



MINISTRY OF
EDUCATION
MALAYSIA

MALAYSIAN EDUCATION SYSTEM

Curriculum Reform: The Malaysian Experience
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Regional Centre for Education in Science and Mathematics

Introduction

- The Malaysian school curriculum is committed to developing the child holistically along intellectual, spiritual, emotional, and physical dimensions, as reflected in the National Education Philosophy.
- ❑ National Education Philosophy:
 - Education in Malaysia is an on-going effort towards further developing the potential of individuals in a holistic and integrated manner, so as to produce individuals who are intellectually, spiritually, emotionally and physically balanced and harmonious, based on a firm belief in and devotion to God. Such an effort is designed to produce Malaysian citizens who are knowledgeable and competent, who possess high moral standards, and who are responsible and capable of achieving high level of personal well-being as well as being able to contribute to the harmony and betterment of the family, the society and the nation at large.



Meeting the challenge

To transform the Malaysian education landscape to prepare for Malaysian future generation by **DESIGN** and no longer by **CHANCE**



What kind of future generation do we want?

- ❑ A fundamental objective of any education system is to ensure that its students are being equipped with the knowledge and skills required for success in life.
- Graduates that can meet the 21st century challenges
- Critical thinking skills, entrepreneurial, holistic and balanced
- Balanced between character and knowledge



What kind of future generation do we want?

- As we go global, Malaysians have the character of good citizenry
 - Wealth creation (entrepreneurial and a job creator)
 - Enhance the social well-being of society (knowledge acquired and transferred)
- In short bringing back soul to the Malaysian education system developing **learned values-driven talent**
- We want to move from the word human capital to human being (talent)
- End game is to make the Malaysian Education system to be referred, respected and relevant



Reformed Curriculum

- Prime Minister Najib Razak said, that starting January 2017, Computational Thinking and Computer Science will be integrated into the new Standard Based Curriculum for Primary Schools (KSSR) and Standard Based Curriculum for Secondary Schools (KSSM) in phases.
- (The revamped) KSSR and KSSM, which will be introduced next year, are a stepping stone in the preparation of a fast-track system for students who meet (certain) standards earlier than others,” said Director General, Ministry of Education Malaysia.



Reformed Curriculum

- “What will change is the pedagogy of instruction and assessment, which will no longer focus only on central examinations, like Sijil Pelajaran Malaysia (SPM) and Ujian Pencapaian Sekolah Rendah (UPSR), but also on school assessment, co-curriculum, physical health, sports and talent.”



New Primary and Secondary Curricula

- Higher order thinking skills
- Project-based
- ICT games-based
- Minimise content overlap with other subjects & post-secondary



National and School-Based Assessment

- Increase the proportion of questions that focus on creative and
- problem-solving skills
- Data interpretation and evaluation
- Reintroduce from 2016 onwards, the science practical testing elements



Sharpening Skills and Abilities of Teachers

- Diagnostic exercise to identify gaps in content knowledge and pedagogical skills among teachers
- Identify gaps in content knowledge and pedagogy
- Tailored professional development School Improvement Specialist Coaches (SISC+) for Mathematics and Science



Blended Learning Open Source for Science or Mathematics Studies (BLOSSOMS)

- Integration of face-to-face and ICT instruction
Deploys new instructional strategies and pedagogical approaches
- Students utilize adaptive learning software to learn at their own pace, and through their preferred learning style Teachers then analyse the resultant data from the software to identify areas where students require extra coaching



Malaysia Education Blueprint (MEB)

- The curriculum will still stress on student-centred and differentiated teaching, but it will have a greater emphasis on problem-based and project-based work, a streamlined set of subjects or themes and formative assessments.
- The Malaysian school system also aims to introduce an “accelerated learning pathway” for high-performing students.

SEAMLESS...



**From Primary to
Tertiary
Education**



The MEB sets out clear system and student aspirations

System aspirations



Access



Quality



Equity



Unity



Efficiency

Student aspirations



Ethics & Spirituality



Leadership Skills



National Identity



Language Proficiency



Thinking Skills



Knowledge

AKHLAK
(Ethics and Morality)

BALANCE

ILMU
(Knowledge and Skills)

