

Education Sector Analysis

Maldives

Policy Planning and Research Division
Ministry of Education
Maldives
February 2019

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List of Abbreviations

ALPs	Alternative Learning Programs
BTEC	Business and Technology Education Council
ECCE	Early Childhood Care and Education
DIE	Department of Inclusive Education
ECD	Early Childhood Development
EFA	Education for All
EMIS	Educational Management Information System
ESAP	Education Strategic Action Plan
ESQID	Educational Supervision and Quality Improvement Division
GER	Gross Enrolment Ratio
GMR	Global Monitoring Report
GNI	Gross National Income
GOM	Government of Maldives
GPE	Global Partnership for Education
HDI	Human Development Index
HEI	Higher Education Institution
HIES	Household Income and Expenditure Survey
HSE	Higher Secondary Education
ICT	Information Communication Technology
ISCED	International Standard Classification of Education
JJU	Juvenile Justice Unit
KS	Key Stage
LSE	Lower Secondary Education
MDG	Millennium Development Goal
MEMIS	Maldives Educational Management Information System
MGT	Multi-grade Teaching
MNQF	Maldives National Qualifications Framework
MoE	Ministry of Education
MoFT	Ministry of Finance and Treasury
MoF	Ministry of Finance
MoHE	Ministry of Higher Education
MoLG	Ministry of Law and Gender
MP	Maldives Polytechnic
MPS	Maldives Police Service

MQA	Maldives Qualifications Authority
NALO	National Assessment Learning Outcome
NCF	National Curriculum Framework
NDP	National Development Plan
NER	Net Enrolment Ratio
NGO	Non-governmental organisation
OOSA	Out-of-school adolescents
OOSC	Out-of-school children
PPRD	Policy Planning and Research Division
QAD	Quality Assurance Department
SDG	Sustainable Development Goal
SEN	Special Education Needs
SIQAAF	School Improvement, Quality Assurance and Accountability Framework
TRC	Teacher Resource Centre
TVET	Technical and Vocational Education and Training
UPE	Universal Primary Education

Acknowledgments

A comprehensive Education Sector Analysis (ESA) is the initial step in planning for system-wide education improvement. ESA documents the status of education at present, highlight critical challenges and examine what remains to be done. The work on this ESA started in the watch of the previous government during the time of Dr. Aishath Shiham as the Minister, but was finalized in 2019 after the change of government in November 2019. This work was funded by the Global Partnership for Education (GPE) - a global fund and a partnership focused entirely on education in developing countries. The UNICEF Malé Office played the dual roles of the Coordinating Agency (CA) as well as the Grant Agent (GA).

The work was first carried out by the Education Sector Plan (ESP) team under the guidance of the Minister of Education, Dr. Aishath Shiham, led by Ms. Sheryna Abdul Samad, Senior Political Executive, Dr. Aglaia Zafeirakou, Senior Policy Advisor and International Expert who had the overall technical responsibility of the ESA, including guidance and capacity development of the growing number of MoE staff and local experts. Mr. Ahmed Mausoom, MoE Staff Associate and Education Officer, provided managerial and administrative leadership during the whole process, as well as significant analytical work of the ESA. The work on the revision of the ESA was coordinated by the Policy Planning and Research Division of the MoE. The technical work of the new ESP team was supported by UNICEF and led by Local Consultant, Dr. Ahmed Ali Maniku, Mr. Abdul Hameed A. Hakeem and Ms. Aishath Shafina.

The MoE and the ESA team thank the GPE for providing the funds to conduct both phases of the ESP. The team appreciates the services of Mr. Mohamed Tariq Khan, the Senior Country Operations Officer at the GPE, who provided the necessary guidance to proceed with this project in line with the guidelines of the GPE. The team notes with gratitude the unique coordination role of UNICEF, especially from Ms. Mazeena Jameel, Programme Specialist for Education and WASH, for the continuous support provided to the MoE and the team.

The Policy Planning Committee (PPC) of 2019 played a very active role, worthy of praise, in facilitating the revision of the ESA and ESP as well. The ESP team would like to express sincere appreciation to State Ministers for Education, Dr. Abdulla Rasheed Ahmed and Ms. Fathimath Naseer for their unwavering support extended in conducting the Policy Planning Committee meetings and NECC meetings in the final revision work of the ESA and ESP in 2019.

The ESA was made possible by the dedication and expertise of an important number of local experts of MoE and the Maldives National University (MNU). MNU prepared the various analytical pieces. We note with gratitude the contributions of Dr. Raheema Abdul Raheem, Dean of Research, Research Center, the Maldives National University; Dr. Fazeela Waheed, Senior Lecturer, Research Center, the Maldives National University; Dr. Aminath Riyaz, Lecturer, Faculty of Arts, the Maldives National University. Ms. Sofoora Kawsar Usman, the Assistant Director at Ministry of Health, Mr. Adam Saeed Umar, and President of Maldives Business School. We also

note with gratitude the work of Mr. Ahmed Saruvash Adam, the Financial Budget Executive at Ministry of Finance and Treasury who led the cost and financial analysis of the ESA.

Analytical work was also done by staff of the National Institute of Education (NIE); namely, Mr. Ahmed Athif, Head of Inclusive Education Unit, Ms. Shuhudha Rizwan, Head of School of Teacher Development, Ms. Aminath Ismail, Head of Science and Maths Unit, Ms. Aniyath Ali, Head of School of Research and Development, Ms. Shiyama Aboobakuru, Head of School of Early Childhood Development. In addition, Fathimath Hilmy, Director General of Quality Assurance Department (QAD), Ms. Aminath Nasifa, Director of DHE, Ms. Fathimath Azza, Director General of ESQID, Ms. Fathimath Sofiya Rasheed, Programme Head of UFAA Office, and Mr. Ibrahim Asif Rasheed, Head of Planning Division contributed with their expertise. Additionally, the team notes the support, cooperation and feedback provided to the Field Survey Team of MoE by the principals, teachers, students and parents of B. Kihaadhoo School, B. Dhonfannu School and B. Dharavandhoo School.

Furthermore, the ESP team is particularly thankful to the stakeholders of the education sector, the heads of schools and professionals in various departments and divisions of MoE who contributed wholeheartedly to the work of the ESA and ESP at the Kick-Off Workshop as well as at the Planning Retreat Workshop.

The team appreciates the support and cooperation extended by the heads and staff of MoE, especially for the statistical updates, feedback and comments provided during the revision phase in early 2019. Expert reviews for specific sections of chapters provided by specialists including MNU Lecturers, Ms. Leela Ahmed and Ms. Mariyam Azra, and Mr. Ahmed Athif of NIE are gratefully acknowledged. The team thankfully acknowledges the support from the Ministry of Finance and the Ministry of Higher Education for the revisions and updates provided respectively for chapter 2 and chapter 6 in the revision phase in early 2019.

Last but not least, the team is grateful to the Policy Planning Committee (PPC) and the National Education Consultation Committee (NECC) acting as the Local Education Group (LEG) for their support and cooperation extended to MoE and for giving their unanimous endorsement for the ESA report facilitating the prompt submission of the ESA to the GPE. The ESP team gratefully acknowledges the continuous guidance, advice and support provided by the Minister of Education and Chairperson of NECC, Dr. Aishath Ali, and Dr. Ibrahim Hassan, the Minister of Higher Education and the Co-Chair of NECC, in the final revision phase of this ESA. The ESP team acknowledges the work of Mariyam Khaleel from Policy Planning and Research Division of MoE and Ali Rasheed from NIE in proofreading this document.

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On behalf of ESP Team 2019
February 2019

ESA EXECUTIVE SUMMARY

The implementation of the Education Strategic Action Plan (ESAP) for 2014-18, was going to end in 2018. In response to this as well as the invitation to join the Global Partnership for Education (GPE), Maldivian government expressed interest in joining GPE and requested GPE Secretariat's support in formalizing its application for funding to develop the country's Education Sector Plan. The request was accepted, and Maldives received funding support from GPE in late 2017 to (i) undertake a comprehensive Education Sector Analysis (ESA) and to (ii) develop a new Education Sector Plan (ESP) for the period 2019-23.

Based on the Guidelines of GPE, the ESA was conducted during February to May 2018. The draft ESP was later developed based on the ESA. However, it was put on hold in September 2018 when the outcome of the Presidential election confirmed that a change of government was imminent. After the new government was sworn in, the revision of the ESP was re-started in the last week of December 2018. This required the updating of the ESA that was already endorsed by the LEG and GPE in 2018. The revision and updating of the 'ESA 2018' was undertaken during January and February of 2019.

Presented below is a summary of the key findings and recommendations of the revised and updated ESA. They are presented chapter-wise for ease of reference.

Chapter 1: Context for the development of the Education sector

Key Findings

1. The Education Strategic Action Plan (ESAP) 2014-18 outlined the vision, mission, major goals and objectives of the sector for the past five years. It did not emerge from a systematic and comprehensive sector analysis, though the Government's Manifesto may have emerged through reviews of sectoral performance. The ESAP 2018-18 lists the strategic actions under the respective pledges and targets. The document was incomplete without the identification of specific performance indicators, agencies/persons responsible, budgetary estimations and monitoring framework, as commonly found in Strategic Plans. However, subsequent annual reviews of sectoral performance have incorporated some of the missing elements.

2. The ESAP envisioned Maldives “to be the country among small nations that provides the best in terms of quality education and training to all”.
3. Despite strong progress on HDI and political will and engagement to improve Human development in the country, vulnerabilities may affect progress. Regarding economic development, supported by higher tourism returns, human development showed strong gains. Since 2011, Maldives has been categorized as an Upper Middle-Income Country, but with pronounced inequalities (World Bank 2016). High fiscal deficit, in combination with high public spending, and uncertain growth projected for 2018, it was expected to have an impact on public investment that may lead to public spending restrictions, including investment in education. Other structural vulnerabilities of the Maldives such as (i) geographical isolation; (ii) small size; (iii) limited land, natural and human resources; (iv) economic shocks; (v) volatile political environment; and (vi) vulnerability to climate change and natural disasters can all impact on public services delivery including education services.
4. The demographic trends impact youth and children as children are unevenly distributed among the geographic regions with the biggest number concentrated in the capital Malé and the smallest number in the Central region (UNICEF, 2015). A high proportion of the adolescent population in the urban are exposed to risky behaviours and health issues. Early childhood development (ECD) policies for young children and TVET policies to address youth skills development for decent jobs are some of the policy implications of the demographic trends.
5. The ESAP 2014-18 was generally in alignment with SDG 4 targets. There is a need for a greater understanding of the concept of ‘lifelong learning’ in the context of SDG4 and its incorporation in the national education sector plan.

Recommendations

1. Continue to address vulnerabilities on human capital, including youth and young children through appropriate K-12 policies addressing OOSC and students at risk.
2. Continue to be inclusive to address geographic and gender disparities including in the context of equity of learning outcomes.
3. Continue to orient policies and strategies on outcomes to improve learning and skills development for employability and entrepreneurship, in order to serve the key national development objectives for reducing poverty and sharing prosperity.

4. Assess the impact of key policies on equitable quality service delivery for improved learning outcomes and skills development; revise and refocus policies and strategies as required.
5. Consider the need for a greater understanding of lifelong learning in the context of SDG4 and its incorporation in the sector plan.

Chapter 2: Cost and Financing for Equitable Quality Education Services for All

Key Findings

1. The Maldives allocates a significant portion of the budget on education. However, from 2015 to 2017 the percentage share of education in the national budget had decreased from 12.7% in 2015 to 11.5% in 2016 and 11.0 % in 2017.
2. In terms of GDP, Maldives spending on education was at 3.6% in 2017. Compared against South Asia and other small island economies, Maldives spends a lower percent of GDP on education. Yet, Maldives is reported to have the highest GDP per capital income of over USD 11,000.
3. Investment in education infrastructure in the past 3 years was unprecedented.
4. The recurrent spending represents about 87% of the total education sector spending, of which 63% is on salaries and wages.
5. In terms of the payroll expense per staff, teachers take home MVR 12,975 per month on average, while the non-teaching staff takes home MVR 7,112 per month on average. There was a pay increment for teachers in 2015.
6. Education spending in the Maldives is primarily funded domestically. Over 90% of the funding comes from domestic sources. The rest comes from foreign sources for projects that are run mostly with international donors.
7. Public education unit costs increased to MVR 25,838 depicting a growth of over 6% annually over the past 10 years.
8. Households were estimated to spend over MVR 23 million per month on education in 2017. This translates to 0.5% of GDP. The poorest households spend comparatively more in terms of the share of the income compared to the richer households.
9. Changes in the structure of spending are likely due to the enhancement programmes carried out by the ministry, such as the school digitization project.

10. A public expenditure review for education has not yet been done. Further studies are necessary to evaluate the impact of the education investment on learning outcomes. There is a need to undertake an expenditure review together with a cost-benefit analysis during the next ESP period.

Recommendations

1. Obtain policy level commitment on the percentage share of the budget over the medium term. Allocation of expenditure within the ministry can be made more efficient. It is important to identify areas for efficiency gains and for new expenditure proposals.
2. Realign budget breakdown consistent with the goals of the Ministry.
3. Education spending is largely spent via domestic budget funding. It will reduce the burden on the domestic budget if multilateral and bilateral foreign financing can be increased.
4. Changes in the structure of spending are likely due to the current enhancement programs. The possible changes should be considered when making future plans and decisions.
5. A public expenditure review for education has not yet been done. Further studies are necessary to evaluate the impact of the education investment on learning outcomes. There is a need to conduct an expenditure review together with a cost-benefit analysis during the next ESP period.

Chapter 3: Access, Enrolment, K-12 grades/Out of School Children and Youth

Key findings

1. There has been tangible improvement on access, coverage and completion over the last 5 years.
2. Based on 2018 school statistics, the NER for females and males at Pre-Primary were 92.6% and 92.7% respectively. The NER in Primary schools was 95.9%, with 96.3% for girls and 95.5% for boys.
3. The NER in Lower Secondary schools was 90.5% with 87.8% for girls and 92.9% for boys. This can be due to various factors such as some (very few) female students

- being home-schooled (informally) for different reasons. This needs to be further studied.
4. The NER in Higher Secondary was low at 44.5%. The enrolment of 50.4% for girls and 38.9% for boys display a stark disparity between male and female enrolments of students above the age of 16. To ensure the continuity of education, further studies need to be carried out to identify, among others, whether the Higher Secondary education programmes provided in the Maldives are attractive or appropriate for male students.
 5. A few students join the work force after Grade 10. Ministry of Education has taken several steps to promote the completion of Higher Secondary education and to provide an alternative pathway for all the students to continue education. It is important to review and realign the policies, and at the same time, monitor the progress of the programmes through MEMIS. Although many female students join the TVET programmes, their participation in the work industry such as hospitality is less compared to males.

Recommendations

1. To minimize gender disparity and to change the perception of society about females working in particular areas, programmes need to be conducted to raise awareness in society on the opportunities available for females in fields of work such as Hospitality.
2. It is important to have a strong central database where OOSC cases can be flagged if they are not registered in a school so that government agencies can work proactively to support families to ensure that their children attain a good education.
3. A simple alternative learning programme that can be implemented in all islands with ease: content, delivery modes and approaches that adapt to the special circumstances and life challenges of children including children from outer islands, children from vulnerable groups, and children in conflict with the law,
4. Promote open learning and flexible learning methods. This is particularly important in the case of OOSC who share the burden of looking after household income avenues to support their families.
5. Seek closer partnership between government and non-government organizations/non-state actors in support of innovative and community-based approaches.

6. Recruit and train teachers/facilitators from the community. Community engagement at all levels is crucial if any policy or programme intervention is to be successful.
7. Monitoring and evaluation of learning should always be a continuous process, done periodically without fail so that the system is always under continuous assessment in terms of being checked for quality of education that is delivered.

