent.

INTRODUCING NELSON “MADIBA” MANDELA’S HUMANISTIC PSYCHOLOGY

Madiba’s humanistic psychology – a concern for people guided by reason, inspired by compassion, and informed by experience – can be deduced from his vision for a South Africa beyond apartheid. This vision was the driving factor that gave birth to not just the country’s transition to democracy but also to her present Constitution. His vision, expressed publicly during the Rivonia trial in 1964 (ANC, 1997), was for: “...a democratic and free society in which all persons live together in harmony and with equal opportunities [and where there is neither] white domination [nor] black domination” (Mandela in ANC, 2001, p. 6). He envisioned a united society in which everyone is seen and treated equally, and which belongs to all its citizens, regardless of racial or cultural differences. Although Mandela constructed his vision in relation to South Africa, one should not overlook the fact that the vision [or more specifically the qualities he incarnates] is equally applicable for countries across the entire African continent.

The words expressed in Madiba’s vision define the South Africa of today, and remains a vision for the world. Furthermore, they continue to serve as the fundamental basis needed to guarantee the success and development of the new South Africa as a multicultural nation.

To begin to grasp the humanistic dimension inherent in Madiba’s vision, one only needs to consider that he (and others) was part of an apartheid regime that subjected him (and others), over a period of several decades, to a culture of violence, brutality, humiliation, injustices, attitudes of hatred, social and political exclusion, and economic marginalisation. Yet Madiba nobly moved beyond the existential challenges he experienced, without harbouring bitterness and instead demonstrated a readiness, not just to forgive but also to share a liberated South Africa with his former oppressors. This quality demonstrates one thing, that is: he remained true to the ideal expressed in his vision for the society. Madiba’s ability to transcend beyond the injustices and humiliations he suffered during apartheid, without any inkling of vendetta and revenge taking over his mind, remains, as Tutu (1999) suggests, a key lesson for the rest of humanity. In both words and deeds, Gates (2005) concludes, Mandela has been a beacon of temperance and humanism.

Madiba’s humanism is characterised by distinct basic values. He longs for and strives toward a rainbow nation of mutual care and concern, free of cruelty and its consequences, where differences are resolved cooperatively without resorting to violence. Central to his humanism is thus a spirit of forgiveness, kindness, tolerance, chivalry, and a belief in human dignity, freedom and respect. Throughout his life, Madiba has demonstrated a strong sense of belief in the human potential and goodness. These basic values guided Madiba’s actions in reconciliation and in building a new South Africa on the principles of reciprocity, inclusivity, and a sense of shared destiny between different peoples. All of this establishes basis for giving and receiving

forgiveness, as well as a rationale for sacrificing or relinquishing the desire to exact revenge for past wrongs.

Because people derive their system of meaning from their own culture, Madiba's humanistic psychology and philosophical stance can perhaps be traced to aspects of his cultural Xhosa attitudes and values. Madiba's humanism is typified by the idea of '*ubuntu*' – a key African cultural value. But this is not to suggest that Madiba's worldview is limited to *ubuntu*. It simply says that it shapes his larger self and life stance. The concept of *Ubuntu* is found in diverse forms in many societies throughout Africa. Desmond Tutu (1999, p. 34) says of *ubuntu* that: "... It speaks to the very essence of being human... When you want to give high praise to someone, we say, '*Yu, u nobuntu*'; he or she has *ubuntu*". A person with *ubuntu* is open and available to others, affirming of others, does not feel threatened that others are able and good – for he or she has a proper self-assurance that comes with knowing that he or she belongs in a greater whole and is diminished when others are humiliated or maltreated (Tutu, 1999). Madiba's humanism is reflected in these qualities of *ubuntu*. We can infer from this that when others are tortured or treated as if they are less than who they are, Madiba feels as equally diminished, humiliated and undervalued.

The "Madiba Magic"

Madiba's magic can be seen as resting on certain pillars. First, in his readiness to reach out to those outside his frame and embrace them; second, an ability to transform sceptics and critics into believers and supporters; third, an ability to transcend his own surroundings, native culture, and milieu and embrace differences, yet remain capable of independent thoughts. There is a transformative quality in his "magic". Madiba's humanistic qualities allow people to, symbolically, claim part of him, regardless of their racial, tribal, cultural orientation. Wole Soyinka likened Madiba to a symbol of what happens in the encounter of different cultural "aesthetics of existence" or the intersection of different cultures. Soyinka argues that Madiba "... is imbued with a honed instinct for responding to, and inaugurating, dialogue as a culture in its own right, one that can be guided towards a humanistic conclusion" (Soyinka in Mangcu, 2009, p. 3). In other words, Madiba has a magic, which allows him to interact with, claim by, and represent all, yet not owned by any.

Nelson Mandela experienced both Africentric and Eurocentric forms of education. Pence and Nsamenang (2008, p.33) acknowledge that the sterling qualities of Nelson Mandela grew "from an indigenous African education in his early years, matured with a Euro–Western education, and fortified himself with a lifetime commitment to his rich traditional roots". In other words, he sat in school and perhaps went through similar socio-political and/or tribal experiences as we do today, yet was able to rise above much of those things that challenged him.

MULTICULTURALISM AND SOME KEY CHALLENGES

Madiba's magic allows him to embrace a multicultural world. This is perhaps his challenge to Africa and legacy to posterity. Multiculturalism simply means that there is a mosaic of disparate cultures co-existing together, within a society or within social institutions such as the family or schools in a society. The presence of different ethnic groups in your environment is an indication that you are in a multicultural setting because culture varies with our ancestry. There is *not* a single African country that can be regarded as a monocultural nation (see Sall and Nsamenang, Chapter 6, this volume). Due largely to processes of migration and colonialism, African countries are defined by polyethnic, racial, or tribal diversity and its associated cultures. A typical example is South Africa, where different racial groups classified as black, coloured, white and Asian hold the same citizenship. Another example is in Africa's most populous nation, Nigeria, where an estimated 250 ethnic groups coexist, with an estimated 200 ethnic groups in the DRC and 42 in Kenya. Each of these groups has their own music, clothing, language, religion, food, and other customs. Such multiculturalism obliges recognition, tolerance and respect of the modes of behaviour, values, and customs of each distinct ethnic and racial group. Sometimes this occurs voluntarily; at other times it results out of response to mandated government policies; but why not to socialization and education.

But multiculturalism is not just a matter between different ethnic groups. People of the same ethnic community or even family can have contrasting cultural perspectives and practices from that of the dominant culture. Already in South Africa, ethnic purists have long abandoned the idea of ethnic purity due not only to exposure to other cultures but also to a departure within the ethnic ensemble from mainstream cultures. For example, the traditional Zulu practice of polygamy is scoffed at by many progressive Zulu youths who feel the practice degrades women. In addition, intermarriage is fast becoming an accepted practice among progressive youths of previously segregated ethnic groups in South Africa. Furthermore, in many families across Africa, many parents and their children often differ sharply regarding personal taste in cultural aspects such as music, food, clothing and artefacts. These shifts from the norm among people of the same ethnic community are often outcomes of differences in culture. When people form a culture which differentiates them from the larger culture of their community or ethnic group, they create what is called a subculture. Subculture is a distinctive culture within a culture. The existence of subcultures within a dominant culture results in multiculturalism even within a family of the same ethnic group.