SHIFT	1		PROVIDE EQUAL ACCESS TO QUALITY EDUCATION OF AN INTER-NATIONAL STANDARD
SHIFT	2		ENSURE EVERY CHILD IS PROFICIENT IN BAHASA MALAYSIA AND ENGLISH LANGUAGE AND IS ENCOURAGED TO LEARN AN ADDITIONAL LANGUAGE
SHIFT	3		DEVELOP VALUES-DRIVEN MALAYSIANS
SHIFT	4		TRANSFORM TEACHING INTO THE PROFESSION OF CHOICE
SHIFT	5		ENSURE HIGH-PERFORMING SCHOOL LEADERS IN EVERY SCHOOL
SHIFT	6		EMPOWER JPN, PPD, AND SCHOOLS TO CUSTOMISE SOLUTIONS BASED ON NEED
SHIFT	7		LEVERAGE ICT TO SCALE UP QUALITY LEARNING ACROSS MALAYSIA
SHIFT	8		TRANSFORM MINISTRY DELIVERY CAPABILITIES AND CAPACITY
SHIFT	9		PARTNER WITH PARENTS, COMMUNITY, AND PRIVATE SECTOR AT SCALE
SHIFT	10		MAXIMISE STUDENT OUTCOMES FOR EVERY RINGGIT
SHIFT	11		INCREASE TRANSPARENCY FOR DIRECT PUBLIC ACCOUNTABILITY

Malaysian Education System

**Achieving
our aspirations
requires that
we make**

**11
shifts**



STEM Education

- The Malaysian Prime Minister said the country hoped to achieve the ratio of 60:40 for youth interested in STEM as compared to non-STEM education careers.
 - To develop policies and prospects toward achieving International Standard and meeting National Development Needs

□ STEM Initiative in Malaysia Education Blueprint 2013-2025

Aims:

- Prepare students with the skills to meet the science and technology challenges.
- To ensure that Malaysia has a sufficient number of qualified STEM graduates.



Measures undertaken in STEM Initiative

- Raising student interests through new learning approaches and an enhanced curriculum
- Sharpening skills and abilities of teachers
- Building public and student awareness