Chapter 4: Quality of Education

The National Assessment of Learning Outcomes (NALO)

Findings

1. A culture of national assessments is being established that helps to link inputs with the expected learning outcomes. The results of findings need to be more widely disseminated and discussed at appropriate levels of the system to ensure that action is taken to improve learning outcomes.
2. Various types of assessments, school-based, NALO, and examinations are conducted by different MoE entities.
3. A policy for National Assessment is in the process of endorsement.
4. The proportion of 4th and 7th-grade students who have attained mastery level competence in language (Dhivehi and English) and Mathematics is low. Without appropriate interventions, it is unlikely that students without mastery of basic competencies in language and mathematics will perform well as they are pushed up to higher grades. This issue needs high priority and needs to be closely studied with a view to introducing appropriate interventions to improve the quality of the school system.
5. The comparative results in Dhivehi, English and Mathematics show mixed results indicating to the need for a sharper focus on improving the quality of learning at the system level with particular attention to reducing disparities across geographical locations and gender. Dhivehi results declined in Grade 4 and increased in Grade 7. There is no significant change in Grade 4 or Grade 7 for English, a slight improvement in Grade 4 and a slight drop in Grade 7. In Mathematics, there is stagnation in Grade 4 and a significant improvement in Grade 7. The gender gap along with the learning gaps based on location continues to persist in the 2017 NALO.

6. The national average of Grades 4 and 7 English and Mathematics results are low compared to many other countries especially in some competencies (NALO 2015 and 2016).
7. Approximately 37.8% of the students in Grade 4 and 43.24% of students in Grade 7 failed to achieve the minimum pass percentage of 40% (NALO 2015 and 2016).
8. The average achievements of Grade 4 students' Dhivehi language are 62.2% compared to their counterparts in Grade 7 who have achieved only 56.76%.
9. Gender analysis of both Grades 4 and 7 students in Mathematics, English and Dhivehi language assessments showed a higher proportion of female students achieving the desired outcomes than male students (NALO 2015 and 2016).
10. Equity issues: There is a clear geographical difference in the results. A disaggregation of the results by atolls showed that Laamu Atoll performed lower than all the other atolls. Greater Malé, Seenu and Gnaviyani Atoll have the highest results (NALO 2015 and 2016).
11. Students scored generally lower in competencies based on higher order thinking. Benchmarks also need to be clearly identified based on the new curriculum.

Recommendations

1. The policy for National Assessment should consider the appropriate frequency of administering the NALO to provide sufficient time for analysis and policy response
2. Further coordination is needed among entities responsible for classroom-based assessment, NALO and examinations.
3. Further analysis is needed to understand the underlying factors behind such a large number of students taking private tuition in the Maldives and on parameters impacting learning such as the effect of private lessons (tuition) taken outside the school-based instruction.
4. Further analysis needs to be conducted to explore the reasons for the stagnation and drop in learning outcomes with a particular focus on curricula implementation, textbooks and teacher's guides.
5. Develop and establish strategies to address gender parity issues in the quality of learning, since girls achieve significantly better results than boys. For that, further analysis is needed to find out the reasons why male students are not performing as well as female students.
6. Develop strategies to address the geographical disparities in Mathematics, English and Dhivehi language. In undertaking such an analysis, it would be important to identify the reasons behind low grades in certain locations (atolls).

7. Instructional strategies need to be carefully developed to improve the Mathematics, English and Dhivehi learning outcomes results. There is a need to instill higher order thinking skills.

Curriculum Reform to Improve Learning

Key Findings

1. Implementation of the National Curriculum Framework (NCF) in the Maldives is advanced with a production of an impressive number of teaching and learning materials, the installation of technology in schools/classrooms, as well as teacher and principals training and parents' awareness and a monitoring mechanism.
2. Information on curricula implementation in the classroom is provided through the NIE mechanisms of monitoring that includes classroom observations and through the External Schools Reviews 2016-18 undertaken by QAD. There is not yet an impact evaluation study to examine to what extent the curricula reform contributes to the improvement of learning.
3. Despite the innovative teaching and learning practices promoted in the NCF, some teaching practices continue the promotion of memorization rather than comprehension and higher order cognitive thinking skills. Classroom-based assessment remains an issue as well as the use of new practices with high-level cognitive thinking and questioning.
4. Some parents, especially in the atolls, express difficulties to understand the new curriculum, the new textbooks and the assessment modalities.

Recommendations

1. In the mid-phase of the curricula implementation, it is recommended to study to verify the extent curricula reform contributes to the improvement of learning.
2. Work on a mechanism to build externally validated assessment data which could be used by all agencies for support and intervention programs.
3. Establish a decentralized system to build professional learning. It is important to work towards strengthening zone and atoll level curriculum implementation and monitoring. Proper intervention programs need to be geared at these levels. Professional development work at the national and school level need to be reviewed.

4. The technical expertise of staff at NIE, school principals and leading teachers at the school level, teacher trainers, and Teacher Resource Centre (TRC) Coordinators should be enhanced.

Multi-grade Teaching

Key Findings

1. Multi-grade Teaching (MGT) promoted by MoE in some schools is different from MGT generally found in low-income countries. The pedagogical model used in these schools is akin to “Multi-level learning classroom” implemented in some high-income countries.
2. Depending on a closer analysis of MGT practice in more schools a re-conceptualisation of the Multi-grade teaching to ‘Multi-level learning classroom’ is an option to be considered by MoE.
3. The MGT model is trying to address the ways to develop a more mainstream and sustainable approach for these small schools with limited human resource capacity. Sustainability should continue to encompass a number of factors (i) availability of qualified, trained and supported teachers through collaboration with qualified resource teachers located elsewhere; (ii) incentives for teachers working in MGT; quality infrastructure, pedagogical materials and internet connectivity; (iii) continuous monitoring for support of teachers and schools with MGT and a greater awareness and involvement of parents to help them gain a better understanding of the MGT approach.
4. As of now, there is no information on how the MGT model impacts learning in the participating classes.

Recommendations

1. A baseline should be established for the performance of students attending multi-grade classes.
2. A mechanism should be developed to monitor the impact of the MGT model on learning, if appropriate, using the NALO.
3. Video documentary of case studies of schools within the Maldives where MGT practices have been successful, need to be produced and made available to all schools through MoE website or other appropriate platforms accessible to schools.

Technology in Education

Key Findings

1. As of February 2018, all schools technically had access to the internet. However, internet connectivity is intermittent in some of the outer islands.
2. ICT is mostly used as a tool for classroom lesson delivery.
3. The Maldives ICT integration in education can be categorized at the 'emerging-applying' phase.
4. For effective ICT integration in learning outcomes, in addition to the technical infrastructure, teachers need to have the necessary education and experience.
5. It is good facilitation skills that allow learning to happen, and the rest are only tools. The effectiveness of technology in the classroom depends on the teacher's ability to use it appropriately in the teaching and learning process.

Recommendations

1. Adopting a proper evaluation process, especially for costly infrastructure projects is recommended. There is sparse systematic follow-up/assessment on new initiatives, or there are inefficiencies in the management of records. UNICEF's approach to innovations in education (a 5-step process) is a good place to start with.
2. Conduct an analysis of current practice on ICT integration in teaching and learning. This can be followed up with an impact evaluation regarding the use of ICT to improve learning and decrease the learning gap in the country.
3. Train all teachers in ICT literacy and ICT pedagogy-integration. Teachers play an important role to achieve effective technology integration in education.
4. Develop a national education portal. Those teachers who use Open Educational Resources (OER), adapting it to their needs, find OER as a useful resource that enhanced their teaching by saving time spent on developing material and diverting that time to focus on student learning instead. A central education portal for the education sector will attract more contributions throughout the Maldives, thereby increasing the resource base.
5. Establish MOE standards on ICT infrastructure for teaching and learning. At present different schools adopt different technological tools, mostly funded and supported through community participation.

6. Conduct a national study and survey (extending the baseline survey carried out for this review) on the state of technical equipment used in schools. Maintaining an inventory at the central level at the MoE will be useful in decision making and strategizing actions.
7. Assist all schools to develop their own ICT in education development plans. The ICT in Education Master Plan 2015-2018 was endorsed in 2015, and further work is required to decentralize the implementation of the Master Plan.
8. Currently, SEN is not accounted for in the Digital School. Curriculum developers could come up with smart ways to incorporate tablet devices to SEN students so that their learning experience could be improved.
9. Since the TRCs can ensure decentralized and close access to resources, enhance the ICT related resources at these centres.

Inclusive Education - The Special Educational Needs (SEN) programme

Key Findings

1. Inclusive Education Policy implemented since 2013, and children with Special Educational Needs (SEN) have received greater attention.
2. Establishment of a Unit within NIE to support the schools have advanced the implementation of this policy. The unit has a small but professional team.
3. After the change of government in November 2018, SEN Unit has been upgraded into a new department in the name of Department of Inclusive Education (DIE) under the Ministry of Education. This new development has a greater potential to support the schools and further advance the implementation of this policy.
4. The inclusive education program of the Maldives is focused on 16 types of students from 3 distinct categories, collectively defined as 'children requiring an Individual Education Plan (IEP)'.
5. By 2018, in the 212 Government schools there were a total of 3,215 students requiring an IEP based on the diagnosis or on suspicion of needing support through an IEP.
6. The focus of SEN programme has shifted from selected schools to all the schools and every child.
7. Continuous teacher training both pre-service and in-service is crucial to sustaining the system to support children with SEN.

Recommendations

1. Train teachers in specialised categories. As per the current teaching capacity of teachers, there are categories of children with SEN, that teachers have limited knowledge and skills to plan interventions.
2. Train teachers to do the functional assessment of children with SEN.
3. Develop a mechanism to track student progress
4. Increase the capacity at DIE/NIE.

Early Childhood Care and Education

Key Findings

1. The implementation of the Pre-Primary integration policy is a major undertaking at scale. The integration policy addresses access, equity and quality issues since the purpose is to offer quality Pre-Primary education in the outer islands, by providing more systematic management under the responsibility of the school principal.
2. Quality assurance and regulation for nursery and daycare centres remain unclear.
3. Gender disparity continues to exist in terms of access to Pre-Primary services with a deficit for young girls.
4. The daily hours of Pre-Primary need to be clarified, in both Malé and the outer islands.
5. In order to make sure that the Pre-Primary program supports holistic early childhood development and early learning that will help young children to develop adequately and thrive through play, interactions and hands-on the educative program are needed to ensure early learning.
6. The early detection of health issues is one of the most effective ways to address them by developing appropriate responses.

Recommendations

1. A policy to be developed for 0-8 years with the initiation of MoE and MoH that will help to harmonize the curricula for Nursery, develop a curriculum for daycare centres and monitoring mechanism to review, Pre-Primary services, tuition classes and daycare centres.

2. Further qualitative analysis is required to find out the reasons for lower enrolment of girls in Pre-Primary.
3. Lengthening the school hours for Pre-Primary through a phased approach should be considered. Under the development of curricula standards, it is recommended that school hours be extended by at least up to 4 hours a week in order to implement the Foundation Stage effectively.
4. Assess the curricula for Pre-Primary classes; design and implement measurement of child development by selecting a proxy indicator. Assess teacher pedagogical practices; upgrading of Pre-Primary teachers to the level of a diploma should be continued by improving the quality of the training linked to the curricula and learning and development standards.
5. Expand the School Health Screening to the Pre-Primary students, in Malé and the outer islands.
6. Strengthen expertise in Preschool education programming, curricula, and monitoring and evaluation are needed in order to deliver ECCE to all children in the Maldives and meet the SDG 4.2 Target.

Teacher quality

Key Findings

1. One of the significant developments of the efforts made to train locals is the upgrading of school teachers to a minimum of a diploma.
2. There is an ongoing partnership with the MNU and the MoE to train 3000 in-service teachers to bachelor's degree level. It is presumed that by the completion of this 5-year project, more than 80% of school teachers will have a minimum qualification of a bachelor's degree.
3. According to School Statistics of 2018, the percentage of untrained teachers working in primary schools has dropped to approximately 6% from 23% in the year 2010. However, with over 500 untrained teachers still working in the system can cause serious learning gaps in the students' education.
4. There are still more than 1200 expatriate teachers working in the schools, which is approximately 41% of Secondary teachers.
5. Since teacher training and preparation has not been aligned with the new curriculum implementation, there are several gaps in teacher allocations for teaching different subject areas, especially from Key Stage 3 and up.

6. There is an urgent need to reorient principals in public schools regarding their role in teachers' PD.
7. The TRCs are playing a vital role in the professional development of teachers for atoll schools, in particular in the implementation of the new curriculum through training and monitoring activities.

Recommendations

1. Continue the implementations of the training to eliminate the need for untrained teachers and upgrade to the level of bachelor's degree, and reduce the need for the expatriate teachers.
2. Continue the training of teachers on new curricula on targeted teaching methods (lesson plans, formative evaluation, and high-level cognitive skills through inquiry approaches among others).
3. Undertake a teacher demand and supply study to fully comprehend the situation of teachers, teacher distribution and allocation, motivation and incentives, training and continued professional development needs of teachers.

School Facilities

Key Findings regarding School Facilities

1. The Maldives has been investing heavily on school infrastructure and facilities improvement in the recent past.
2. Schools in the atolls experience notable amount of varied difficulties related to facilities such as relatively inadequate space for library, meeting rooms, AV rooms, Listening Rooms, office space, safe open play area, or proper places for storing chemicals.

Recommendations regarding School Facilities

1. Undertake an audit of school facilities to ascertain the reasons why many schools are in need of additional classrooms /other spaces. (The number of school session per day, number of subject streams, as well as introduction of new programmes requiring additional rooms and facilities should be considered in such an audit).
2. Develop school standards necessary for effective implementation of curriculum.

3. Prepare a medium term (3-5 years) facilities development plan for the school system.

Chapter 5: Technical Vocational Education and Training, in and out of school

Key findings

1. The Maldives has a developing system of TVET which is supply-driven at present. The task ahead is to develop it into a comprehensive system, especially a system of Technical and Vocational Education, in which people would be able to participate continuously throughout their lives as and when they require to reskill and upskill and learn. At the same time, it is important to acknowledge the fact that the TVET system of the Maldives is.
2. So far, about three thousand people per year receive training via these programmes through the efforts of the government alone. The private sector may also contribute a similar number through their own training programs, giving a total of 6,000 per year. Also, there is a large number of the expatriate population whose members are also engaged in skilled labour which means that the demand for skills is probably much bigger. However, no data currently exists that can allow us to arrive at an accurate figure.
3. Thus, research into finding out the nature and quantity of demand for skills in the country is required.
4. It is understood that a large number of youth, including students studying in lower and higher secondary schools, are not aware of the opportunities available for further studies in the Maldives, especially with respect to TVET learning pathways.
5. Rebranding education purely as a trade commodity has disrupted how we think about providing educational services. Very often, the quality and image of the polytechnic and TVET education system are seen as lower than that of the standard colleges and universities.
6. Female participation in vocational and technical programmes is comparatively less than that for males. Increasing the participation of women in TVET programs is important not only to having women gainfully employed but also to decrease the gender parity gap in employment.

Recommendations

1. A more demand-driven approach is needed to cater to the needs of the labour market.

2. To address the dispersed population in small islands can consider greater use of the ferry system to gather people into one location for training sessions or community meetups. Another solution is to deliver training or meetings through video conferencing software, as is being used by some providers.
3. The MoE should work with the ISPs to improve the quality of the broadband network and bring down the costs to a level which is more affordable to people living across the country. This will enhance the efficiency of the training programs and improve participation.
4. There is a great need to develop teams based in the atolls to deliver practical training and apprenticeships because trainers in Malé are unwilling to travel to the atolls. Another option could be to pay a stipend to those who attend TVET programs away from home.
5. Conducting a media campaign to educate and recruit more women into TVET and BTEC programs in all fields could be considered in order to increasing women's participation.
6. Providing TVET and BTEC training is one side of the equation. The other is placing graduates of these programmes in employment. It is vital to include industry representatives in the development of curricula. In addition, skills standards need to be developed.