In multicultural societies, public spaces such as in schools are cultural crossroads because they are points where people of different ethnic orientations, or with different subcultures, converge. Because ordinarily people act, appreciate, or detest according to their cultural worldview (Nsamenang, 2008), taking the step to learn about the 'Other' can be an unwieldy process. For this reason, multiculturalism can be a challenging practice. We will now highlight some of the main challenges of

multiculturalism and then reflect on how key principles inherent in the “Madiba Magic” could help us cope in multicultural environments.

Challenges of multiculturalism

To many people, and especially children, the “Other” culture represents a different world or strange customs (du Toit, 2004). In many parts of Africa, people still value and practise the following customs: initiation, the ceremony whereby young males are initiated into manhood; polygamy; dowry or lobola, a wedding agreement between the bridegroom and the father of the bride whereby the latter receives goods from the former; and ubuntu, human kindness, generosity, neighbourliness, sociability and fellowship (Murithi, 2009). To someone who is unfamiliar with these practices, these cultures represent a different world. When black South Africans saw white South Africans playing a Rugby game for the first time, many blacks wondered what they were fighting for. To these blacks, Rugby was a strange sport. One of the challenges of multiculturalism then lies in how to establish communication between, and in the partial integration of, cultural ensembles which often are much more comfortable operating within their zone of security. Schools serving polyethnic communities are particularly challenged by these concerns.

Many people say that multiculturalism highlights differences rather than commonalities, and that it reifies essentialist cultural self-definitions among ethnic groups in society. This is a true criticism of multiculturalism because when one looks at the meaning of the concept “multiculturalism” above, one notices that it emphasizes the coexistence of the different cultures to which one identifies. This means that it is permissible for members of different cultural groups to practice their own culture in the way that it allows. Culture represents the norms, customs and values which both guide our behaviour and act as a framework from which our behaviour is judged by the majority who identifies with that culture. Consequently, if it is acceptable in your culture to walk barefooted, then it means you can go wherever you wish without shoes. But another person in whose culture dressing includes wearing a pair of shoes, might find it discomfoting going outdoors without it. In these two examples, the difference is that in one culture shoes is valued while in the other it is not. These are just two of numerous examples. The idea that multiculturalism emphasizes differences is both its strength and its weakness. Teaching people to strike a balance on issues of diversity and rise above intolerance or the hatred of others because of their differences is a challenge that must be resolved if multiculturalism is to succeed; as Africa is dip in it.

One of the dangers of multiculturalism, if mishandled, is that it promotes the idea that a nation-state consists of groups, rather than one of common citizenship. In this sense, multiculturalism is often viewed as a force that disunites rather than unites people. In other words, it is viewed as anti-national unity. This fear sometimes results in people of the different ethnic or language groups disliking each other and triggering conflict, as happened in countries such as Rwanda between Hutus and Tutsi, or between Kikuyu and Luhya in Kenya. In the process of such conflict, our

schools serving polyethnic communities would be equally affected. Bell, Washington, Weinstein and Love (1997) draw attention to fear of another sort in South Africa, where they argue that in the multicultural South African context, many teachers are also grappling with their own social identities and fears, as their school population transform and as they try to make adjustment to the new reality of living in an integrate society. We should not, therefore, let multiculturalism disunite but rather unite people who feel they are different in our society. A good example where this process has begun is in multiracial South Africa, where the new Constitution – founded on principles of, *inter alia*, inclusivity, social justice, human rights – provides that country with a basis on which multiculturalism can foster social cohesion among its citizens.

In addition to the social challenges such as the diverse student and teacher population in schools, multiculturalism poses particular pedagogical and support challenges to professionals in the education system. The challenges in working with an ever growing pluralistic school population encompass many areas. The provision of relevant multicultural curriculums, the use of culturally sensitive assessment and intervention strategies, the training of staff in the provision of these services, the recruitment and retention of multicultural and diverse professionals, and the integration of diverse communities and parents in an authentic and empowering manner (Sanchez, 1995) are few of the issues facing those working in multicultural settings. Inclusion of the sociocultural context of the students during teaching and examinations, the sociocultural background of the examiner, issues of awareness of bias and stereotypes continued to be stressed by many in the multicultural field. Yet we see for example in South Africa that while the racial composition of the student population in many schools has changed, the staff composition in these schools remained largely unaltered. In formerly white-only schools, where majority of the students are blacks, the majority of the teaching and support staff is white – with many of whom having little or no prior experience teaching students of other cultural groups (Samuel and Sayed, 2003).

For the diverse student and school staff, the ability to conceptualise and integrate culture and issues of diversity within a developmental perspective is also important (Sanchez, 1995). This is particularly essential because as developmental psychologists have indicated, children grow and develop differently across cultural divide (Nsamenang, 2004). This aspect points clearly to the need for comprehensive training of teachers as a result of multiculturalism. In addition to this, education professionals are also challenged by the need to consider the impact of complex social/environmental problems, which in many contexts have negative consequences for students from various racial/ethnic backgrounds. Many African students live in poverty with their parents and relatives. These students may be in schools with others from affluent background. Multiculturalism demands the construction of the socio-educational aspects of school life to cater for students from these backgrounds.

BRINGING THE “MADIBA MAGIC” INTO THE AFRICAN SCHOOL CURRICULUM

The discourse on multiculturalism seeks to promote national reconciliation through mutual recognition and respect of differences. The challenges of multiculturalism suggest a need for a new attitude and mindset, one which will allow us to construct and embrace an entirely new identity – one which allows us to develop a new mindset not just regarding how we perceive ourselves as individuals, but also how we perceive otherness. There is no question that, with the multiplicity of ethnic enclaves across the continent, differences define us as African people. One of Africa's outstanding strengths is its indomitable spirit and multiethnic psyche. In a continent whose impressive feature is diversity, it is apparent that Africans cannot identify themselves with, or see and interpret, everything and anything from one culture, or even Westernised, cognitive repertoire (Nsamenang, 2004). A multicultural perspective is paramount. This is what “Madiba” has demonstrated in his unique spirit of humanism. We propose here that in handling the challenges of multiculturalism and building a culturally pluralistic society, the “Madiba Magic” - given its transformative nature - provides a useful starting point.

Given the socialising influence of the school, we argue also that teacher education and the school system have a critical role to play in the re-socialisation of the mindset needed, if multiculturalism is to ‘succeed’. The development of educational curricula that build on the key tenets of Madiba humanism and “Madiba Magic” are essential to recreate the mindset necessary to practise and support a truly multicultural school environment, and the society which one hopes for. Different ways in which the Madiba's Magic, reflected in the tenets and basic values of mutual care and concern, non-violence, spirit of forgiveness, kindness, tolerance, chivalry, freedom, respect, reconciliation and a belief in human dignity – can be infused into the school curriculum, are further discussed below.