STEM EDUCATION

PHASE 5 WAY FORWARD

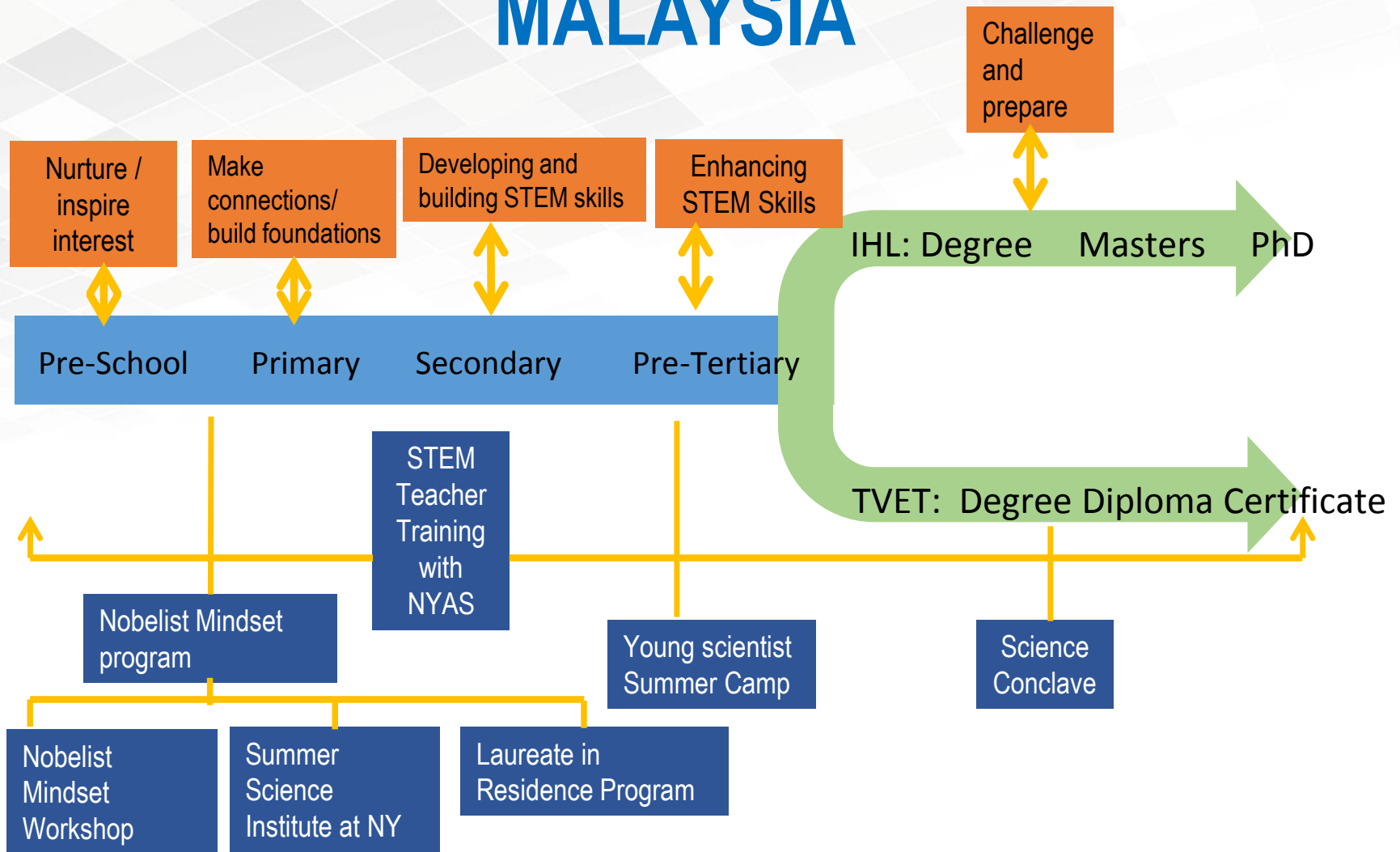
2014-2020



- 1 STEM focussed schools- STEM Co-Curriculum
- 2 Young STEM researchers
- 3 STEM teacher s' training
- 4 Science Conclave
- 5 Young Scientist Summer Program



STEM EDUCATION FRAMEWORK IN MALAYSIA



10 SHIFTS



SHIFT 4: Quality TVET Graduates

Increase capacity, quality and levels

Industry-led curriculum

New Collaborative Models

Increase enrolment **2.5X**

Enrolment 2012

250K

Enrolment 2025

650K

TVET is a premier lane in Malaysia

Campaigns

- Educate the public about the diversity of career opportunities in STEM
- Encourage more students to select STEM subjects
- STEM education plays a big role as the catalyst to meet the challenges and demands of our present and future economy



RECSAM'S ROLE & CONTRIBUTIONS



Southeast Asian Ministers of Education Organization
Regional Centre for Education in Science and Mathematics

Regular Course (4 April- 29 April 2016)

RC-PM-140-4: Meaningful Primary Mathematics in the STEM Environment



Workshop on 'Developing 21st Century Skills through Science, Mathematics and Technology' for Datdaruni School, Bangkok, Thailand (23-27 May 2016)



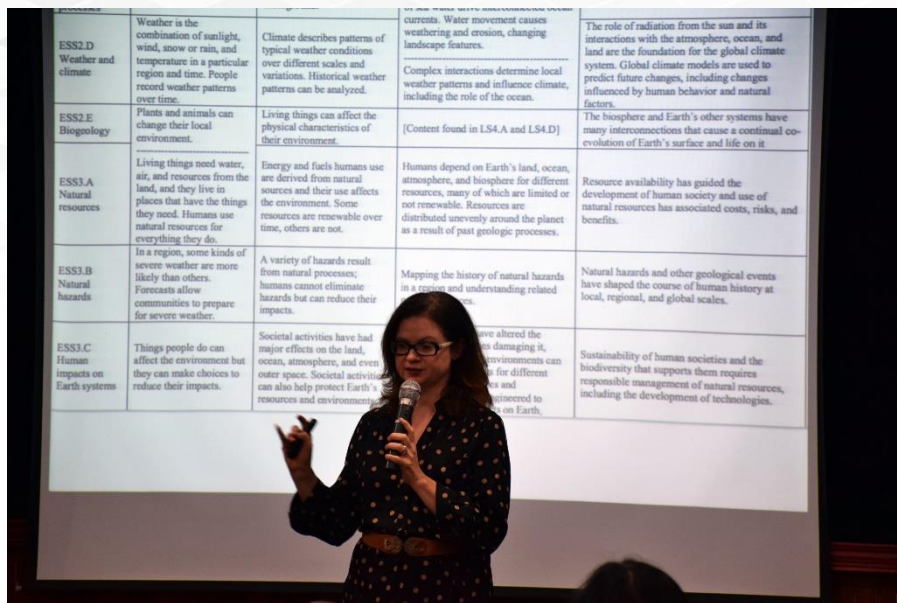
RECSAM's Contribution: STEM Using Low Cost Materials Workshop (16 & 17 Aug 2016)



Capacity Development Workshop for strengthening STEM Curricula for Girls in Africa and Asia and the Pacific (Phase 1) under Malaysia-UNESCO Cooperation Programme (MUCP) (26- 30 Sept 2016)



Colloquium on STEM (Perspectives of USA) by Dr. Margaret Chmiel from Smithsonian Washington D.C. (28 Oct 2016)



THANK YOU