Chapter 6: Higher Education

Findings

1. The Higher education sector in the Maldives is growing. Even though there are 02 public Universities, 09 private colleges, 01 polytechnic there is no proper mechanism or regulation to assist in their governance. The only regulation that exists for colleges was developed in 2007 and amended in 2011 does not cover the necessary areas in governance and structure of a college.
2. The sector has a Master Plan for the period 2017-2022. Although published recently, the Master Plan is in need of revision.
3. There are more than 200 higher education institutions (HEIs) registered at the former DHE and 35 of them offer programmes at Diploma and above qualifications. However, the MoHE and MQA do not have the qualified staff to properly manage the necessary regulatory work.
4. The basic statistics for higher education gathered at the former DHE appear to be rather incomplete.

5. The lack of qualified staff has been an issue that has been identified by higher education institutions as well. To address this issue, the former DHE has initiated a loan scheme to train staff for University, College and the Polytechnic. The people who are trained under this scheme would have a bond to serve at these institutions for a specified duration.
6. Though the MNU, the IUM and some private colleges have their own funds for research, there is no public research grant /facility available in the country.
7. Though the manuals for Programme Accreditation have been developed, due to the lack of funding and professional staff at MQA, the process has not yet commenced.
8. Although not officially recognized, the so-called 'block mode' teaching is widely used in HEIs. Currently, full-time equivalent programmes are conducted in the 'block mode', which is a part-time arrangement, while qualifications are awarded in the full-time duration. Though the definition of this mode of delivery varies, it is being used to deliver full-time equivalent programmes in condensed "blocks" of contact time typically on a weekend (or 2-3 days) and students are exposed to 10-12 hours of didactic teaching. However, currently there is no regulation that guides the use of this mode of delivery.

Recommendations

1. As a matter of urgency revisit the Master Plan for Higher Education 2017-2022 to either revise it to reflect the current needs of the country or develop a new Strategic Plan for Higher Education.
2. Develop appropriate legislations related to governance and other areas of Higher Education in-line with the current developments of this sub-sector. To develop a vibrant private Higher Education sector, it is recommended that flexibility in the structure and operations be encouraged while maintaining the standards and quality regulations. In addition, it is also important to note that while MNQF has frameworks and basic standards outlined, its complementing job structures needs alignment to the framework and subject fields. Furthermore, technical and vocational training needs to be expanded in the Maldives.
3. The collection and publication of higher education statistics need to be systematised and improved.
4. To determine the scope of the Higher Education sub-sector in the Maldives, it is vital to conduct a national Training Needs Assessment and align courses and

- priorities according to a shortage of skills which will facilitate to establish a demand-driven Higher Education system.
5. As the former DHE has now evolved into the Ministry of Higher Education, its mandates should reflect the need for developing and sustaining a quality Higher Education system in the Maldives.
 6. As the sector develops, it is important to emphasize on providing flexible entrance pathways while setting up measures to control the exit point, thereby encouraging more students to participate, and at the same time, ensuring that only students who surpass a particular level of a quality graduate from the programmes.
 7. The MQA needs to commence the quality assurance process of programme accreditation as soon as possible. It is vital to highlight that the current context needs to be considered, where teaching and delivery modalities should be more closely monitored by the regulatory authorities.
 8. It is also necessary to establish Learning Information Management Systems to monitor the patterns and trends in the Higher Education sector, thereby implementing policies based on facts and figures. With free Higher Education pledges promised by the new government, it is important to develop policies that are streamlined to the national development goals, and such policies should also be crucial to define exclusion and inclusion criteria.
 9. A policy on 'block mode' teaching needs to be developed to ensure that the qualities of the programmes are maintained.
 10. A policy is urgently needed to properly define delivery modes of teaching. This should also include guidelines either to halt an officially unrecognized 'block mode' teaching or to properly regulate this mode of delivery for appropriate levels of qualifications.

Chapter 7: Education and Training Contribution to Economic and Social Development of Maldives (External efficiency)

Key findings

1. Education plays a major role in the socio-economic wellbeing of the Maldives. The Maldives has a very high literacy rate and a fair Pre-Primary and Lower Secondary school enrolment rate. However, this education participation rate weakens as it moves to Higher Secondary Education and to Higher Education stage. There is a

sharp decrease in the number of students who move from the Secondary to the Higher Secondary level, which in turn adversely affects the number of students going into Higher Education. No studies have been conducted to date to study trends and patterns in retention and completion of studies at various levels.

2. TVET unit has been transformed to TVET Authority in 2011 as a regulatory authority, while Maldives Polytechnic is to deliver courses under the authority of TVETA. However, due to various pressures, TVETA has also been conducting courses.
3. Education has a direct impact on the labour market of Maldives. Maldivian locals are unable to perform at the higher end of the skills due to unmatched or mismatched skills, limited relevant experience and other institutional constraints. Maldivians are unable to increase the share of employment in highly skilled jobs due to weaknesses such as extremely low enrolment, retention and completion rate in Higher Education.
4. In recent years, enrolment in Higher Education has increased due to the introduction of alternative pathways to Higher Education, initiating of alternative forms of delivery and increase in private sector participation in Higher Education. However, while there is an increase in enrolment, completion rates are low. More importantly, the expansion of enrolment also saw the serious need for placing quality assurance at the forefront of the sector.
5. More than a fifth (27,837) of locals are engaged in the Tourism industry. However, only 14% of those work in the resorts. Total workers in the industry are 41,355. So, out of those who work in the industry 13,518 (32.7%) are expatriate workers. This means training institutions are unable to meet the demand for workforce training and development by the Tourism industry. There is a need for a proper mechanism that explores the demand for the job market in the Maldives.
6. Indirect sources show that education impacts health, fertility, illicit drug use and getting involved in gangs and criminal activities in the Maldives.

Recommendations

1. Tracer studies are necessary for the Maldives to explore school leavers' activities and involvement in Higher Education. Career counselling at all levels of the education sector is also important.
2. The most recent labour force statistics were available from the 2014 census. It is possible that dramatic changes have occurred in the demand and supply of labour

- market in the Maldives. Hence, further timely research is needed to explore the labour market needs including skill mismatch and unmet needs.
3. A poorly trained or untrained workforce is a major hurdle to improve local involvement in higher level jobs in the labour market. Hence, it is crucial to increase educational attainment and technical skills of the Maldivian labour force to increase the productivity of the country.
 4. At present, only indirect sources are available to make any judgment on the socioeconomic impact of education in the Maldives. Sound research needs to be conducted in the Maldivian context to explore the impact of education on social outcomes in the Maldives. More importantly, any policy level changes in this area should be based on sound evidence.

Chapter 8: Organisational aspects and evidence-based data for decision making

Key Findings regarding organisation aspects

1. The MoE appears to have reverted back to a more centralised system of administration once again creating the school administration zones that were abolished during the 2009-2012 period.
2. A number of departments of the MoE have been transferred to a newly created Ministry in November 2018.

Recommendations regarding organisation aspects

1. With the change of government and the transfer of departments, it is important for the MoE to as soon as possible re-draw the structure of the overall organisation of the Ministry to reflect the changes.
2. With the separation of mandates of higher education, TVET, culture and heritage and language academy to other newly formed Ministries, the MoE needs revising its organisational structure soon. Based on the ongoing policy reviews and discussions on decentralisation, a new functional organisation structure should be developed soon for school administration.

Key Findings regarding data for decision making

1. Although the MEMIS is based on an open source platform, MoE currently lacks the technical know-how to customize it. Currently, the customization is outsourced to an international party, although MoE will greatly benefit from having an in-house programmer.

2. An experienced team is needed to train all the staff within the ministry and in atolls to familiarize with the MEMIS. A focal point from each atoll has been trained on the MEMIS and on its functions.
3. Although web portal and a mobile application exist, the lack of familiarity with it makes some users become easily discouraged with using the technology. In these initial roll-out stages, it is crucial to have database support in the form of a strong MEMIS team to work out challenges and setbacks in the system.
4. As the MEMIS is still in the process of being integrated, there are very immediate issues to be addressed including the creation of separate databases for MOE's myriad array of functions which also will feed into the MEMIS. Hence, a highly technical collaboration between the portal and its developers is needed.
5. Some schools still operate under limited connectivity network capacity, which may be a source of frustration when switching into a new system.

Recommendations regarding data for decision making

1. Establish a strong network that will function as the steering committee in implementing MEMIS: Having a comprehensive representation of all stakeholders from every department with regular meetings to discuss the ways in which the MEMIS can better serve their needs is vital. Familiarizing and teaching skills required for the MEMIS to stakeholders from all areas is extremely important for its sustainability.
2. Build a strong team for the MEMIS within the sector with people who have a deep understanding of the database. This will remove the dependency on outsourcing and create effective and efficient solutions. At the moment, a team from MoE is being trained on the MEMIS customization and its features.
3. Train and encourage users to maximize the use of the MEMIS in their daily functioning and keep them updated about the existing functionality.
4. Assess and benchmark the MEMIS regularly, address and correct any weak points that are evident from the assessment. Plan routine data collection integrate results and plan interventions accordingly.
5. Improve internet connectivity in all access points.
6. Expand the MEMIS to include predictive technology using artificial intelligence and other dictators. This will be extremely beneficial in predicting risk and creating alerts for intervention for students.
7. Ensuring that there is legal backing for data collection and its use is crucial for a successful school census. Before implementing a school census, the roles and

- responsibilities and the legal, financial, technological, and administrative capacities need to be assessed, planned and communicated well.
8. The school census process needs to be fully institutionalized with defined responsibilities and well-coordinated between the central and atoll levels under the management of a single entity—most commonly the statistical unit within the MoE.
 9. Proper internal and external validations are necessary.
 10. Timely completion is crucial, and data need to be analyzed and disseminated within no more than four to six months of data collection. Penalties should be enforced in cases of noncompliance with deadlines.
 11. Data integration requires strategy, standards, collaboration, and systematic data flow to maximize the value of data toward tangible interventions and results in relation to student learning and improvements.
 12. Learning data need to be added to data on demographics, teachers, schools, and inputs to get the full story.
 13. Unique identification for schools, teachers, and students should be based on (existing) national identification systems and policies spanning different sectors and ministries.
 14. Governments should choose between different methodologies/technologies (for example, paper-based, digital (e.g. Ipads), biometric) to find the best fit for their country-specific context.

Introduction

Background

During the past five years, the education and higher education sector was guided by the Education Strategic Action Plan (ESAP) for 2014-2018. This action plan was based on the then ruling party's 2013 election Manifesto. The ESAP outlined the vision, mission, major goals and objectives of the sector. It did not emerge from a comprehensive sector review, though the initial Manifesto may have emerged through reviews of the education sector's performance.

The 5-year Presidential term was also going to end in 2018. In response to this as well as the invitation to join the Global Partnership for Education (GPE), the Maldivian government expressed interest in joining GPE and requested GPE Secretariat's support in formalizing its application for funding to develop the country's Education Sector Plan. The request was accepted, and Maldives received funding support from GPE in late 2017 to (i) undertake a comprehensive Education Sector Analysis (ESA) and to (ii) develop a new Education Sector Plan (ESP). This document presents this Education Sector Analysis (ESA).

The opportunity to prepare a new education sector plan based on a comprehensive sector review comes timely for Maldives. The last such comprehensive sector review was undertaken over two decades ago. The ESA was also timely as national contributions are needed at a time global goals, priorities and targets are being reviewed to assess progress made towards the achievement of the new global education agenda based on the Sustainable Development Goals (SDGs).

In the past five to ten years, Maldives education sector has experienced significant strides and achieved much success. The number and pace of reform appears unprecedented. With the multitude of new policy interventions and the rapid pace of reforms in these years, the Ministry of Education had little time for in-depth review of the impact and effectiveness of these reforms. It became evident that a thorough and holistic assessment was necessary before a major initiative to plan for a new education strategy was undertaken. Hence, a more comprehensive evidence-based diagnosis of the education sector had become essential and timely. Furthermore, available statistics and data needed updating while new data were required for better planning. The opportunity for this was more promising than before with the launch of the Maldives Education Management Information System (MEMIS) in mid-2017.

The new plan can only be better informed with well-researched analytical findings. While Maldives had achieved some internationally agreed targets ahead of schedule, there was significant work to be done in addressing issues of equity, inclusivity and quality. Despite the achievement of gender parity, many of these issues to address as they relate to girls are of special concern.

Purpose of the ESA

A comprehensive ESA was intended to serve the purpose of an evidence-based diagnosis of the sector. The ESA was intended to provide a sound analytical base to enrich the national level debate between the government and all education sector stakeholders, including development partners. It was also intended to enable decision makers to re adjust and orient policies to national as well as internationally agreed priorities and targets.

Based on the Guidelines of GPE, the ESA was conducted during February to May 2018. The draft ESP that was later developed on the basis of the ESA. However, it was put on hold in September 2018 when the outcome of the Presidential election confirmed that a change of government was imminent. After the new government was sworn in, the revision of the ESP was re-started in the last week of December 2018. This required the updating of ESA that was completed and endorsed by the LEG and GPE in 2018. The revision and updating of the 'ESA 2018' was undertaken during January and February of 2019.

This ESA is part of the process of the development of the next Education Sector Plan for 2019-2023 and will provide information on which the ESP can be based. This document presents the status and performance to date of Maldives's Pre-Primary, Primary and Secondary Education subsectors, and the Higher Education sub-sector including Technical and Vocational Education and Training (TVET). The ESA focuses on the achievements, strengths and weaknesses in terms of enrolment, equity, inclusivity and efficiency, quality and learning outcomes. It also covers costs and financing of education and system efficiency.

Scope

The ESA provides a description of the situation of the education system and an analysis of the causes of system weaknesses and difficulties. It analyzes the general country

context, existing policies and their effectiveness, the performance of the education sector and system capacity, and cost and financing. It mainly covers the period from 2013-2018. As a diagnostic analytic document on the status of the Maldives' education sector, it includes key findings and recommendations for policy development.

The ESA is based on quantitative and qualitative analysis of a broad range of available robust data, issue papers prepared by the MoE and in-depth analytical studies. Extensive guidance and capacity building of MoE staff was built into the process. The external consultant, the local researchers contracted and two MoE staff seconded for the assignment were part of the day to day development of ESA. Following a presentation to the Policy Planning Committee (PPC) of the MoE and presentation and feedback from NECC and GPE Secretariat, the ESA was re-submitted to NECC for final endorsement before sending it to the GPE.

Methodology

The overall methodology employed in the ESA followed five major steps:

- i. Review of key strategic and analytical works of the education and higher education sector undertaken prior to the ESA. These included the MoE's ESAP 2013-18, the Concept Note for ESP preparation, the World Bank analysis "Expanding Access and Enhancing the Economic Benefits of Education in Maldives 2012, the 2015 diagnostic study of the World Bank on Maldives, the Report on the National Assessment of Learning Outcomes 2015, 2016 and 2017, historical documents on the education sector since 2015, and the Issue Papers prepared by the MoE.
- ii. The identification of sector policies, goals and objectives;
- iii. The collection of relevant data and education statistics;
- iv. Key informant interviews/consultation with key MoE Staff;
- v. Capacity building workshops and regular working sessions with Thematic Working Committees (TWCs);
- vi. Regular engagement with PPC;
- vii. The analysis and synthesis of the data and reports; and
- viii. The identification and endorsement of priority areas for improvement.

Analysis and synthesis of data and reports involved a series of activities which included:

- Drawing up of tables, including tables disaggregated by selected characteristics e.g. Atoll, Male', gender, responsible authority, type of schools/institutions;
- Establishing time series and trend analysis;
- Aggregating or disaggregating data;
- Calculating relationships and preparing graphs; and
- Computing summary statistics and indicators.