The role of teacher education

The training of culturally sensitive teachers: School shapes society and the future via today's children. Indeed, schools shape children's perception of the world through processes of socialisation. This means that the values, beliefs and norms of society are internalised by our children so that they come to think and act like other members of society. This relation between school and society suggests that if multiculturalism, in terms of recognition and respect of differences, integration and communication between cultural ensembles, intracultural management, support of minority rights, and the stimulation of peaceful coexistence, is to flourish in Africa, the school system, and indeed teacher education, is an important medium through which to begin to shape this vision.

One of the first things that need to be accomplished at the teacher training level is the development of a comprehensive and integrated course focusing on the contents and ancestry of different ethnic communities in the society. This is motivated

by the fact that without specific cultural information, we can inadvertently use practices and approaches in teaching that infringe on the customs of each others' traditions. Cultural sensitivity training also eases communication across cultural divides. Teachers must be trained to train their students. The training of teachers and other education professionals can focus on three critical aspects grounded in the principles of the Madiba Magic: awareness, knowledge and skills.

The awareness component can involve teacher trainees examining their own values, myths, stereotypes and worldview. Self-reflection constitutes a major part of Mandela's life, which he speaks about in his autobiography entitled "*Long Walk to Freedom*" (Mandela, 1994). The knowledge aspect should entail developing a non-stereotyping, flexible understanding of cultural, social, and family dynamics of diverse ethnic groups. This should be looked at within a historical sense as well. Finally, the skills dimension requires the development of culturally sensitive and flexible pedagogical and assessment methods and communication skills. Culturally sensitive training can assist teachers develop the temperament required to cope in multicultural school environments and teach in a culturally sensitive manner.

Teacher education professionals need to devise ways to integrate these three elements together in a course. Bronfenbrenner (1979) developed an ecological model that offers an example of how integration could be achieved. This model states that teachers try to understand a student in the context of his/her mesosystems, macrosystems and exosystems. This means, all the participants in the school and the wider community are placed in an ecological context which allows for a deeper understanding. A key aspect to "Madiba Magic" is in his embracing of others as a result of understanding them in their entirety. While South Africa has embraced cultural diversity as a nation, the school system is yet to embrace the kind of holistic understanding and integration in teaching and learning that Madiba Magic and Bronfenbrenner's proposals demand.

Learning to appreciate differences:

Exposure to the awareness, knowledge, and skills in cultural training means that teachers stand a greater chance of fostering the multicultural competences necessary in pedagogy. Training teachers to develop and deliver anti-bias lessons can help teachers learn to appreciate, rather than fear, differences and to recognise bias and stereotypes when they see them. The appreciation of difference and indeed tolerance are central virtues of Madiba's Magic. These values have been enshrined in the South African Constitution, which he helped to craft. When teachers value differences during their teaching, they can in turn encourage their students to be open about their lifeworlds. If what students do at home is never mentioned or is considered strange by teachers and other students, they may refuse to speak their home language, eat their traditional foods, wear their traditional clothes or follow their traditional religious practices. Teachers need to recognise these issues and understand that such practices would be counter to the spirit of the "Madiba Magic".

Based on Madiba's humanistic psychology, the following can be suggested as a way of supporting teachers toward valuing cultural diversity and resisting malignant prejudice:

The Madiba Magic shows that peacemaking begins with the self. As teachers, try to create opportunities for students to interact and make friends with people who are different from themselves. In addition to emphasizing values of respect and tolerance of differences, strive to teach students about peaceful social interaction and strategies to achieve goals related to interaction and communication with people from cultural background other than their own. Students learn best from concrete experiences. Thus try also to expose them to role models from their own and other cultures.

Model the behaviours and attitudes that you want your students to develop. The significance of modelling has continued to be stressed by many social learning advocates. This extends to your personal demeanour as well as your professional practice. Incorporate a wide range of diversity in the books, magazines, pictures and other instructional materials used for teaching. Be accommodative in your demeanour with students.

Schools need teachers who can function outside of their cultural frame, to reach out to and work with peers and students from other cultural ensembles. Critical multiculturalism, anti-racist education, and social justice education are not common currently in teacher education and training in many African countries. A recent study of these institutions in South Africa (Hemson, 2006), revealed that (a) there is little focus on how teacher-trainees will enact the learning related to diversity, and (b) there is little material available that addresses diversity, or give attention to theories of diversity and exclusion. The language of 'diversity' creates its own problems as it is seen as a formula for division and victimisation in many South African institutions. The issues highlighted in Hemson's study are examples of some of the things that teacher trainers need to change if they are to better prepare teachers to work in a multicultural setting.

Teachers who incorporate the need for a strong sense of sociability and acceptance of others into their classroom practices and learning environment will help learners not only develop caring relationships with teachers but also with peers. All students and teachers need to be taught about xenophobia and its consequences. Students need to know what xenophobia is and its effects on other learners (especially, foreign learners). Supporting teachers in this way will help them to reach outside of their own frame, and help others to do likewise, as Nelson 'Madiba' Mandela has demonstrated.

Learning to cultivate authentic working relationships with culturally diverse parents and communities:

In any school context, a major part of teachers' work life involves interacting with the parents of their students and other members of the wider communities

which the school serves. In Africa, establishing authentic relationships with culturally diverse parent community is a crucial aspect of any effort to increase multicultural understanding and the development of a school environment where cultural differences are recognised and valued. Teacher education needs to focus on training schemes that aim directly at supporting teacher trainees to establish positive relationships with parents of diverse communities. Working at the centre of any “cultural crossroads” can be a challenging task for both teachers and parents. To become actively involved in school is daunting for minority ethnic group parents, especially those living in African societies where multiculturalism is still to take foothold. Yet it is in these kinds of situations – in fact, it was in worse-case scenarios – that Madiba strived. Teachers need to develop the transformative quality and skills in, *inter alia*, communication, interpersonal interactions, and in empowering others, which will allow others, as Madiba demonstrated, to claim part of them, regardless of their racial, tribal, cultural orientation; to become a symbol of what happens in the encounter of different cultural “aesthetics of existence” with “...honed instinct for responding to, and inaugurating, dialogue as a culture in its own right” (Soyinka in Mangcu, 2009, p.3).

There is of course no quick way about achieving this outcome. However, the measures that we have discussed at (a) and (b) above have been found to be helpful starting points. Focusing attention in teacher education on issues of critical multiculturalism or critical antiracism and anti-tribalism, social justice education and anti-oppressive education have shown also to be helpful, even empowering, frameworks, to teachers working towards a multicultural conclusion (Henson, 2006).