The ESA was conducted by a **technical team** of the MoE, led by an International Consultant supported by 2 professional staff from the MoE seconded for this task for the duration of work and a number of other local specialists. The International Consultant served as the Task Leader who was responsible to generate the final ESA report (and subsequently the ESP) with the help of the local team members. A Senior Policy Executive was appointed by the Minister as the Deputy Task Leader for this project.

The Steering committee: The NECC also serving as the LEG, was the Steering Committee to provide broad parameters and policy directions for this analytical study. The NECC also had the responsibility to endorse the ESA before they it was sent to GPE Secretariat. The NEEC/LEG comprised 19 members from a broad spectrum of stakeholders. In 2019 with the LEG was re-constituted, its membership increased from 19 to 21. Minister of Higher Education (MoHE) became the the Co-Chair of LEG. Two of State Ministers from the MoHE also became members.

The Policy Planning Committee: The Consultant Team had the opportunity to engage more frequently with a smaller group other than the NECC named as the Policy Planning Committee (PPC), comprised of 7-8 MOE policy and executive level staff. In 2019, the PPC was also re-constituted with all new members.

With the guidance from the Task Leader and/or Deputy Task Leader, the analysis was informed more specifically by the preparation of selected issue papers. Key Specialists were identified and guided to write and present these issue papers. These specialists (professional staff within the MOE sector) served as members of the **Thematic Working Committees** formed for this exercise.

The main data sources used in this ESA were the MEMIS, The NALO Reports of 2015, 2016 and 2017, A Snapshot of the Maldivian School System, (An analytical report of external school reviews), Household and Income Survey 2010, Statistical reports of the Census 2014, UIS data, UNICEF/MoE reports on Out of School children, Maldives Demographic

and Health survey 2009, various financial data from the Ministry of Finance and Treasury and the Ministry of Education.

Structure of the ESA

The ESA consists of eight chapters. They are organized as follows:

- Executive Summary
- Introduction
- Chapter 1: Context for the Development of the Education Sector
- Chapter 2: Cost and Financing for Equitable Quality Education Services for All
- Chapter 3: Access, Enrolment, K-12 grades/Out of School Children and Youth
- Chapter 4: Quality of Education
- Chapter 5: Technical Vocational Education and Training, in and out of school
- Chapter 6: Higher Education
- Chapter 7: Education and Training Contribution to Economic and Social Development of Maldives (External efficiency)
- Chapter 8: Organisational Aspects and Evidence-based Data for Decision Making.
- References
- Annex

Chapter 1: Context for the Development of the Education Sector

1.1 Geographic, historical and cultural aspects

The Republic of Maldives, a multi-island nation in the Indian Ocean of globally recognized natural beauty, consists of an archipelago of nearly 1,200 small coral islands of which 199 are inhabited by a population of approximately 400,000 inhabitants: 310,000 Maldivians and 90,000 expatriate workers. The population geography in the Maldives is strongly polarized. More than 25 percent of the population lives in Malé, the capital, while the rest are distributed among just under 200 other inhabited islands (World Bank, 2012; WB 2015). The capital, Malé, located at the centre of the archipelago, is the single most populous island of Maldives, with density as high as 53,700 people per square kilometre against an average of approximately 1,900 people per square kilometres in the atolls (World Atlas, 2012).

The unique archipelagic coral islands of Maldives provide the country with an extremely rich and diverse marine ecological system. The marine resources are vital for economic development, with nature-based Tourism being the key driver of economic growth and Fisheries, an important sector of employment for the local population.

The Maldives has been an independent state for most of its history. It became a British protectorate in 1887 and remained so until independence in 1965. The Maldives embraced Islam in 1153 A.D. Pre-Islamic data suggests that Buddhism was the prevailing religion in the country. There is also evidence to suggest that Hinduism was practised in the islands. The language of Maldives, Dhivehi, is of Indic origin. The identity of the first settlers in the archipelago remains unknown, but the language and old place-names show Aryan and Dravidian origins, suggesting early migrations from the Indian subcontinent.

The Maldivian people speak a unique language, Dhivehi, and use a distinct script known as Thaana, which is written from right to left. Dhivehi is the language of administration in the country. English language is widely used and is the medium of instruction in schools. The prevailing low pass percentage in the English Language at the end of the Lower Secondary level has raised issues about the language of instruction in schools along with the importance of a greater focus on improving English Language competency.

1.2 Macroeconomic context and demographic trends

Economic growth of the Maldives has been strong in recent years with growth averaging 6% in the past 5 years. However, economic performance is heavily susceptible to shocks from both domestic and external sources, as evidenced by the dip in growth in 2015 to 2.2%. Economic growth for 2018 was initially projected to be strong at 6%. However, due to political instability, this projection was not maintained.

Economic growth of the Maldives is driven by strong performance in the Tourism sector and higher investments in the Construction sector. The Tourism sector contributes to around a fourth of the GDP and the Construction and Real Estate sector, together contributes over 15% to the GDP. Other main industries include Fisheries, Transportation and Telecommunications, which provide most employment to the locals. Table 1.1 provides a snapshot of the key macroeconomic indicators.

Table 1.1: Macroeconomic indicators

	2013	2014	2015	2016	2017	2018
Gross Domestic Product						
Nominal GDP (MVR mns)	50,633.5	56,866.7	61,565.6	64,919.3	71,676.8	77,439.4
Nominal GDP (USD mns)	3,283.6	3,687.9	3,992.6	4,210.1	4,648.3	5,022.0
GDP Growth Rate	7.3	7.3	2.2	6.2	6.9	6.0
GDP Per Capita	7,557.2	8,196.0	8,559.1	8,891.4	9,671.3	10,292.7
Prices						
Inflation (%)	3.8	2.1	1.0	0.5	3.4	3.1
Government Finance						
Revenue (MVR mns)	11,900.7	15,164.2	17,306.2	18,578.1	20,814.9	22,400.7
Revenue as a % of GDP						
Expenditure (MVR mns)	13,666.3	16,539.4	21,440.9	25,306.5	22,228.4	24,894.6

Expenditure as a % of GDP						
Deficit (MVR mns)	(1,765.5)	(1,375.1)	(4,134.7)	(6,728.4)	(1,413.5)	(2,493.9)
Deficit as a % of GDP	(3.5)	(2.4)	(6.7)	(10.4)	(2.0)	(3.2)
Public Debt						
Domestic Debt (MVR mns)	11,518	10,749	10,204	26,476	26,086	27,391
External Debt (MVR mns)	16,908	20,644	23,109	11,726	17,408	21,744
Total Debt as a % of GDP	56.1	55.2	54.1	58.8	60.7	63.5
External Sector						
Current Account Balance (USD mns)	(127.4)	(117.8)	(301.7)	(1,032.4)	(1,010.0)	(896.0)
CAB as a % of GDP	(3.9)	(3.2)	(7.6)	(24.5)	(21.7)	(17.8)
Gross International Reserves (USD mns)	368.3	614.7	564.0	467.1	480.1	593.6
Exchange Rate (MVR/USD)	15.41	15.4	15.41	15.35	15.40	15.42

Source: Ministry of Finance and Treasury, February 2018

Note: 2017 numbers refer to the most recent estimate. 2018 numbers are projections by the government authorities.

The Inflation rate of the country has been low in the past 5 years primarily due to lower commodity prices in the international market. Inflation rate of the country is heavily affected by global prices due to the high propensity for imports in consumption.¹

The revenue of the government has seen exponential growth since the introduction of a modern tax system in 2011. Similarly, the country has increased its public sector spending to finance the institutional structure required for a democratic form of governance, new measures of social security and infrastructure upscaling. As a result, the government budget deficit has widened in recent years, registering a deficit of 6.7% and 10.4% in 2015 and 2016 respectively. However, fiscal consolidation measures in 2017 meant that the deficit was drastically reduced to 2%. Government authorities estimated the deficit for 2018 to be at 3.2%.²

The higher amount of public spending has led to an increase in the public-sector debt in recent years. The public debt to GDP stands at 60.7% at the end of 2017, as per 2018 budget of the Government of Maldives. The debt path outlined in the 2018 budget

¹ See Chapter 2, Ministry of Finance and Treasury data, 2018 and Ministry of Finance data, 2019.

² See Chapter 2.

indicates that debt will increase in the medium term as loans committed for infrastructure are disbursed.³

In addition, heavy expenditure on infrastructure has also weakened the external position of the country in terms of the current account balance. Current account deficit drastically increased to 24.5% in 2016 and remained high at 21.7% at the end of 2017. Although it is estimated to fall to 17.8% in 2018, it remained high throughout. Although the current account has deteriorated, gross international reserves have increased in recent years as inflows of foreign exchange increased in terms of Tourism earnings and debt inflows. The Gross International Reserve is at USD 480 million at the end of 2017.

It is expected that the above economic forecast will have an impact on the costs and financing of the education sector (see Chapter 2).

Human Development Index (HDI): The Maldives shows a remarkable performance in the Human Development Index (HDI) in recent years, with a strong, a stable high ranking in South Asia (UNDP, 2016). According to the most recent report of UNDP (2018), *“Maldives’ HDI value for 2017 is 0.717— which puts the country in the high human development category— positioning it at 101 out of 189 countries and territories. The rank is shared with Uzbekistan. Between 1995 and 2017, Maldives’ HDI value increased from 0.539 to 0.717, an increase of 33.0 percent. Between 1990 and 2017, Maldives’ life expectancy at birth increased by 16.2 years, mean years of schooling increased by 2.3 years and expected years of schooling increased by 4.1 years.*

Maldives’ GNI per capita increased by about 154.7 percent between 1990 and 2017.”

Maldives had attained a Gross National Income (GNI) per capita of US \$ 10,383 by 2015, showing an increase of about 216.2 percent between 1990 and 2015 (UNDP, 2017).

Demographic Trends impacting Children’s and Youth’s Human Capital

According to the results of the Population and Housing Census (2014), the Maldives has almost completed its demographic transition – the shift from high crude birth and death rates to low ones. The fall in crude death rate was due to significant reductions of infant and child mortality rates over the last two decades. This creates the first demographic dividend (DD) that is defined as “the accelerated economic growth that is triggered when

³ Ministry of Finance and Treasury data, see Chapter 2.

the working age population is growing in relation to the number of young dependents” (0-15 years old) (UNFPA, 2016).

The estimated population of the country in 2014 is 402,071 residents, of which 63,637 were foreigners. The national residents were 341,256 (males and females representing 50.7% and 49.3%), a 14% increase since the last census in 2006. The population is distributed among Malé, 20 administrative atolls covering 187 inhabited islands, and 237 non-administrative islands (109 resorts and 128 industrial islands) (NBS, 2015).

The most striking aspect of the population distribution is that the population of Malé represents over 38% of the total resident Maldivian population (UNFPA 2016). About 53% of the resident population is distributed in 187 inhabited islands having strong implications on the provision of services, including health, protection and education.

The annual population growth rate has been declining which can be attributed to the falling fertility rate, from 6.4 children in 1985-1990 to 2.1 in 2014. Consequently, life expectancy at birth has increased from 70.0% (2000) to 72.5% (2008) for males and from 70.1% (2000) to 74.1% (2008) for females, which can be attributed to a combination of several factors such as better access to healthcare, improvements in the quality of preventive, diagnostic and curative health services, and increased levels of education and health awareness (UNICEF, 2015 & UNFPA, 2016). As a result, the percentage of the population aged 0-14 has declined from around 41% in 2000 to 31% in 2006, while the percentage of population aged 15-64 steadily increased from around 55% (2000) to 63% (2006).

At the same time, youth emerge as a significant demographic force in the 2014 census as 47% of all resident Maldivians are less than 25 years old (UNFPA, 2016).

Children and Youth in the Demographics:

- (i) Children are unevenly distributed among the geographic regions with the biggest number concentrated in the capital, Malé and the smallest number in the Central region. Out-migration from outlying islands is the main reason for this urbanization process. By 2025, the total Maldivian population is expected to increase by 19.3%; the share of the young (0-14) will go up by 16 per cent, the

working age group (15-64) will increase by 18% while the number of elderly (age 65 and over) will rise by 52% (Department of National Planning, 2012).

- (ii) The high proportion of the adolescent population, in light of findings of the high prevalence of risky behaviours and health issues, requires a specific focus on physical, mental and social health and education needs.

Policies to address Early Childhood Development and Youth Human Capital:

Demographic trends described above are expected to have direct implications on the choice of priorities for governmental policy goals and funding. Two policy goals emerge strongly:

- (i) An ECD policy goal to provide to young children in Malé and in the outer islands well-coordinated services (Education, Health and Social Protection) for holistic Early Childhood Development.
- (ii) A youth policy goal to provide all young Maldivians with the opportunities to acquire the skills and get the education that will bring them jobs.⁴ The growing numbers of adolescents also lead to the increase of the working age population and require long-term socioeconomic policies on Technical and Vocational Education and Training (TVET) aimed at creating employment opportunities for the young people and maximizing their economic potential.

1.2.1 Administration system of the country and Education service delivery

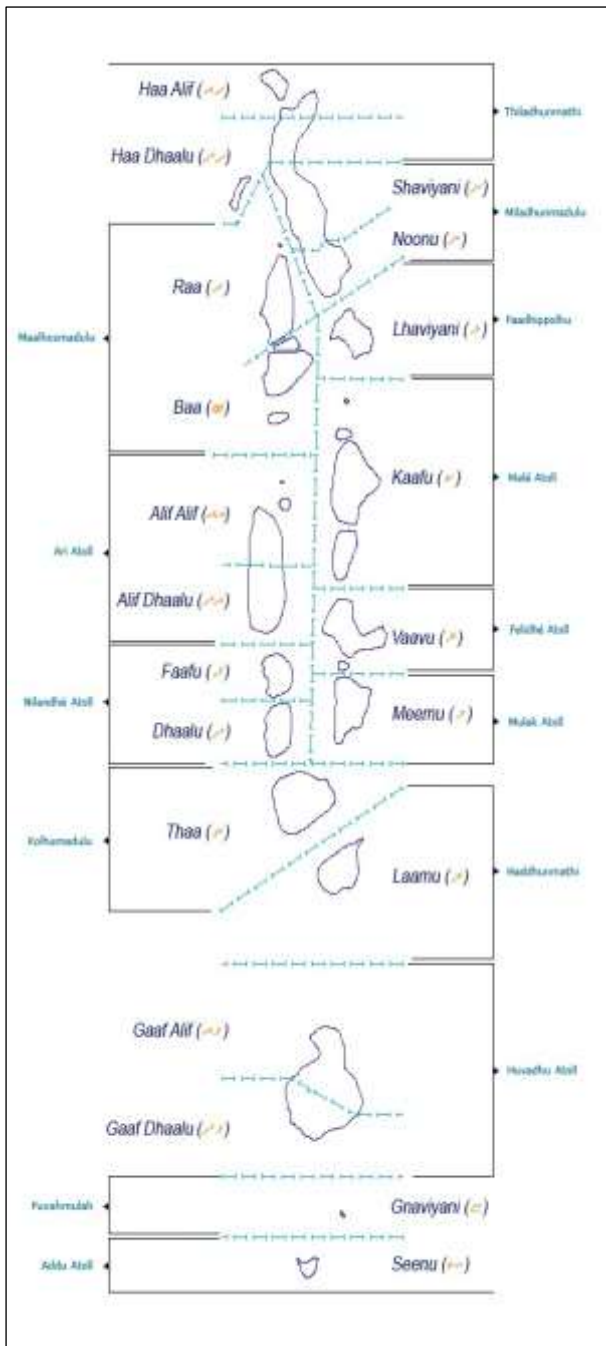
The Maldives has two spheres of government; national and local as stipulated in the Constitution. The Administrative Divisions of the Maldives refers to the various units of government that provide local government services in the Maldives. According to the Decentralization Act 2010, the administrative divisions consist of atolls, islands, and cities each administered by its own local council. Administratively, there are currently

⁴ UNFPA, 2015.