There are practical examples of these developments in the South African context. The entire education system has been desegregated, meaning that parents can send their children to any school or university, and education professionals can take up employment in any of these institutions, without regard for race. The rationale is that, in a country which was once moulded by the social-engineering experiment that separated them geographically and psychologically, opportunities are needed to building relations across cultural divide. When people of different cultural ensembles are in contact with each other, there is a greater chance of developing cultural understanding. The desegregation of schools provides South Africans and education leaders in particular, with an opportunity to improve cross cultural group communication and build a Rainbow Nation, in which everyone is tolerant of each other. Secondly, the Revised National Curriculum Statement for South Africa supports the building of a multicultural or multi-racial society. The core contents of the Revised National Curriculum revolve around particular learning areas, skills and values. The curriculum further sets out the following as, among other things, its guiding principles to promote tolerance and support multiculturalism: inclusivity, social justice, human rights, and a healthy environment (DoE, 2004). The hope is that through changes such as these, the society will be able to realise the aims of a democratic society and of the Constitution.

Most South African universities – South African teachers are trained in universities, unlike in teacher colleges elsewhere in Africa – now have statements of vision and mission that make explicit commitments to social justice and that recognise the polyethnic nature of the society. In addition, efforts are being made to ensure that some courses give specific attention to issues of cultural and other forms of diversity and oppression. The hope is that these will empower teacher trainees to move outside their own cultural frame and able to enact the sort of skills and attitudes necessary to build authentic working relationships with culturally diverse parents and communities. Efforts to build relationships among the citizenry and construct a truly Rainbow Nation are, thus, not just confined to the school system, but rather cut across all levels of the education system.

The role of school leaders:

Madiba's humanism draws heavily on a spirit of forgiveness, and tolerance, and a belief in human dignity, freedom and respect. At the school level, school leaders can promote these values through the school curriculum. In South Africa, for example, a process of promoting these values has already begun. The Revised National Curriculum Statement in that country, for instance, supports the building of a multicultural society as, in addition to its core contents which cover different fields of knowledge, skills and values, it is guided by principles of inclusivity and social justice.

Madiba emphasizes the richness of people's cultural heritage and expresses values and behaviours that are not narrowly racial or purely sectional when relating to society. Throughout his life, Madiba demonstrated a strong sense of belief in the human potential and goodness. This belief has guided his actions in reconciliation. It is Madiba's forgiving spirit that led to the healing process evident in the multicultural South African society today. Through the values of the South African Constitution and the national curriculum, school leaders are being encouraged and supported to set the sort of tone that emphasizes that irrespective of people's cultural differences and social background, people should forgive others and live together in peace and in trust.

A good way to encourage and support students of different racial or tribal groups to appreciate each other is to have them work together in groups. The significance of social interaction for learning and development has long been recognised and acknowledged. As future adults, students should be given opportunities to interact with people other than their own race or tribe. Through this learning, they can cultivate tolerance and respect for each other, not just for better quality interaction in school but also for the future. In most cases, students have no problem with interacting with other learners. The problem often is with parents who tell them that one tribal group is better or worse than the other. Students should discuss the causes of xenophobia and how it can be addressed in their schools. It is only when students themselves define what they understand by these concepts

that they can be able to realize that xenophobia is a bad thing and should be eliminated when and where it occurs.

CONCLUSION

This chapter has discussed the multicultural situation in Africa, with emphasis on South Africa. The objectives of this chapter are: to construct and present the Nelson (Madiba) Mandela humanistic psychology and “Madiba Magic”; to highlight some of the challenges of multiculturalism experienced in multicultural societies and schools; and to illustrate how characteristics of the “Madiba Magic” might be infused into the school curriculum via teacher education as a strategy to manage some of the challenges that multiculturalism pose in African schools and the wider society.

Madiba’s magic and humanism is characterised by distinct basic values of a spirit of forgiveness, kindness, tolerance, chivalry, and a belief in human dignity, freedom and respect. These values, coupled with a will to transcend one cultural frame and embrace difference, are necessary for the flourishing of multiculturalism. The school is an important institution through which to realize the vision of a multicultural society. Teacher education has critical role to play in the process of socialising young citizens to live in a context that is multicultural. The incorporation of Madiba humanism and magic into the school curriculum would, in effect, promote an African perspective on fostering multiculturalism, where cultural diversity is recognized, harnessed, and celebrated (see Sall and Nsamenang, Chapter 6, this volume).

LEARNERS' EXERCISES

Table 1: Activities that can be used to promote multiculturalism in Africa

Activities as indicators of multiculturalism	Implied developed competences and how they are developed	How the competencies are demonstrated
Cross-cultural group work Playing sporting games	Children will develop tolerance and respect	A child who is able to work together with other children is likely to develop tolerance and team spirit
Human rights and children's rights in schools and at home	Children will develop self-esteem and confidence	Children will be able to develop critical thinking and analytical skills
Race equality	Children need to discuss about the importance of gender and race equality in South Africa and the African continent	Children will be able to realise that girls are equally as competent as boys
Effects of cultural wars and instability in Africa	Children need to discuss about the importance of humanness and Ubuntu in Africa	Children should be able to play together with other children from other parts of Africa and beyond
Discrimination and xenophobia	Children should be able to realise that they need to appreciate other children from other racial groups as their brothers and sisters	Children should be involved in debates on the difference between discrimination and xenophobia

Learners' Short list for Further Reading

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Chapter 36

**EDUCATION FOR ALL: FROM JOMTIEN TO DAKAR + 10:
WHAT PROGRESS FOR AFRICA?**

Djénéba Traore and George E. Fonkeng

INTRODUCTION

Development through education is a major concept in the globalization process. In this light, progress in the educational domain varies according to time and space. Consequently, the objectives, organization and methodology of education are of necessity a reflection of the existing institutions, the values and forces that characterize a given society. The notion of education as an important factor for all knowledge and an indispensable capital for the development of society is not new. Education is a dynamic force for change; and its implications for the socio-cultural beliefs of a nation, oblige this study to postulate that, education for all (including for girls), is imperative and constitutes a major challenge for the whole world. Thus, education seems to be a vital investment which a nation should undertake. It is rightly that Dewey (1959), quoted by Tchombe (1994), states that what the best and wisest parent desires for his child, the government and community should equally desire same for all its children.

Besides, the General Assembly of the United Nations has always insisted on the right to education as one of the basic human rights. It declares that illiteracy is one of the major obstacles to economic, political, social and industrial development. Education as a universal right occupies an important place in international agreements and conferences since 1945 (International Declaration of Human Rights). The international decade of the Woman (1975-1985) for its part, fought against the cristallisation of the status of the woman, notably in the domain of education where she was hitherto excluded. The Convention on the Rights of the Child adopted by the United Nation's General Assembly on 20 November 1989, in sections 28 and 29 insist on this right. The African Charter on the rights and wellbeing of the child adopted by the African Union (section 11) strengthens the above resolutions with the necessity to eliminate all forms of discrimination against women and girls. In 1990, four agencies of the United Nations (UNESCO, UNICEF, PNDP, World Bank) organized a meeting in Jomtien (Thailand), to reach an understanding on a world declaration, namely, the commitment of intergovernmental organizations, NGOs and individuals, to ensure that the basic right to education becomes a reality by 2015.

Education for all or the universality of education, is in line with the main recommendations of the millennium development goals (MDGs) that provide that education is an individual right, and quality education a basic right (United Nations, 2000). Following these declarations, and given the commitments taken by States, it could be observed that the number of children attending primary school has significantly increased since the year 2000. The rate of girls in schools is higher than ever; the budgets devoted to education and aid in this domain have increased significantly.

The report indicates that between 1999 and 2005, the percentage of children in primary education increased by 36% in South and West Asia. The authorities of 14 countries suppressed school fees at primary level, which promoted the attendance

of school of the most disadvantaged groups. The number of children who have never attended school in the world has dropped significantly, going from 96 million in 1999 to 72 million in 2005. Countries that have witnessed the highest school attendance rates in primary education are those that generally increased public spending in education indicated in the NDP. Public spending on education has increased by more than 5% a year in sub-Saharan Africa and South and West Asia; the two regions were the furthest from meeting the objectives of EFA.

THE PROBLEM

It should be pointed out that education for all in terms of access, stay and completion at the primary level is difficult to achieve, just as many other rights, especially in situations of shortage of human, material and financial resources. Furthermore, we notice in many African countries that there is slow progress in the introduction of the true practice of democracy, good governance and transparency in public management. In short, there is a real lack of public will in our African countries with regard to EFA. The ratification of international agreements by African Heads of State is an opportunity for them to make their presence felt on the world political scene. We equally notice that legislative texts in African countries are well conceived and drafted according to international expectations, but their application is problematic. It is, therefore, not surprising that despite the good intentions shown by a college of Heads of State to universalise primary education, we can still notice in many countries in the world and notably in developing countries, a net fall in school output through indices such as a high rate of repeating, poor performances in official examinations and a wide disparity at performance levels between rural areas and urban areas.

Presently, 72 million children are still not attending school throughout the world. UNESCO complains that in five years, there shall still be 56 million. This poor picture was painted by the UNESCO Education for all global monitoring report, published at the end of January 2008. With 72 million children not attending school, decreasing national budgets and plummeting bilateral and international aid, the achievement of universal primary education by 2015, which is one of the Millennium goals fixed by the United Nations, is almost out of reach (Education for All Global Monitoring Report, UNESCO, 2008).

Still with regards to bad news, the poor nature of educational services, the high rates of school fees as well as the high rate of adult illiteracy, are some of the factors that limit the chances of reaching Education All (EFA) by 2015.

The Education for All global monitoring report is a yearly publication by a team of independent experts recruited by UNESCO. This report assesses the progress made in order to reach the six objectives of Education for all defined in Dakar, Senegal, in 2000. The UNESCO Institute of Statistics (UIS) is a key member of the EFA monitoring team, for it provides the statistics and analyses that constitute the basis of the report.

Education refers to a process, an action on a person, intended to develop him/her usefully, to perfect him/her and involve him/her fully in social development. Education brings about human progress, works on the child right from birth and gradually leads him/her to autonomy. A good education enables the individual to acquire a complete physical, social, emotional and intellectual development.

In March 1990, the Jomtien (Thailand) World Conference on Education for All (EFA), adopted the historic decision to universalize primary education and eradicate illiteracy before the year 2000. Given that this resolution for 10 years remained at the level of good intentions, UNESCO organized in April 2000 in Dakar (Senegal) a World Forum on Education which adopted an Action Framework committing the governments of 181 countries that were present, to create conditions for quality basic education for all before the year 2015. In effect, Education for All is an objective that aims to provide access to quality education and training to all before the year 2015. It is translated into reality by the following six objectives:

1. Develop and improve in every way, the protection and education of little children and notably the most vulnerable and disadvantaged children;
2. Ensure that by 2015 all children, especially girls and children in difficulty and those belonging to ethnic minority groups, should have the possibility to access compulsory free quality primary education and to go through right to completion.
3. Meet the educational needs of all youths by ensuring an equitable access to adequate programmes with the objective of acquiring knowledge as well as necessary skills to cope with everyday life and participate as active citizens.
4. Improve adult literacy rate by 50%, and notably that of women, by 2015, and ensure for all adults an equitable access to basic and permanent educational programmes.
5. Eliminate disparities between sexes in primary and secondary education by 2005 and institute equality in this domain in 2015 by ensuring especially for girls, a balanced and unrestricted access to an efficient and quality basic education.
6. Improve in all aspects, the quality of education such as to obtain for all recognised and quantifiable learning results - especially in reading, writing and arithmetics, indispensable skills for everyday life.

If in the year 2000, more than 113 million children, mostly girls, were excluded from the educational system, in 2010 there were still 72 million children who were deprived of primary education and 800 million adults who were still illiterate.

Despite the progress realized in this domain, equity between girls and boys is still a concern, as well as disparities between urban and rural areas.

In addition, in most public schools, the teacher/pupil ratio is equal to or more than 1/100.

Ten years after Dakar, the Summit on Millennium Development Goals held in New York from 20 to 22 September 2010, in an optimistic view, indicated that 13 African countries have already attained or would get to Universal Primary school attendance (UPSA) by 2015; the leading objective amongst the major objectives of Education for All, fixed by the World Forum on Education (Dakar, April 2000), and that was adopted by the United Nations in September 2000. However, for 31 countries in the continent, this objective would never be attained if the educational policies remain unchanged. This is one of the overwhelming observations made by the Regional Report Dakar +5 Education for All in Africa: Guidelines for Action, launched by the UNESCO-Dakar Regional Office.

At the approach of the 2015 deadline, the progress made by sub-saharan African countries at the level of all educational cycles appears to be precarious given the dwindling of financing sources.

What are the causes of this situation and how can the difficulties be handled? If we carry out a critical analysis of the state of attainment of EFA in Africa, we would observe that it is influenced by many factors related mainly to history, geopolitics, economics and culture.

CRITICAL ANALYSIS OF THE STATE OF EFA IN AFRICA

A colonial past that is difficult to overcome: In Africa, the concept of “modern school” is closely related to the colonial period. One of the reasons why Africans have for long rejected what they called “white man school” is certainly due to the fact that this institution that was imported from the West was considered as a kind of acculturation and moral and physical repression for African children. This trauma which was still alive in the minds of Africans during the early years of Independence and long after, led to the design and implementation of educational reforms that aimed to “Africanise” school curricula by including national languages as the means of teaching and enhancing African history and culture. To measure the extent of these reforms, we should recall that in the former colonies, the use of mother tongues was formally forbidden by school rules, subject to indepth corporal chastisement and serious humiliations. Furthermore, the history and culture of the African continent were repudiated by the colonial masters who, we should recall, had invaded Africa under the cover of a civilization mission that aimed to save the lost souls of “these poor savages”. During the colonial period, the few Africans who had been to school (for the most part through force), were basically taught the history of the colonial masters, who in turn considered school a “necessary evil”, given that school could cause a change in mentalities and lead to an uprising against established order.

In order to get back their bearings, it is vital for Africans to “get rid of their old demons” and turn to the realities of today, in order to build a better future for their children. They have to stop behaving as helpless victims and as of necessity come out of the vicious circle of lamentations and fruitless accusations of the

colonial period. The past should be used as a springboard for progress and not as an impediment.