189 islands, 19 atolls and 3 cities in the Maldives, namely; Malé City, Addu City and Fuvah Mulak City. (See Map on this page).

Services of the local government are delivered based on the constitution and the main legislative texts, the Decentralization Act 2010 and the Local Council Election Act 2010. The Local Government Authority has the responsibility for local government through the councils: three city councils (Malé, Addu, Fuvahmulah) and the 187 lower level island councils, accountable to one of 19 atoll councils. At budget level, the councils' financial income comes from (i) their power to charge fees or rents for the services they provide and can seek loans as well as create financial instruments such as bonds, bills and securities to fund development activities and (ii) the yearly allocated public funds from central government for office administration, provision of services and development projects. In addition, the authority to generate revenue from state facilities within a council jurisdiction has not yet been granted.

Figure 1.1: Map of Maldives



The responsibilities of the **Atoll Councils** are to establish and maintain a register of islands and their lands, assist island councils in seeking technical and financial assistance, and administer and implement projects in the atoll development plan that have not been assigned to a particular island council.

The responsibilities of the **City and Island Councils** include providing road, waste disposal, pest control, water, electricity and sewage systems; primary healthcare and preschool education; and educational and vocational programs for adults.

Ministerial oversight by the Local Government Authority: The Decentralization Act stipulates the establishment of a Local Government Authority to which the Island Councils and Atoll Councils are accountable. The Local Government Authority was established in late 2010 and Local Council elections were held in February 2011 and in the year 2017.

At the central level, the Local Government Authority (LGA) constituted in accordance with the Decentralisation Act, has the responsibility for local government and advises councils on the formulation of regulations and bylaws. In the case of a dispute between two councils or over an issue, the LGA has arbitration powers. The councils have representation on the LGA.

The Decentralization Act 2010, stipulated that the councils have responsibility on pre-school service delivery and educational and vocational programs for adults. The city councils were responsible for salaries of Preschool teachers and the oversight of the Preschools. However, given the research evidence on the importance of pre-primary education for a holistic early childhood development and for later success in schools and due to the prevailing unequal service provision in preschools across the councils, MoE decided in 2015, to operationalize the Preschool Administrative Act (2012). With this decision, the two years of Pre-primary education was integrated into the public schools in the islands (except for the capital city, Malé) so as to ensure more effective and systematic management and quality support from the central government. This was followed by a reduction of central government support through the MoE to community schools administered by the councils.

A UNICEF commissioned study undertaken in 2013 underlined that the process of decentralization was not completed, as several responsibilities to be transferred to the councils were not implemented and its impact on service delivery regarding health and education was not readily evident. According to the report, by 2013, Atoll and Island Councils felt they have significantly less powers and less opportunities to raise revenue and provide services than they did prior to 2008, despite the grand visions in the Decentralization Act (UNICEF, 2013).

By the year 2018, only a very few Primary Schools and Pre-schools are run by the local communities (community schools). This shows that the Decentralization Act is not fully implemented, but changes were made, with the argument that this would help to offer quality services (including education services) in a more equitable way under a more systematic management.

1.2.2 Sustainability of growth resilience towards economic shocks and environmental vulnerability

The Maldives graduated from a Least Economically Developed Country status in 2011 and is now categorized as an Upper-Middle Income Country. Its economy is driven primarily by the Construction and Tourism sectors. The low elevation of the Maldivian islands makes the nation highly vulnerable to rising sea levels. The key issues of development are its high population density, dispersed geography, and limited resources. Actions that the previous government of the Maldives took to address these issues were to relocate and consolidate its population from the outer islands to the greater Malé region to use its resources. However, given the change in government, it is expected that the focus on Decentralization will be more. Given the country's vulnerability, the focus is on crucial actions to strengthen the country's resilience to climate impacts and prioritizes mitigation in energy, transport, and waste. Invest Maldives, the government investment promotion agency, has invited private investment in agribusiness, energy, financial services, and infrastructure (World Bank, 2018).

Vulnerability issues: 'Structural vulnerabilities' of the Maldives include: (i) geographical isolation; (ii) small size, (iii) limited land, natural and human resources, and (iv) vulnerability to climate change and natural disasters. 'Vulnerabilities at risk' is characterized by socio-economic transitions and changes, e.g. Maldives graduation to become a Middle Income Country (MIC) as well as by external shocks that have severe impacts on the Maldives social and economic development, e.g. natural disasters, like the 2004 tsunami, and the 2008 financial crisis. These vulnerability features impact on human development dimensions of education, income and health, and challenge those institutions that are created to address these dimensions (UNICEF situation analysis 2015)

Geographic vulnerabilities and emergency preparedness

The Maldives is made up of over a thousand small islands. The geography of Maldives and the population dispersion places the country in a vulnerable position. The Spatial disparity between Malé and the outer islands contributes significantly to the education choices.

The Human Development Index (HDI) for Malé is 0.734 compared with 0.627 for the outer islands (United Nations Children's Fund, 2015). The low HDI for atolls is largely due to the low average years of schooling in comparison to Malé. An assessment of regional Human Development Index (HDI) and the human development dimensions indicates that Malé performs far better than the outer islands in the expected and average years of schooling (United Nations Development Program, 2014). In fact, exploration of mean years of schooling shows that someone who is living in Malé is likely to complete three more years of schooling than someone living in the outer islands (United Nations Development Program, 2014). This leaves the population of outer islands more vulnerable compared to the population in Malé from the perspective of HDI and its related aspects.

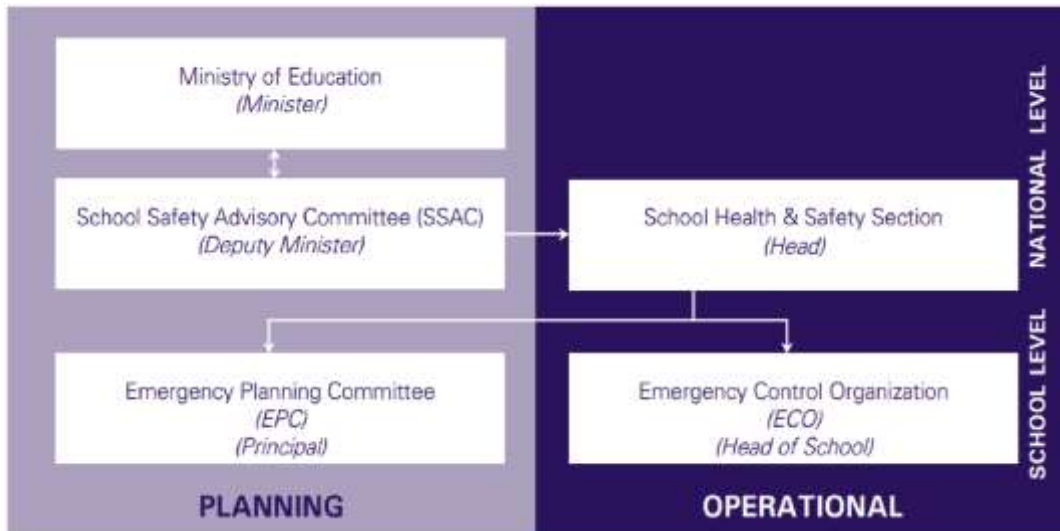
According to the UNDP (2014), Maldives faces other vulnerabilities due to geographical isolation, small size, climate change, and natural disasters. For example, the 2004 Tsunami was a major shock to all the systems of the Maldives including education. The damage to the Maldives due to Tsunami included 82 deaths, 26 missing people, 30,000 displaced people, 8,500 damaged shelters and 2,800 homes destroyed causing an estimated loss of US \$ 470 million, which is equal to 62% of the National GDP (UNDP, 2014). All environmental disasters have an enormous impact on the education sector as families, children and their livelihood are most affected by each of those environmental disasters.

Due to the huge loss caused by the Tsunami in 2004, many aspects of environmental vulnerabilities have been evaluated in the Maldives. According to the UNDP (2006), the islands in the eastern fringe of the Maldives are most prone to tsunami threats. The northern atolls are more prone to cyclonic winds and storm surges and it gradually reduces as it moves along the southern atolls. Earthquakes are not common to the Maldives and the risk of it is low except for Seenu, Gnaviyani, Gaafu-Dhaal and Gaafu-Alif atolls (UNDP, 2006). The other major environmental vulnerability faced by the Maldives is climate change and sea level rise. The islands of the Maldives are extremely low lying (a mean of one-meter-high), and therefore, even a slight rise in sea level will be extremely threatening (UNDP, 2006).

Hence, an integrated disaster management approach from all sectors is a necessary component for the development of the Maldives. The education sector, in particular, should have well-established processes that can cope with those vulnerabilities. As such, the circular number 11/2011 of Ministry of Education states that all schools in the Maldives should comply with the 'School Emergency Operational Plan Guideline 2009' (Ministry of Education, 2011). The School Emergency Operational Plan 2009 states that,

“Schools must be prepared to respond to an emergency or traumatic event in an organized and timely manner so as to ensure that students and staff can continue to function effectively without additional trauma or the development of additional crises.” (Ministry of Education, 2009. P.12). National and school level teams and their functions in emergencies and disasters are provided in the figure below.

Figure 1.2: The national and school level emergency response teams and their functions



Source: Ministry of Education, 2009, p. 16

In addition to school disaster management plans developed by the Ministry of Education and individual schools, the recent UNICEF activities in the Maldives include child-centred, multi-hazard risk assessments that are in line with the local and national development plans (UNICEF, 2016). With the assistance of UNICEF, the National Disaster Management Centre (NDMC) had developed Standard Operating Procedures (SOPs) for the establishment of Community Emergency Response Teams (CERTs) (UNICEF, 2016). The SOPs will help to establish a necessary budget for CERTs which has already been piloted for effectiveness in all 11 inhabited islands of Laamu Atoll (South Central region). The pilot shows the possibility of engaging community members including children to internalize preparedness and response actions to ensure safety in disasters and emergencies (UNICEF, 2016). It is time to update the School Emergency Operation Plan that was formulated in 2009.

1.3 Overview of key policies and results

1.3.1 National Development Plans; Youth Strategy; National Gender Policy 2016-2021

Starting late 1970s, Maldives undertook development planning and by 2006, the country had issued seven National Development Plans (NDPs). With the introduction of multiparty democracy in the mid 2000s, the first election under the new system gave way to party manifestos replacing NDPs. Political party manifestos have, since then, become the de facto principal national planning documents. The 7th NDP (2006-2010) which was the last of its kind, was replaced by a Strategic Action Plan 2009-2013.

A National Child Health Strategy – Every New-born Action Plan (ENAP) Maldives 2016 – 2020 as well as a National Reproductive Health Strategy 2014-2018, was implemented by the Ministry of Health.

A Youth Manifesto, 2013-18, was also under implementation to support youth, especially those who leave school without successfully completing their education, to become skilled and join the labour force of the country.

The current National Gender Policy 2016-21 is founded on two key policies: (i) political, economic, and social empowerment of women, and (ii) zero tolerance to violence against women (El-Horr & Pande, 2016). The Ministry of Gender and Family is responsible for the protection and promotion of the rights of vulnerable groups in the Maldives, including Women's Rights & Empowerment, Gender Equality, Child Rights & Family Well-being, Elderly Rights and Well-being, Disability Rights and Well-being and Social Protection Services.

1.3.2 International commitments to the Sustainable Development Goals

By 2010 Maldives achieved five out of eight Millennium Development Goals, making it South Asia's only MDG+ country. Strong emphasis on the social sectors has been one of the key factors to sustain concerted efforts of the Government and its international partners in eradicating extreme poverty and hunger (MDG-1) achieving universal primary education (MDG-2), reducing child mortality, (MDG-4), improving maternal health (MDG-5), and combating HIV/AIDS (MDG-6)¹. The Adult literacy rate of over 98% has been achieved and sustained since 1999. The Maldives achieved Education for All (EFA) / MDG targets for primary education well ahead of the target dates. Universal primary education was achieved by 2002 with a small gender disparity. Rapid economic growth in the last decades was instrumental in ensuring almost universal coverage with basic social services

and an improvement of living conditions. The rate of improvements in achieving gender equality (MDG-3), ensuring environmental sustainability (MDG-7) and developing a global partnership for development (MDG-8) has been slower and requires intensified efforts.

Maldives is adopting the SDG 4 and its Framework for Action (UNESCO 2016). The MoE is moving ahead with the implementation of the Sustainable Development Goal 4 on Education by building on the successes in the implementation of the Millennium Development Goals and EFA goals. Attention is needed to address lifelong learning mentioned in SDG 4 and to incorporate it in national educational planning.

1.3.3 Development partners supporting the Education sector in the Maldives

The World Bank is a partner in the country's development for over 35 years, assisting the country to improve its public financial management, the relevance and quality of education, and the development of financing. Its portfolio comprises assisting the country to improve its public financial management, the relevance and quality of education, and the development of the financial sector. The Enhancing Education Development Project 2013-17 which was closed on June 2018 supports activities that promote strategic initiatives at the country level to strengthen and develop the education system such as the National Assessments of Learning Outcomes for Policy and Program Development; the Management and Leadership Development in the Education Sector; the Learning Environment Enrichment of Secondary Schools; A Model for Multi-Grade Teaching in Small Schools; A Model for Combined Curriculum Streams; and Continuing (In-Service) Training for Untrained Teachers. Under School Level Education Development, the World Bank supports strategic initiatives to improve the performance of schools through School-Based Management; Modernizing Quality Assurance for School Improvement; Strengthening School-Based Professional Development for Teachers and Other School Staff; School Quality Assurance and Teacher Development Awards; developing A Master Plan for Higher Education; Strengthening the Maldives Qualifications Authority. The World Bank is discussing with the country to define the next education support program in the country.

The UNICEF plays a pivotal role in advocacy in implementing children and youth rights through analytical work and innovations and initiatives, supporting equitable quality education from Pre-primary to grade 12. In addition, the UNICEF supports children and youth well-being and inclusion of children with special needs in the Maldives with particular attention to various forms of discrimination. Under the Country Programme

(CP) (2016 – 2020), UNICEF had a lead role in advocating for the importance of Early Childhood Education, and the transition to Secondary Education for all adolescents, especially in remote islands. The program has a particular focus on inclusion and equity across sectors; on supporting the integration of child-centred, multi-hazard risk assessments into development plans at national and local levels; on improving transition rates to higher secondary education; on developing school-based psychosocial support programme especially for those migrating to Male'; on reducing offensive behaviours among adolescents and young people, while advocating for removal of punitive punishments for adolescents in conflict with the law; on supporting programmes for Out of School Children and Youth, with development of alternative and flexible learning programmes, among others.

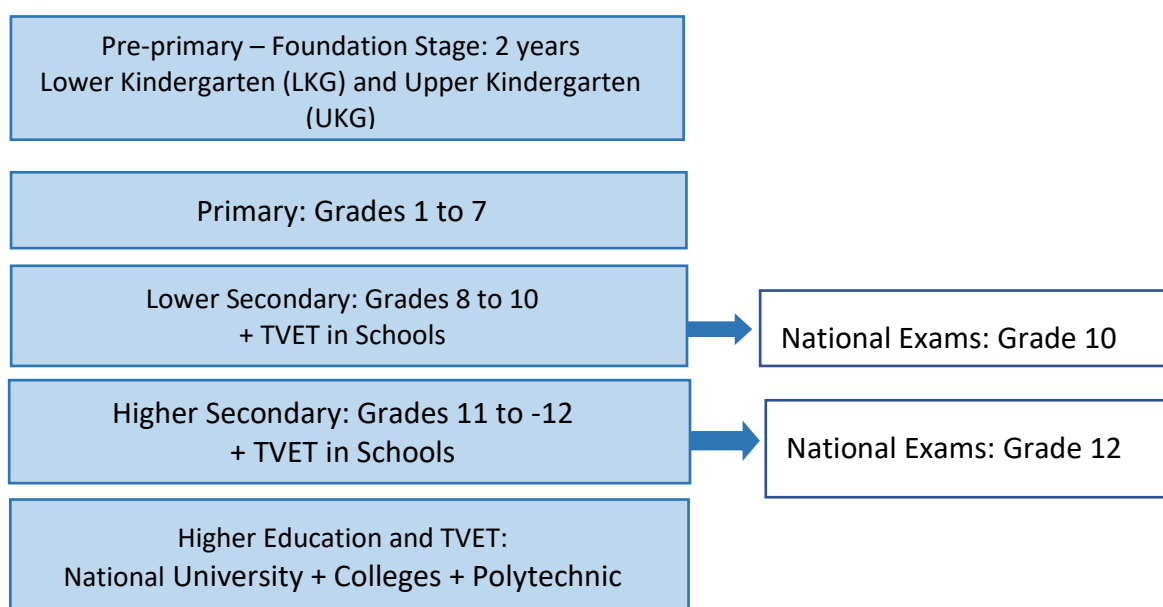
The Asia Development Bank (ADB) is another active development partner in the Maldives but does not have an education-oriented portfolio. UNESCO has been providing technical support to education in the Maldives. In recent years Maldives has benefited from UNESCO's technical support in developing its education management information system as well as ICT policy formulation which is a task that is still in progress.

1.3.4 Overview of the Maldivian Education System

The stages and schools of the Education system in the Maldives: Education and skills are provided in the Maldives through the following stages of the Education system:

- 2 years of Preschool Education
- 7 years of Primary Education
- 5 years of Secondary Education (3 years of Lower Secondary and 2 years of Higher Secondary)
- Skills development (Technical and Vocational Education and Training (TVET) and Higher Education programmes through colleges and universities (Figure 1.3).

Figure 1.3: The structure of the Education System in the Maldives



Note: IGCSE: International General Certificate of Secondary Education
SSC: Secondary School Certificate HSC: Higher Secondary School Certificate

The Two national examinations are delivered at Grades 10 and 12. While grade repetition is not practiced, there is no repetition policy from Grades 1 to 10. The 2 years of Pre-primary, operated on behalf of the communities are incorporated into the public schools. At all levels, private providers are functioning in the delivery of education services.

The General Education is delivered through a network of public and private schools. The public schools in Malé and the main islands offer a combination of Primary and Secondary Education. Overall, there are about 212 schools both public and private, offering Primary Education, 195 schools offering Lower Secondary Education, and 52 schools offering Higher Secondary Education (MoE 2018). The sum of the above schools does not add up to a total number of schools as schools overlap in levels. All public schools (except 1) by default offer Grade 1 to 10 (Primary + Lower Secondary). But in some island schools, they might not have classes for Lower Secondary as quite often children from the outer islands move to Malé or other islands for better schooling. Thus, there are not enough students (5 is the minimum required) to make up a class. Higher Secondary is offered only in 3 designated schools, the Centre for Higher Secondary Education (Malé) the Addu High School (South) and the Jalaaluddin School (North).

The legal framework: With the first constitution of Maldives (1932), the government formally recognized its responsibility for the provision of basic education. This recognition

is considered to be instrumental in driving basic, social and economic development of the country. To date, there is no Education Act in the Maldives⁵. However, the 2008 Constitution of the country prescribes that everyone has the right to education without discrimination and mandates the state to provide free primary and middle school education⁶ and stipulates the provision of access to higher levels of education. Further legal requirements have stemmed from the ratification of the Convention on the Rights of the Child (1991), the enactment of the Law on the Protection of the Rights of the Child in the same year, with an amendment (2014), and the Preschool Act (2012). Furthermore, the ratification of the Convention on the Rights of Persons with Disability (2010), and the passage of the Disabilities Act (2010) have implications for the delivery of education in the country. The Local Governance Act (2010) also requires the Local Councils to organise and conduct education and vocational training programmes for adults. Additionally, the Maldives National University Act (2010) and the Islamic University Maldives Act (2015) provide a legal basis for state-funded university education in the Maldives.

In the absence of a specific Education Act, the above-mentioned Constitutional provisions, Acts, Presidential Decrees provide the legal framework for education in the Maldives. All national level educational planning must be done on the basis of this broad legal framework. By 2013, the Ministry of Education (MoE) has developed and has implemented the current Education Strategic Plan (ESAP) for 2013-17.

Access, Completion and Learning Outcomes Achievements: The overall primary Net Enrolment Rate (NER) in 2017 was 97.7%, with 96.6% for females and 97.3% for males. For the year 2018, the primary NER is 95.5% with 96.3% for females and 95.5% for males. Gender parity is close to being achieved (at 0.94). The NER in the Lower Secondary is 90.5% with Net Enrolment for girls at 87.8% and Net Enrolment for boys at 87.8% percent.⁸

Despite these achievements, the system faces the challenge of a sharp drop in enrolment in Higher Secondary Education. The Higher Secondary Education Net Enrolment is 44.5.0%, with 50.4% for girls and 38.9% for boys in 2018 (MoE data). Policy actions are

⁵ A draft Education Act has been in the Parliament under discussion since 2010.

⁶ Article 35 and Article 36, Clause (a) and (b) of the Constitution 2008. Subsequently the middle school requirement has been interpreted to cover secondary education.

⁷ From School Statistics 2018, Ministry of Education.

⁸ NER is less than 100% as a number of students in 13-year age group are enrolled in primary. GER reaches 100%.

under implementation to address the issue of the drop-out between Lower Secondary and Higher Secondary (mainly through policies in establishing various educational pathways). While this does not fully address the low transition rates from the Lower to Higher Secondary Education, it offers an alternative path that provides a vocation-oriented education to students unable to cope with or not inclined towards a general education at this level. However, this strategy is under revision.

The quality of education at all levels is another major policy challenge for the Maldives. The analysis of the 2016 NALO shows modest results with substantial regional and gender disparities. The NALO conducted for the year 2017, shows that results dropped especially in grade 4 for Dhivehi and Math, and improved slightly in English, while in Grade 7 there is an improvement in Dhivehi and Math. Table 1.2 provides a summary of student achievements in the above subjects for Grades 4 and 7 in 2015/2016 compared to 2017.

Table 1.2: Student achievement for Grades 4 and 7 in 2015/2016 compared to 2017

	Dhivehi			English			Mathematics		
	2016	2017	% Change	2015	2017	% Change	2015	2017	% Change
Grade 4	62.20	56.80	-5.40	52.90	53.17	0.27	57.50	57.04	-0.46
Grade 7	56.76	66.00	9.24	51.10	49.84	-1.26	44.60	49.47	4.87

Source: NALO 2017: Report QAD / MoE, April 2018.

The NALO 2017 confirms that in all cases, girls outperform boys. Also, while the majority of students are performing above the mean, there are a number of students ranging from 15% to 31%, performing below the minimum standards. The systemic issues of learning outcomes identified through the NALO in 2016 and 2017 point to urgent action needed at lower levels in the education system. Such actions may help to retain more students in the mainstream General Education in the higher grades.

The NALO does not include established benchmarks on the distribution of the achievements within the maximum and minimum expected learning achievements.

According to the Ministry of Education, there is a significant increase in students pass percentage in GCE O' Level 5-subjects from 27% in 2009 to 77% in 2017 (MoE, 2018)⁹. A key reason that made this possible is the channelling of students who are not performing

⁹ NALO 2017. MoE, Maldives

well or not academically inclined away from GCE O/L studies to alternative pathways. This has affected the number of students sitting the GCE O/L examinations. As such this increase in GCE O/L pass rate needs to be viewed with caution and while bearing in mind the appropriate context.

While student performances at national examinations have shown improvement, geographic disparities remain and need to be addressed.

1.3.5 Official Education policies and reforms of recent past: An overview

With increased coverage and participation rate, the Maldives has placed a greater emphasis on addressing the identified quality and equity issues in education. By the time the international community migrated from MDGs to Sustainable Development Goals (SDGs) in 2015, Maldives had witnessed the introduction of several reforms in the education sector and the 2014-18 Education Strategic Action Plan (ESAP), presented below. These reforms are supportive of SDG 4 targets for improving quality and equity in education which still remain critical concerns at all levels of the system.

Education Strategic Action Plan 2013-18 outlines the vision, mission, major goals and objectives of the sector. It was developed following a review of the education sector. The ESAP 2013-18 lists the strategic actions under the respective 5 goals (pledges) and targets. The goals (pledges) are:

- 1.No child left behind
- 2.Every youth is skilled
- 3.Ensuring higher education
- 4.Reputed schools with adequate resources
- 5.Skills related to economic revolution.

The ESAP envisions Maldives “to be the country among small nations that provides the best in terms of quality education and training to all”. The mission is to “***provide opportunities for quality education to all, from pre-school to university level; nurture students with good discipline; and develop them as healthy and capable children of Maldives to face the challenges of life***”.

The document, as it is, is incomplete without the specific performance indicators, agencies/persons responsible, budgetary estimations and monitoring framework, as

commonly found in Strategic Plans. However, subsequent annual reviews of sectoral performance have incorporated some of the missing elements.

A Master Plan for access to quality higher education 2017-22: A Master Plan for Higher Education was developed with support from the World Bank. Key analytical work that guided the development of the Master Plan are: Human Capital for a Knowledge Society: Higher Education in the Maldives, an Evolving Seascape (2011); and Human Capital for a Modern Society: General Education in the Maldives, an Evolving Seascape (2012) authored by the World Bank teams. These reports contain an analysis and description of the higher education sector.

The aim of the Master Plan for Higher Education is to guide institutional and sectoral development. The overall objective is to develop the key policies based on the five main areas: the desired size and structure of higher education, governance of higher education, quality of higher education, economic and social relevance of higher education, and budget and financing of higher education. A number of policies and strategies have been recommended for each of these five areas. The cost and financing of the education sector plan will take into account the cost and financing of the Higher Education Master Plan with the aim to balance budget across sectors. By 2018, the Higher Education Master Plan is under implementation. Chapter 6 of this ESA is dedicated to higher education advancing further analysis, findings and recommendations that will support the implementation of policies and strategies to achieve outcomes of the Master Plan for Higher Education.

“No child Left Behind” Policy Framework: The overarching education policy framework for basic education, “No Child Left Behind”, focuses on ensuring inclusive quality learning opportunities which caters to the needs of every child to reach his/her full potential, aiming at 14 years of free education starting at the age of 4 in pre-primary education till they complete higher secondary education at the age of 18 or 19, including a 10 year compulsory cycle from Grades 1 to 10. A number of initiatives are under implementation since the “No Child Left Behind” policy was launched leading to tangible results in terms of access, enrolment, completion and enrolment in technical and vocational programs in schools and the incorporation of 2 years of kindergartens into the public system in the atolls; the implementation of policies to address out-of-school students and students at risk such as the Dhasvaaru program; the Business and Technology Education Council (BTEC) an international qualification offered by the MoE in 178 out of 190 secondary schools; the inclusive education policy for children with disabilities, offering some form of education for children with special needs (in 185 out of 212 schools in 2017). The “No

Child Left Behind” policy implementation can be improved through assessment or impact evaluation and EMIS data analysis. More has to be done in encouraging schools to place a greater focus to screen/identify children at risk or falling behind, to diagnose the problems and taking appropriate remedial actions.

National Curriculum Framework (NCF) Reform for all grades, defining values, expected learning outcomes and key skills and competencies, rolled out starting in 2015, through the production of teaching and learning materials and teacher training programs. It appears to be generally well received by schools and teachers. The external school review highlights new challenges to be addressed such as: improving teaching and learning in the classroom by supporting teachers through school-based, practical training on lesson planning, teaching for understanding and higher level cognitive skills, using remedial education best practices, supporting the implementation of new curricula in small islands as well as the student assessment process, and inadequate parental engagement (Quality Assurance Department, 2018). Finally, considering the curricula reform and learning outcomes national assessments 2016 and 2017, does not show significant gains on learning outcomes, including high level cognitive skills, but rather a stagnation in some cases. At the same time, geographic and gender gaps regarding learning are still persistent.

Multi-grade Teaching (MGT) strategy to improve learning: The MGT is a response to support island schools with very low student enrolments but with a wide grade as well as age-range as well as to address the declining enrolment in the atoll schools due largely to rapid migration to Malé region and to other population centres. This support is provided through additional investments in classroom set-ups and ICT, and targeted in-service teacher training on MGT strategies in around 41 MGT schools. Improving teacher quality, re-branding the MGT as ‘Learning Groups for Excellence’ where appropriate, and analysis of its impact on learning outcomes through the NALO findings are necessary to help the program’s contribution on improving learning in the more isolated and small communities that face specific challenges in the delivery of educational services.

Pre-primary education integration in the public system: Since the beginning of 2016, the 2 years of education prior to Primary school, LKG and UKG years of Pre-School education, have become the responsibility of the MOE. Until 2015 this was under non-government/private and community sector. Thus, the existing government Primary and Secondary schools incorporated the Pre-School classes in all the islands except in Malé. School management faces new challenges as they now have to cater to the new age group

that had been served outside the formal education system. To cater to the new age group public schools are required to implement more up-to-date teaching and learning practices for early learning and holistic early childhood development, with attention to the geographic, socio-economic and gender disparities. A more multi-sectoral approach to education with greater collaboration with health and social protection will better support holistic early child hood development in the Maldives while following the SDG 4.2 target and indicative strategies.

National Assessment of Learning Outcomes (NALO): (NALO): This policy focuses on systemic quality improvement. It began with the establishment of QAD in 2015, within a 5-year project supported by the World Bank, the findings of which will be presented in detail in Chapter Four. The key challenge for the quality assurance policies is to strengthen a common set of work with other key departments of MoE and schools, in order (i) to understand the findings and recommendations of the external school reviews and NALO, (ii) to develop or re-orient appropriate policies and actions to improve education service delivery at the classroom level aiming towards improved and equitable learning outcomes for all students. The NALOs undertaken in 2015, 2016 and 2017, focus on learning by providing key information on the outcomes of the education system at the levels of Grades 4 and 7 (English, Math and Dhivehi) that will help in designing and implementing of policies on improving quality teaching and learning. The impact of NALOs could be maximized by strengthening linkages with the Curricula, teacher training, Multi-grade teaching and the MEMIS. The next application of NALO should introduce learning benchmarking. Participation in appropriate international assessments will help Maldives to be in a position to benchmark learning outcomes at the international level and hence be in a position to see where the quality level of its education system’s learning outcomes stands in comparison with that of other countries.

The Inclusive Education Policy: Since 2013, the Inclusive Education Policy (IEP) promotes and facilitates the education provision for children with disabilities across the country. Currently there are 52 specialized Special Education Needs (SEN) units and 178 schools with SEN trained teachers across the country, catering to over 1,172 students with special needs. Furthermore, in line with the School Attendance Policy, every school age child is being identified, tracked and monitored by the MEMIS. Tracking students with SEN and specifying the teaching and learning methodologies while ensuring resources and capacity development at central and school levels are the new challenges in this area.

TVET in schools and outside schools: Maldives is developing a system of TVET education both in schools through appropriate policy initiatives (BTEC, Dhasvaaru - alternative pathway for apprenticeship) and out of schools (Polytechnics, TVET, colleges, non-formal) for skills development matching the market needs. The task ahead is to develop it into a comprehensive system to reskill and upskill and learn and target specific groups (youth, women, in Male and atolls) and to respond to the development needs of the country. Certifications, quality assurance mechanisms, programs for targeted populations (youth, women and rural populations), use of ICT delivery platforms as well as strengthening linkages with the labour market are ongoing targets. The new Impact Evaluation Studies (ISP) will help to refocus and reshape the TVET programs to show progress on equitable access, quality and relevance, in line with the country's developmental goals.