The indepth imbalance between school and university supply and demand.

One of the main causes of the shortage of teachers in school and university establishments is certainly the fact that in very many African countries, mostly Francophone African countries, the recruitment of teachers from the pre-school to higher education, just like that of all other civil servants, was from 1980 subjected to a highly selective and restrictive competitive entrance examination, in order to meet the requirements of the World Bank and the International Monetary Fund (IMF) through the Structural Adjustment Plan (SAP), which by the way is still in force.

The National Education Budgets for the training of teachers is still too small. Thus, the ADEA Bamako+5 Conference held at the end of 2009 placed emphasis on the need to train an additional 4 million contract teachers to fill the gap in teachers at the level of basic education. The world today needs 11 billion dollars a year to meet the EFA objectives. Due to economic and financial crisis, it is obvious that rich countries shall not provide the necessary financial support. It is difficult to make people to understand that educational expenses should not be considered as a burden, but as an investment for the future of the planet. Even though it is unanimously recognized that education is the key to development and that access to education is an inalienable right for all human beings, still many countries do not devote enough effort to attain the EFA objectives.

The increase by the World Bank of the budget allocated for basic education, which moved from 900 million dollars in 1990 to 1.9 billion dollars presently, has not solved the problem. Poor internal and external output (high rate of repeating, drop out and dismissal, training/employment disparity, unemployment of young graduates) are still common. The sharp increase in school enrolment which was the logical consequence of the Jomtien and Dakar conferences, occurred at the detriment of the quality of the educational system. The extensive shortage in teachers has led governments to take alternative decisions not based on pedagogic principles, such as double division, double part-time teaching and totally inefficient decisions such as the recruitment of part-time teachers without any initial training. The abandonment of quality has led to an abnormally high rate of failure, surprisingly checked in many countries by a high percentage of obligatory promotion to the next class at the level of basic education. In effect, some officials of the educational sector have fixed the number of pupils that have to move to the next class each year at 85% no matter their class performance.

In these conditions, supply has been unable to meet employment market needs which require increasingly competent workers. Meanwhile, students are still today trained according to the criteria of the 1990s, i.e. read, count and write. These skills are the basis of the know-how to be acquired at the end of 6 to 9 years of schooling. A child could leave school after this period and the State would feel that he/she had

accomplished his/her duty.

No one thought of the future of the millions of children who were forced to drop out of school at adolescent age, without any intellectual capacity to enable them face the hard reality of the job market. No practical knowledge was taught to them that could enable them carry out a professional activity. Once they prematurely left the educational system, it became necessary and urgent for them to quickly learn a trade in the informal sector, in order to survive in economically weak societies highly characterised by duties towards the family and close ones.

The students who were lucky to go to the University found themselves in an equally unenviable situation. In effect, the universities train future unemployed persons. What do we learn there? In what conditions is learning carried out? Who are the teachers who carry out the training? How is university administration organised? These are some of the questions that beg for answers.

A private sector that often depends too much on public aid.

In the 1980s to 1990, Africa witnessed a quantitative leap at the level of the privatisation of the educational system. This privatization contributed on the one hand to absorb a significant part of those that public schools lacked the capacity to admit. On the other hand, it enabled teaching conditions to be improved, offering to learners a more appropriate environment in terms of enrolment and didactic materials. However, in some notably Francophone African countries, the private sector has not been able to develop itself autonomously due to a lack of initiative, innovative spirit and the fear of taking risks. The growth of private schools still largely depends on State financing.

Inefficient and unadapted training and learning methods.

The globalization of education at all levels of the educational system requires the rethinking of pedagogies, methodologies, curricula as well as the method of imparting knowledge. It is unquestionable that we are presently living in a knowledge-based society where competition is the watch word. Importance is accorded to those who possess knowledge and who especially know how to impart or use it.

Meanwhile, we generally notice serious weaknesses in African schools and universities, such as:

1. Lack of qualification and continuous training of the teaching corps;
2. Shortage of number of teachers;
3. An almost absence of didactic materials and school and university libraries;
4. Outdated learning methods, based on "cramming" and not on the development of a critical mind.

5. Absence of policies and practices to integrate Information and Communications Technologies (ICT) in pedagogy.
6. Non mastery of English, French other languages.

Dilapidated and insufficient state of school and university infrastructure

Despite the efforts of African Governments and Technical and Financial Partners to develop school and university infrastructure, access to these establishments remains a major challenge to be met. In addition, we notice in many African countries, a tremendous shortage in quality teachers. The economic crisis of the 1960s caused a brain drain of the best teachers towards Western countries where they can get somehow better opportunities than in their countries of origin. Consequently, there is a weak student/lecturer ratio especially of senior lecturers. We equally notice a poor internal and external output. As for internal output, blame has been levied on the lack of teachers, the lack of classrooms, of amphitheatres and didactic materials, lack of equipped laboratories and complaisant and a lax administration that has been overtaken by events. In the case of external output, many degree holders are unable to find a job due to the fact that course contents do not take into account the issue of professionalisation. Finally, the lack of financing provided to State universities poses enormous problems. In many African countries, the State is the only source of financing, for private schools and universities are unable to generate the necessary resources to ensure their operating.

Poor school attendance by girls

There can be no development without the effective participation of women in the process of the creation of riches. In the 1980s, the school attendance by girls witnessed an unprecedented growth. In effect, everywhere in Africa, we noticed a strong mobilization for a girls/boys parity, especially at the primary level. The level of school attendance by girls increased considerably between 1990 and the year 2000 in regions where gender inequality is most pronounced, such as in sub-saharan Africa, Arab countries and South and West Asia.

However, this quantitative development of school attendance by girls is limited to basic education, beyond which inequalities between sexes remain. We should point out various dimensions of inequality with regards to the exercise of the right to education for girls such as some family, social and cultural constraints. In many African countries, there is still strong cultural preferences for boys with a serious negative impact on gender equality. Early marriages are a non-negligible hindrance which retards the education of girls; and more precisely the HIV/AIDS epidemic; wars and poverty are equally important as factors to be considered in the rights to education (UNESCO, EFA GLOBAL Monitoring Report: Gender and Education for All, 2003/4). The lack of training, information and sensitisation of communities and school management committees such as Parents/Teachers Associations (PTA) and School Management Committees (SMC).

Adult education still remains an important consideration in the promotion of Education for All. In effect, many studies (Amin and Fonkeng, 2000), have shown that the more parents are educated, the more they participate in the education of their children; this is same for access to information and the sensitisation of communities. Very often, we ignore the importance of councils or decentralised local authorities in the financing of education and other educational materials/resources. Parents, through Parents/Teachers Associations (PTA) or School Management Committees (SMC), and in consultation with administrative authorities, are capable of influencing the school attendance of children, and at the same time, the functioning and management of schools. Through the supply of labour and financing of part of didactic materials, PTAs and SMCs are an asset in the overall process of Education for progress.

WAY FORWARD

Education is a development factor, and sustainable development has to be anchored on solid youth training. To promote Education for All implies, on the one hand, fighting poverty, school failure, school drop out and a rise in enrolment. On the other hand, it entails fighting differential success and students selection which are current practices in our educational milieu, in short, all the elements that bring about the inefficiency of the educational system with negative consequences on the economic development of countries (Fonkeng, 2008).

Poverty

Poverty is a reality lived daily by 1.4 billion people in the world, according to informed sources. The poverty threshold was increased, moving from 1 to 1.23 dollars a day and per inhabitant. People most affected by poverty are mostly found in Africa. Together with women, children suffer the most in poverty situations; poverty destroys hope and opportunities, leaves indelible marks in the minds of young people. Many children do not go to school due to poverty. When the quality of education is low, poverty fatally sets in. Child labour or the exploitation of children is a poverty indicator. "When children, especially girls, marry and have early pregnancies, poverty sets in. Childhood is the best period to fight the poverty cycle. A school programme that should enable youths to access quality education is a major step in the fight against poverty; and this starts notably with strong support of the Education for All Objectives.

Moral Education

African training schools have since their accession to independence, produced professionals- medical doctors, lawyers, engineers, pilots, astronauts, teachers, etc. - that are capable of transforming the human society. However, since the beginning of the 1980s, we witnessed a profound disparity between training and employment.

Where therefore is the will of African States for professionalisation and youths training, in order to facilitate the obtaining of a job? Given the inaction of most States on this vital issue, don't we therefore have the right to think that the fundamental aim of education has been undermined? The fall of educational standard in our schools has become a phenomenon that calls for concern. The training of teachers and the practice of the profession must take into consideration the values and priorities related to moral principles in order to equip the children with a humanist vision. Teachers, without exception, are responsible for the development of each child at the moral, emotional, physical and intellectual level. Schools and teachers are morally called upon to reconcile the academic sector and the social sector. This requires a more dynamic approach in the planning of school programmes as they exist today, more especially in the vision of Education for All.

Information and Communication Technologies (ICT)

The 21st century is undoubtedly marked by the emergence of a knowledge based society, born of the technological revolution, especially in the domain of Information and Communication Technologies (ICTs). The manner and rapidity, with which knowledge is produced, configured and disseminated plays a key role in innovation and competitiveness at world level. A redefinition of education, knowledge and development adds to this transition towards a knowledge society. What does, "to be learned" mean today? Emerging knowledge in society requires a close link between the various forms of education and development in the local, national, and global contexts. Computers have and are changing the way we live, learn and work. In effect, no technological innovation in the world has been able to change our way of life and work as rapidly and radically as computers. Even if African educational experts have the right to ponder on the issue of the integration of ICTs, a sure fact remains: It is today no longer an issue of proving whether the inclusion of ICTs may contribute in the improvement of the quality of education in Africa, for no scientific study puts it into question, but to determine the ways and means for the sustainable pedagogic use of ICTs in school, in all schools. This is equally a way to open and adapt school to the job market wherein the computer has become indispensable (Traore, 2008). What future for the pedagogic use of ICTs in Sub-Saharan Africa? The case of five member states of ERNWACA).

However, despite the positive impacts of the computer, its use is still facing the reticence of many people and the educational system as a whole. Some of the skeptics underestimate and even deny the positive impact of computers in the improvement of the quality of education. On the basis of this, the following question comes to mind: How can an educational system ignore the importance of these innovative machines? Almost all disciplines in the school curriculum can be taught and studied using computers or ICT. Many schools, from nursery school to the university, passing through primary and secondary schools are called upon to introduce this tool in their training process.

Decentralisation

In order to attain the objectives of Education For All, it is imperative and urgent to undertake the decentralization of African educational systems. In this connection, promotion of good governance, democracy and transparency are indispensable elements to be established. Local council officials and other local officials should feel involved in the operating and control of schools in terms of the implementation of educational policies and the evaluation of the meeting of fixed objectives. It is difficult to talk of decentralization without making allusion to democracy and good governance, in the domain of education. The rights and responsibilities of teachers and their organization within the context of their representation at the local council level, their involvement in curriculum development and implementation and examination, as well as the democratisation of the decision making process at the school level, are primordial. Within the same context, the problems of salary and carrier profiles are also very important elements.

Strategic Planning

Every educational system has to be planned in a strategic manner in order to adapt it to needs and render it efficient. Needs identification, the formulation of objectives, data collection and organization of human, material and financial resources are essential for the achievement of the goals of Education For All. Strategic Planning involves a scientific application in the formulation of educational policies and decision making. A quality strategic plan must contain well defined objectives with a precise and logical analysis of the necessary actions to be taken for future needs. In this connection, it takes into account the economic, political and social context. In order to achieve the EFA objectives, it is of utmost importance that schools and universities should have, inter alia, adequate infrastructure, well trained teachers, improved teaching methods/strategies.

Planning has to make room for private education in the supply of education in various African countries. The contribution of confessional and lay education is immense and should be encouraged.

School Curriculum

Today, it is increasingly becoming necessary to ask some fundamental questions. The greatest part of sub-saharan Africa is actively involved in Agriculture and the vast majority of families have a history that is linked to this sector. Given that education and training are at the centre of the economic development of the entire nation, we ought to compulsorily adapt our educational systems to the needs of African nations; otherwise we shall be forced to beg for charity from other nations. The need for change in education is immense and constraining. Primary school curricula have to be directed towards social life with a penchant for the rural sector, in order to contribute in the improvement of economic and social conditions. The design and preparation of local pedagogic materials with teaching/teachers adapted to their use is increasingly becoming a shortcoming in the training of our children.

At the secondary level, the school programme should have a diversified change mechanism and focus on the development of attitudes and skills with vocational and professional training at the basis. At the university level, the challenges are more linked to the necessity to train youths capable of meeting the national socio-economic challenges with a degree of confidence. They should have the capacity for a full exploitation of all technological options notably local technology for the development of small and medium size enterprises capable of transforming local materials into finished and useful products.

Second decade of education for Africa (2006 - 2015)

In an important document titled "Second Decade of Education for Africa (2006 -2015)", the African Union describes its vision of Africa, which is that of an "integrated, peaceful, prosperous continent that manages its own initiatives in order to occupy its rightful place in the world community and in the knowledge economy."

For the panafrican organization, the concretization of this vision must of necessity require "the development of African human resources", a process that must be based on the establishment of a quality education for all, in order that each African citizen should fully contribute within the means available to him/her, to the economic and socio-cultural development of his/her country and the continent.

The Second Decade of the Education action plan underscores the necessity to strengthen mutual collaboration between African States, in order to ensure, at the end of the Second Decade of Education, the establishment of efficient information management systems in education at the national, regional and continental levels. Other major results expected include the significant improvement of *teaching results (access, quality, efficiency, relevance)*, at the same time examining issues of *the training of teachers and higher education at the service of development*; the achievement of sex equality in primary and secondary education; the institution of systematic experience-sharing and mutual assistance for the promotion of education by significantly filling the gap between the sexes in subjects like mathematics, as well as the sciences and technology.