Teacher Quality Policies: continuous professional development opportunities are provided to uplift the quality of in-service teachers and to ensure all teachers hold a minimum qualification of at least a diploma. The minimum qualification policy has been set and enforced since 2015. A further target for all teachers to hold at least an undergraduate degree in the profession by 2020 has been set, and teachers are being supported to attain these qualifications. Innovative teacher training options such as virtual training, video conferencing and the Teacher Resource Centers (TRCs) are being adapted to overcome the geographic challenges. Despite the efforts, unqualified teachers are unequally posted contributing to the existing disparity among schools. Better targeted practical innovative training is needed to improve teaching and learning in subject areas, and to improve higher level cognitive skills and better lesson planning with a greater focus on contextualizing curriculum content, and use of better techniques for identifying learning issues, and mounting remedial education.

MEMIS: The need for a comprehensive central database in the Educational System of the Maldives came about with the difficulty in managing the old system. In the past, excel sheets were used for data collection. In 2015, work started to establish a central database with the assistance from UNICEF. This was the stage at which data collection through MEMIS database started (MoE 2017). A MEMIS familiarization program and basic training was completed for all schools in the Maldives in December 2016. MEMIS was officially launched in the Maldives on 16 July 2017, which was a major milestone as this database is the first of its kind for the education sector in the Maldives.

The OpenEMIS, formally launched in July 2017, allows MoE to retrieve and analyse data from schools, teachers and students in real time. It provides schools a complete

management system that greatly increases efficiency in administrative work. OpenEMIS allows students as well as parents to login and see the students' progress and also review their academic/discipline records. For MEMIS to function well, it is important to:

1. Establish a strong network that will function as the steering committee in implementing MEMIS: Having a comprehensive representation of all stakeholders from every department with regular meetings to discuss ways in which MEMIS can better serve their needs is vital. Familiarizing and imparting skills required for MEMIS to stakeholders from all areas is extremely important for sustainability.

2. Build a strong team for MEMIS within the sector with people who have a deep understanding of the database. This will remove the dependency on outsourcing and create effective and efficient solutions. A team from MoE needs to be more proactively trained on MEMIS customization and its features.

Quality assurance mechanisms policy framework: The Quality Assurance Department (QAD) was established within the Ministry of Education in 2015 with a mandate to undertake studies to assess the quality of education at the system level and to advise on ways to improve quality through quality assessment through “whole school” reviews and as part of the School Improvement, Quality Assurance and Accountability Framework (SIQAAF).

1.4 Findings

Disparity and vulnerabilities: The Maldives is characterized by a population geographic disparity, Malé versus the outer islands, while the archipelago is vulnerable to climate change. The national language, Dhivehi, is taught as a subject in schools and English is the medium of instruction in schools. Despite strong progress on HDI and political will and engagement to improve Human development in the country, vulnerabilities may affect progress. In regard to economic development, supported by higher tourism returns, human development showed strong gains and greater human development. Since 2011, Maldives has been categorized as an Upper Middle-Income Country, but with pronounced inequalities (World Bank 2016). High fiscal deficit, in combination with high public spending, and uncertain growth projected for 2018, it is expected to have an impact on public investment that may lead to public spending restrictions, including investment in education. Other structural vulnerabilities of the Maldives such as (i) geographical isolation; (ii) small size; (iii) limited land, natural and human resources; (iv) economic shocks; (v) volatile political environment; and (vi) vulnerability to climate change and

natural disasters can all impact on public services delivery including education services (World Bank, 2016). Addressing these vulnerabilities continue to be an important task ahead for the Maldives while emoving ahead with its effort to continue to improve its HDI.

Demographic transition challenges and opportunities to address youth and children’s needs through education: The Maldives has almost completed its demographic transition. The demographic trends impact youth and children as children are unevenly distributed among the geographic regions with the biggest number concentrated in the capital Malé and the smallest number in the Central region (UNICEF, 2015). A high proportion of the adolescent population in the urban are exposed to risky behaviours and health issues (UNICEF, 2016). ECD policies for young children and TVET policies to address youth skills development for decent jobs are some of the policy implications of the demographic trends.

Maldives education strategy’s alignment with Sustainable Development Goal 4 and its targets: The current ESAP 2014-2018 is generally in alignment with SDG 4 targets, and MoE continues to show strong commitment towards aligning with SDG 4 Education and its targets, as well as other international commitments. There is a need for a greater understanding of the concept of ‘lifelong learning’ in the context of SDG4 and its incorporation in the national education sector plan.

Supporting other sector strategies and planning: the country is implementing a National Child Health Strategy – Every Newborn Action Plan (ENAP) Maldives 2016 – 2020 and a National Reproductive Health Strategy 2014-2018; the implementing agency is the Ministry of Health.

1.5 Recommendations

1. Continue to address vulnerabilities on human capital, including youth and young children through appropriate K-12 policies addressing OOSC and students at risk.
2. Continue to be inclusive to address geographic and gender disparities including in the context of equity of learning outcomes.
3. Continue to orient policies and strategies on outcomes to improve learning and skills development for employability and entrepreneurship, in order to serve the key national development objectives for reducing poverty and sharing prosperity.

4. Assess the impact of key policies on equitable quality service delivery for improved learning outcomes and skills development; revise and refocus policies and strategies as required.
5. Consider the need for a greater understanding of lifelong learning in the context of SDG4 and its incorporation in the sector plan.

Chapter 2: Cost and Financing for Equitable, Quality Education Services

2.1 Introduction

The success of the Education 2030 agenda requires sound policies and planning as well as efficient implementation arrangements. It is also clear that the aspirations behind the proposed SDG 4 cannot be realized without a significant and well-targeted increase in financing, particularly in those countries furthest from achieving quality education for all at all levels. It is, therefore, important to increase public spending on education in accordance with country context and aim to adhere to international and regional benchmarks of allocating efficiently at least 4 – 6% of Gross Domestic Product and/or at least 15 – 20% of total public expenditure to education.”

The Government of Maldives has given priority for spending on education over the past several years and has been instrumental in achieving the success which the sector has witnessed. This chapter discusses how education is financed in the Maldives, and how costs are managed.

For the purpose of this chapter, the education sector spending is assumed as spending by the education ministry, schools and departments under the ministry, as the focus of this study is on spending of these institutions. Universities, training expense by offices on their own, other training institutes and various government agencies are not included in the education spending covered in this chapter.

In 2018, the Ministry of Education administered 212 schools in the Maldives. In addition, the government provided funding for the ministry itself, Dhivehi Language Academy, Department of Higher Education, Department of Heritage, National Institute of Education, Maldives Qualifications Authority, and Technical and Vocational Education Training Authority. The schools, departments, and divisions of the ministry are divided into 76 business areas for the purpose of managing the spending on education.

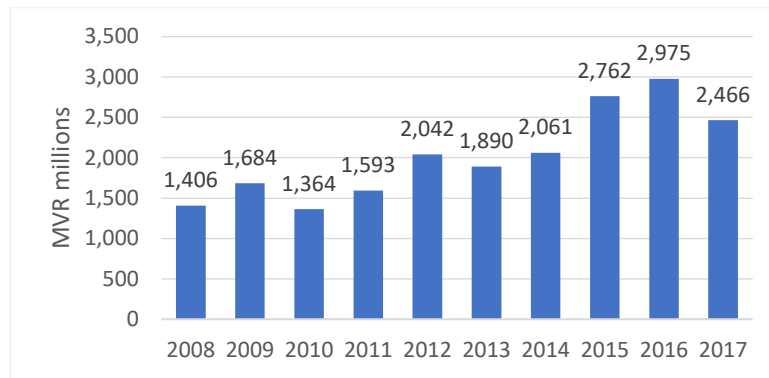
This chapter is organized as follows: The first section will discuss the global or aggregate trends in spending on education. It is followed by an in-depth analysis of education spending, with a particular focus on salary expenditure, non-salary expenditure and infrastructure investments in education. The chapter then discusses the sources of public sector education spending and the unit costs of spending. It then dwells into household spending on education. The chapter also links the evolution of education spending with the learning outcomes as measured by pass percentages in public examinations. The chapter concludes by summarizing the key findings.

All data used in the chapter was obtained in February 2018 and some data updated in February 2019. Data from UNESCO was retrieved from UNESCO education databases in February 2018.

2.2 Aggregate trends in education spending

The spending by the government on education via the Ministry of Education increased substantially in the last 3 years. In 2017, MVR 2,466 million was spent on education by the ministry and this represents lower spending compared to the previous two years (Figure 2.1), as the amount allocated to capital items was reduced. Spending grew from MVR 1,406 million in 2008, depicting a compound annualized growth rate of 6.0% per annum. The recent hike in spending by the ministry is due to increased investments by the government on infrastructure, including the education infrastructure.

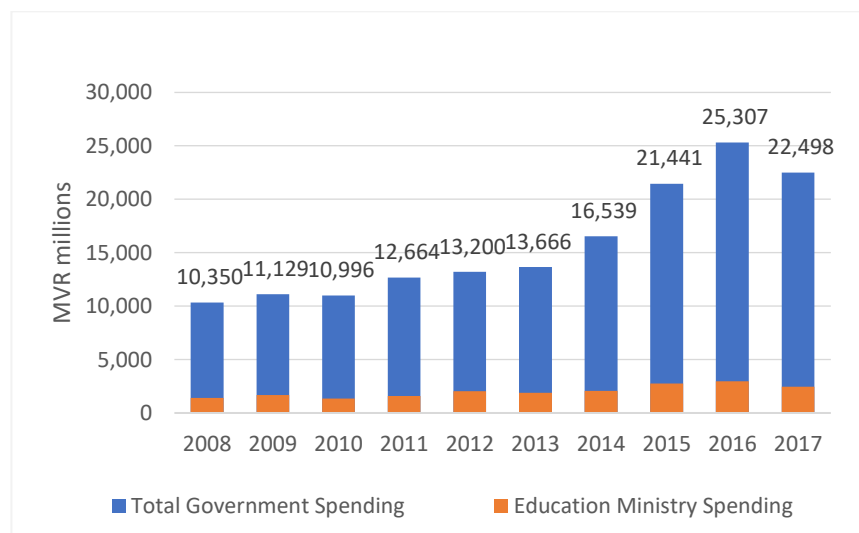
Figure 2.1: Total spending of Ministry of Education



Source: Ministry of Finance and Treasury, 2018. (Updated 2019)

The total government spending also follows a similar trend. Figure 2.2 depicts that the total spending of the government increased in the past 3 years, compared to rest of the years over the past decade, primarily fueled by the recently established modern tax system in the Maldives. The total government spending increased a compound annualized growth rate of 6.8%, while the revenue grew at 11.1% in the same period. The main increment in the past 3 years can be attributed to the infrastructure scale-up that the government undertook.

Figure 2.2: Total government spending

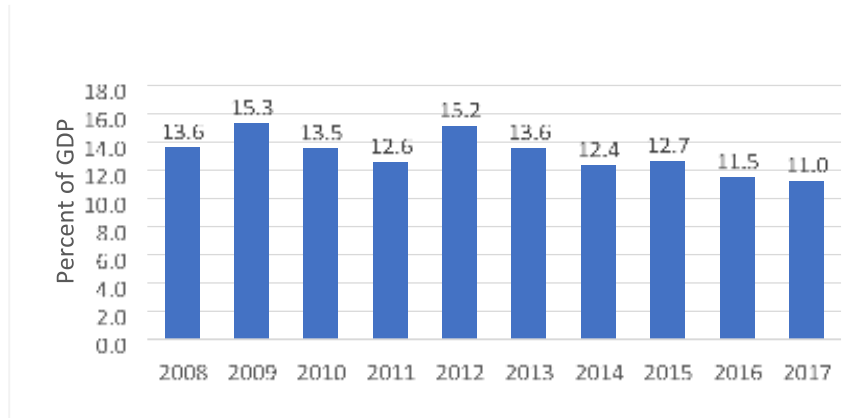


Source: Ministry of Finance and Treasury, 2018. (Updated 2019)

The hike in government spending resulted in a slight decline in the share of the spending of the Ministry of Education in the total government spending. At its peak, the government spent over 15% of the total spending on education in both 2009 and 2012.

In 2015, the percentage share of the Ministry of Education was 12.7%. However, in the following 2 years, the share of the Ministry of Education fell slightly to 11.5% and 11.0% in 2016 and 2017 respectively, as indicated in Figure 2.3.

Figure 2.3: Percent share of spending

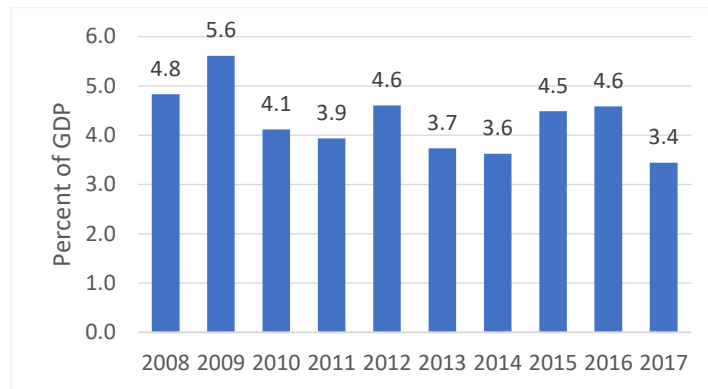


Source: Ministry of Finance and Treasury, 2018. (Updated 2019)

There seems to be a gradual fall in the share of the spending allocated to education, primarily due to the recent focus on infrastructure spending. Loss of budget space may pose a risk in increasing the quality of education when it is crucially needed.

In terms of GDP, the total spending of the Ministry of Education is depicted in Figure 2.4. It remains between 3.6% and 5.6% over the past decade. Education spending remains a significant chunk of public spending. In 2017, the spending of the Ministry as a percent of GDP was 3.4%, registering a lower number compared to 2015 and 2016. The spending in 2015 and 2016 is higher due to infrastructure projects in the education sector.

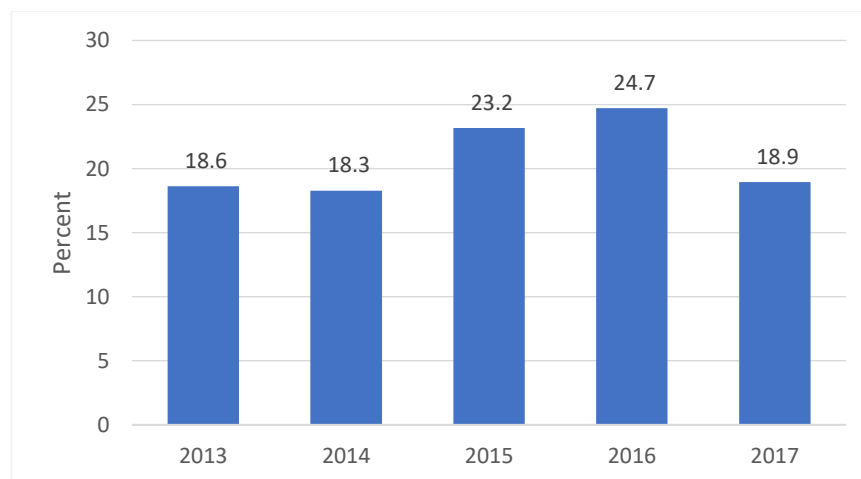
Figure 2.4: Education spending as a percentage of GDP



Source: Ministry of Finance and Treasury, 2018. (Updated 2019)

The GDP represents the total wealth of the country. Expressing education spending and GDP on per capita basis, in general, represent the share of income spent on education by an average person in the Maldives. Over the past 5 years, education expenditure per capita against GDP per capita increased from 18.6% in 2013, to 24.7% in its peak in 2016, and to 18.9% in 2017 (Figure 2.5).