The conference of ministers of education of the African Union adopted the following priority domains:

- i. Gender and culture prospects
- ii. Educational information management systems;
- iii. Development of teachers;
- iv. Higher education;
- v. Teaching and technical and professional training, especially education in difficult situations;
- vi. Curriculum and educational and didactic materials;
- vii. Quality management

The examination of the quality of education shall be based on the following write-ups and approaches:

- i. Establishment of standards for the quality management of education in Africa;
- ii. Strengthening of skills for quality management in education;
- iii. Systematic monitoring and evaluation of the progress of the learner, and the quality of teaching and learning.

Consolidation

Finally, it is important to point out that enormous progress has been made in EFA, and that there is need to continue the effort of consolidating what has been achieved by placing particular emphasis on quality. In this connection, it would be important to make allusion to the capacity of an educational system to meet innovations and social changes. Research is indispensable for change; many reflections in this regard have enabled the introduction of strategic innovations at the primary level in order to improve on the quality of education. For example, people are increasingly talking of the New Pedagogic Approach (NPA), Competence-Based Approach (CBA) and Compensatory Teaching are the new elements in the fight against the internal inefficiency of primary education. For an emerging Africa, it is crucial to take into consideration in research programmes, African realities in the social, cultural, economic, linguistic and psychological contexts with emphasis on application. Professionalism has become indispensable to render education more attractive. For quality education, we are obliged to take teachers into consideration for they occupy an important place. Such would ensure an improved internal output of the educational system. Lastly, in order to ensure success at the level of the consolidation of what has been achieved, it would be important to include in the educational process, a quality monitoring and evaluation mechanism by adopting a good policy and making use of men and women of integrity.

CONCLUSION

We shall conclude with a reality that is inherent in the present African educational systems that are all losing sight of the positive human values that African societies have produced and developed on their territories throughout the centuries. In accordance with the spirit and objectives of this book, we hope that the African Union would orientate education towards a priority action that our founding fathers had initiated in 1961 by involving African pedagogic officials in the reform of educational contents, especially curricula, school textbooks and teaching methods, in order to take into consideration the African context, the development of the African child, cultural heritage, and demand for technological advancement in economic and industrial development (UNESCO 1961: 23). Consequently, the primary mission of Africa in education is to meet the challenge of establishing an African cultural identity as provided for in the UN convention on

the rights of the Child. Another major concern is to adapt the knowledge taught to conform to international standards and requirements- in a world where needed skills change rapidly.

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Handbook of African Educational Theories and Practices A Generative Teacher Education Curriculum

“This monumental piece of work – covering nine thematic sections in thirty-six intellectually heavy weight chapters, mobilising forty-six contributors from sixteen different countries – breaks new ground in its efforts to address the challenge of *kutiwa kasumba* (brainwashing) that has been Africa’s burden since the colonisation of the continent and since its assimilation of western education ... Africa happens to be the only region of the world where all the role models to which its children in their formative years are exposed (angels and saints, great achievers, film stars, etc) are of a race that is different from theirs. African children are the only ones in the world whose socialisation begins with acculturation (learning about other worlds in a foreign language), instead of beginning with enculturation (being deeply entrenched into your own world first and foremost).” *Pai Obanya International Education Strategist, Professor of Educational Evaluation, University of Ibadan, Past Director, UNESCO-BREDA*

“African Educational Theories and Practices is a courageous volume and one much needed as Africa seeks its own way forward, building on its strengths and traditions while acknowledging the importance of others' views as well. This volume moves beyond a well founded critique of the failures of western education in Africa, to present ways forward that arise from the continent itself. In publishing this book the editors and authors provide a service not only for Africa, but for education globally.” *Alan Pence, UNESCO Chair for Early Childhood Education, Care and Development, Director ECDVU, and Professor University of Victoria, Canada.*

“The contributors to Educational Theories and practices are united in the view that for Africa’s institutionalized public basic schooling, currently based largely on Western models and values, to be relevant to African realities and aspirations, now and in the long-term, it must of necessity seek to harness, adapt and utilize Africa’s centuries-old cultural knowledge and sociocultural cognitive systems in its attempt to prosecute modern enterprises and programmes of education in a global context. In sum, the challenge to both the teacher trainer and the teacher practitioner is to acquire knowledge, expertise and skills that require continuous resourcefulness, creativity, adaptability and inventiveness in the spirit of a generative approach to Africa’s educational philosophies and practices of the future.” *Mubanga E. Kashoki Professor of African Languages, Institute of Economic and Social Research, University of Zambia*

“This volume is a major contribution. Addressed primarily to those who will devote themselves to teaching African children, African Educational Theories and Practices provides an up to date, Africa-focused review of the major issues of schooling and learning. There is no doubt that teachers across the continent will find much to consult, to try out, and to think about, as they try to solve educational challenges, one child at a time.” *Dan Wagner Professor of Education, University of Pennsylvania Graduate School of Education & Director, International Literacy Institute.*

“For too long, educational theories and practices in African and other non-western countries have been based on theories and thinking about child development and childhood developed within a western social context. This volume represents a valuable and highly welcomed source of knowledge, connecting education and practices in school to local cultural practices and thinking in African countries. The different chapters cover both new and existing theorising as well as present educational practices anchored in local knowledge. It is a new and highly important book for teachers, researchers and others aiming at improving the quality of education for children in Africa.” *Anne Trine Kjørholt Professor & Director, Norwegian Centre for Child Research, Norwegian University of Science and Technology*

“Cet ouvrage est d'une grande importance si l'on considère son volume (36 chapitres), le nombre d'auteurs (46 contributeurs), de pays couverts (16 pays). Mais il est surtout important par rapport aux questions soulevées et aux propositions qui y sont faites. Le problème posé est réel: le système éducatif africain souffre effectivement de la "kutiwa kasumbalisation". Les conséquences de celles-ci sur l'acculturation des cadres africains, sur les difficultés de transmission et d'assimilation des connaissances, sur la "perdition" de l'Afrique sont, si pas fatales, en tout cas constituent de sérieuses contraintes pour le développement de notre continent". *Bernard Mumpasi Lututala, Secrétaire Exécutif Adjoint, CODESRIA.*

“In drawing together an impressive range of pan-African views, research and practical home-based, community and classroom approaches in relation to an ‘Africentric’ rather than a solely ‘Eurocentric’ perspective on education, this handbook breaks important new ground. As such, it is, in my view, a work that, although it has its shortcomings, may stimulate a more concerted and effective move – ultimately and hopefully in all African countries - to developing formal education curricula which are truly representative of the diversity of cultures (including mother-tongue instruction at least in the early grades) which are particular to specific African communities both across and within individual countries. Certainly, such a transformation will require more focused and grounded ethnographic research – good examples of which are represented in a number of chapters in the handbook – than has yet occurred. In short, I see this handbook as both a useful resource in current teacher education as well as a stimulant to refinement and extension across many other specific cultural communities of the research I have mentioned.” *Emeritus professor David Donald, University of Cape Town*

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