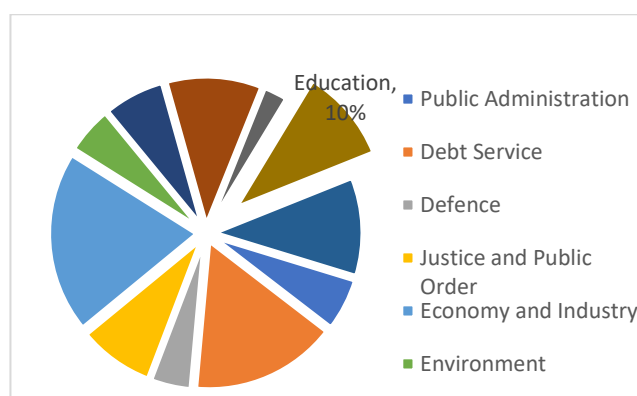
Figure 2.5: Aggregate education expenditure per capita as a share of GDP per capita



Source: Ministry of Finance and Treasury, 2018. (Updated 2019)

The government allocated over 9% of the budget to education in 2018, showing a similar level of priority to the sector as in other years. Although the proportion is suppressed by a vast amount of spending on infrastructure and megaprojects by the government, education is seen to be one of the large areas of spending by the government.

Figure 2.6: Functional classification of budget 2018



Source: Ministry of Finance and Treasury, 2018.

Table 2.1 shows the information in a tabular format. In addition, it also shows the expenditure of the Education Ministry after controlling for inflation or based on the price levels of 2013. It also shows that there is a real increase in spending over the past 5 years. The total expenditure increased from MVR 1,889.9 million in 2013 to MVR 2,578.6 million in 2017 in nominal terms, while at constant prices the spending increased to MVR 2,411.4 million by 2017. Furthermore, the breakdown of education spending shows that spending on capital or development spending increased considerably over the last 5 years, while the growth of recurrent spending was contained.

Table 2.1: Government education expenditure, outturns, 2013-2017

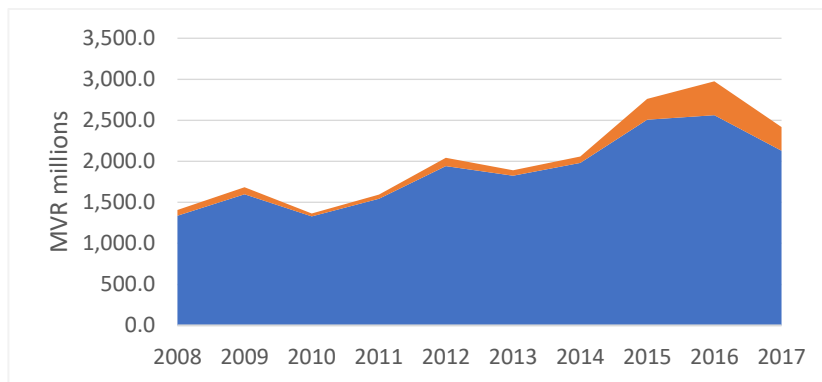
	2013	2014	2015	2016	2017
Total education expenditure					
Current prices (MVR millions)	1,889.9	2,060.5	2,761.7	2,975.3	2,578.6
Constant prices (MVR millions)	1,889.9	2,017.8	2,678.8	2,871.6	2,411.4
Share of GDP (%)	3.7%	3.6%	4.5%	4.6%	3.6%
Share of total public expenditure (%)	13.8%	12.5%	12.9%	11.8%	11.6%
Recurrent expenditure					
Current prices (MVR millions)	1,823.5	1,979.4	2,506.5	2,562.8	2,255.5
Constant prices (MVR millions)	1,823.5	1,938.3	2,431.3	2,473.5	2,109.2
Share of GDP (%)	3.6%	3.5%	4.1%	3.9%	3.1%
Share in total recurrent expenditures (%)	13.3%	12.0%	11.7%	10.1%	10.1%
Capital expenditure					
Current prices (MVR millions)	66.5	81.2	255.1	412.5	323.1
Constant prices (MVR millions)	66.5	79.5	247.5	398.2	302.2

Share of GDP (%)	0.1%	0.1%	0.4%	0.6%	0.5%
Share in total recurrent expenditures (%)	0.5%	0.5%	1.2%	1.6%	1.5%

Source: *Ministry of Finance and Treasury, 2018 and Author's own calculations.*
 Note: 2013 is used as a base year to estimate the spending at constant prices.

As depicted in Figure 2.7, recurrent spending grew at a rate of over 8% per annum between 2008 and 2014. Since 2015, the recurrent spending of the Ministry of Education has in fact been falling. It can be attributed to tighter budget controls applied to recurrent spending by the central government in order to increase the efficiency of spending or to make way for the surge in the development spending. A reverse trend can be seen in the case of capital spending of the Ministry of Education.

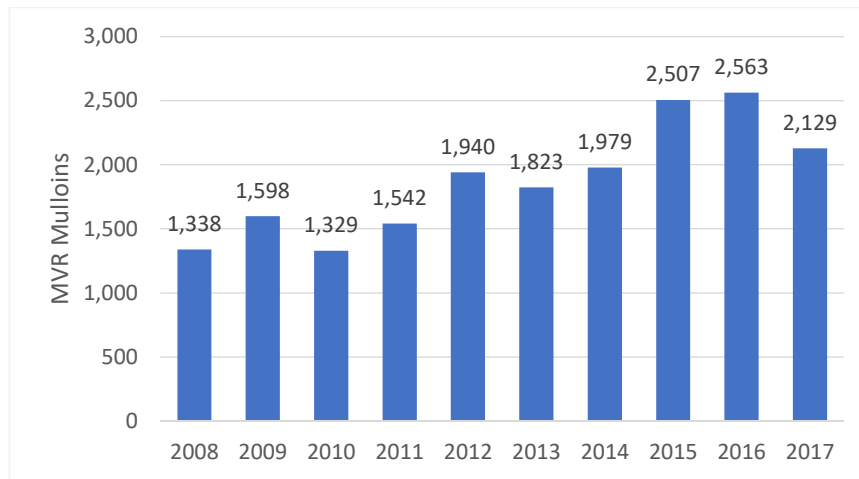
Figure 2.7: Recurrent and capital spending breakdown



Source: *Ministry of Finance and Treasury, 2018. (Updated 2019)*

The recurrent spending on education increased from MVR 1,338 million in 2008 to MVR 2,110 million in 2017 (Figure 2.8). This represents a compound annualized growth rate of 5.4% over this period. As outlined earlier, there are two trends visible from the recurrent expenditure in the past decade. The recurrent expenditure increased significantly in general, in the first 7 years. The latter 2 years depict a consolidation of recurrent spending.

Figure 2.8: Ministry of Education recurrent spending

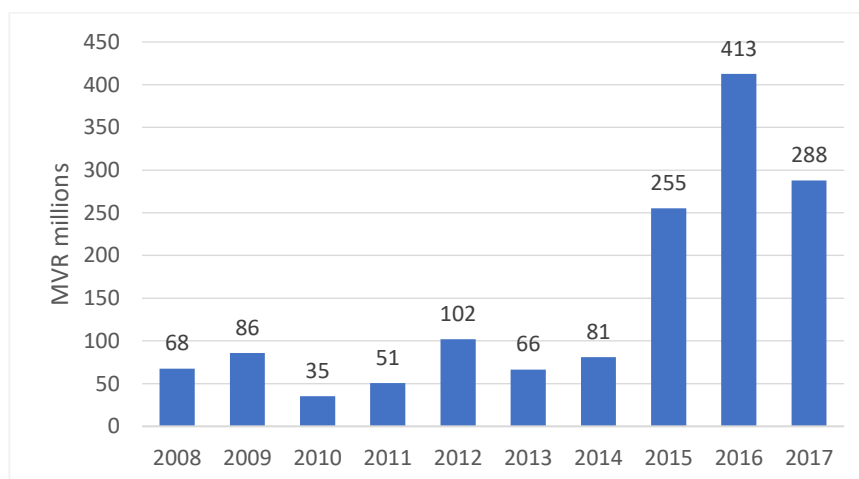


Source: Ministry of Finance and Treasury, 2018. (Updated 2019)

At the same time, spending on capital increased substantially between 2015 and 2017 (Figure 2.8). The capital spending remained at an average of MVR 69.8 million per year between 2008 and 2014. However, between 2015 and 2017, the government spent close to MVR 1 billion on capital expenditure, averaging MVR 330.3 million per year in this period.

Lower recurrent spending in 2017 may pose a risk in the future in terms of higher spending. Majority of the savings are from expenditure such as repairs and maintenance, for which requirement may kick in at a higher cost in future.

Figure 2.9: Ministry of Education capital spending

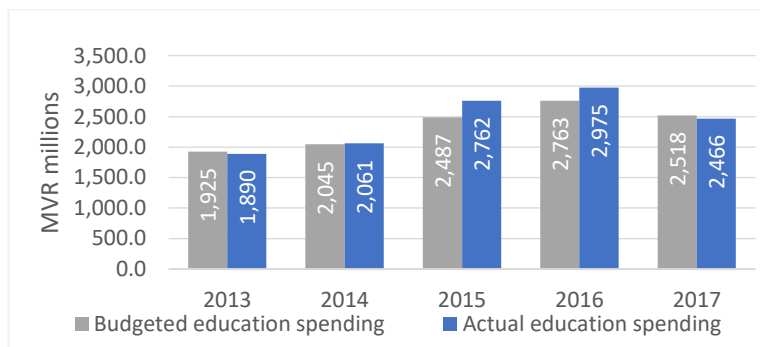


Source: Ministry of Finance and Treasury, 2018. (Updated 2019)

The government has allowed the Ministry of Education to exceed budget allocation in the recent years (Figure 2.9). From the past 10 years, the education spending was under the budget allocation only for 3 years. In 2017, the actual expenditure in education shows a slight underspending. The year 2015 and 2016 show high variances exceeding the budget allocation by 11.0% and 7.7% respectively.

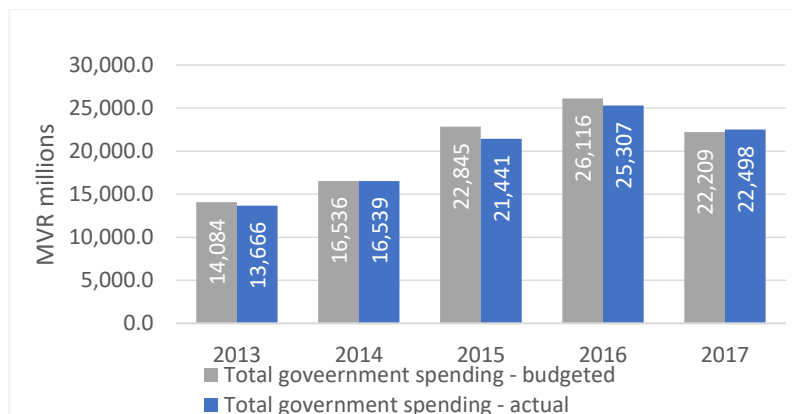
The total spending of the government was kept inside the budget allocation in general (Figure 2.10), and hence, the additional budget allocation has been made from other sectors. This indicates that the government of Maldives has regarded education a priority and allocates resources to the sector as deemed necessary. This may also be an indication of poor planning and inadequate budget controls in the sector.

Figure 2.10: Education spending-budgeted vs outturn



Source: Ministry of Finance and Treasury, 2018

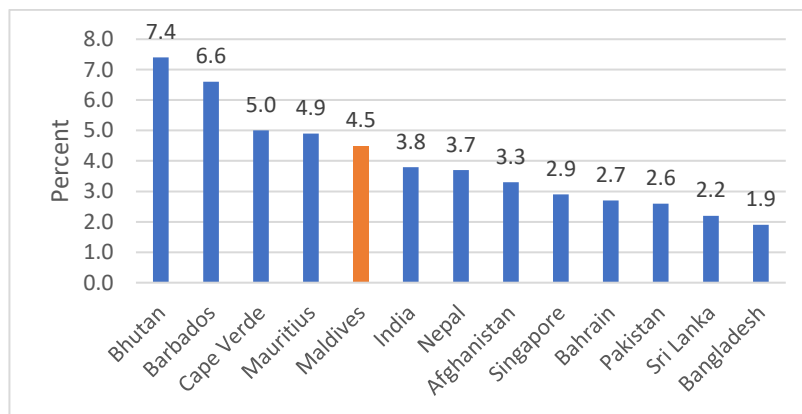
Figure 2.11: Government total spending-budget v outturn



Source: Ministry of Finance and Treasury, 2018

The Small Island Developing States (SIDS) have been known to spend a higher proportion of the budget on education than other developing countries. Maldives ranks at the higher end of the spectrum of education spending expressed as a percent of GDP. Data from the UNESCO Institute of Statistics (UIS) states that Maldives spending on education amounts to 5.2% of GDP in 2015. Data from the same source and using the most recently available data points out that Bhutan, among the South Asian countries, and Barbados among the small island states, spend a higher proportion of GDP on education. Other South Asian countries spend a much lower amount compared to GDP on education. The Maldives ranks lower compared with the Scandinavian countries. Scandinavian countries such as Denmark, Sweden, and Norway spend close 8% of the GDP on education. However, Maldives spend a lower proportion compared to the global average of 4.7%.

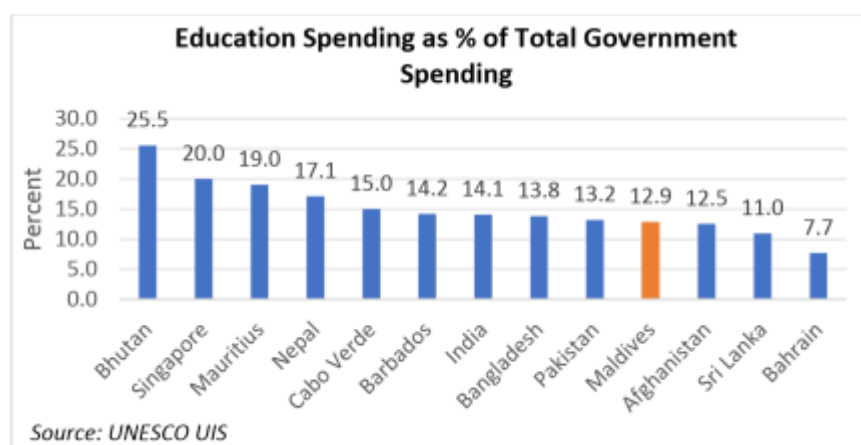
Figure 2.12: Education spending as a percentage of GDP



Source: UNESCO UIS (Maldives data corrected against MoFT data, 2018)

In terms of total budget allocation on education, Maldives still ranks at the lower end when compared against the SIDS and South Asian counterparts. Bhutan allocates more than a fourth of the government spending on education. Singapore also allocates a fifth of the spending on education. Meanwhile, the data from the UNESCO shows that the Maldives allocated 12.9% of the government spending on education. This allocation, in terms of total spending, is below the international standards.

Figure 2.13: Education spending as a percentage of total government spending



Education sector also inhibits both political and economic risks. For example, changes in education policy in recent years has resulted in significant changes to public spending on education and composition within. For example, the current government is spending unprecedented amounts on education infrastructure and inputs, while the previous government focused on improving the system of education. These changes lacked continuity and changes along with the government. Furthermore, it also changes the composition of the budget.

2.3 Detailed analysis of education spending

Table 2.2 shows the spending of the education sector by type of spending. Glancing at the budget breakdown of education spending, historically over 90% of the spending by the Education Ministry on recurrent expenditure as depicted in Table 2.3. However, in 2017 and in recent years, the share of capital spending increased due to the infrastructure scale-up and the share of recurrent spending in the budget of education ministry is now at 87%. Conversely, the share of capital spending is at 13%, although it remained as low as 3% in 2011 and saw a rise over the recent years.

Total spending on education grew at an average growth rate of 6% between 2013 and 2017. However, the spending was boosted in 2015 by a growth of 34% compared to the previous year. Spending in 2017 saw a decline compared to 2016 by 13%, as the government introduced a number of fiscal consolidation measures to curb the total spending of the government.

Table 2.2: Economic classification of public spending on education 2013-2017

	2013	2014	2015	2016	2017
Total spending on education	1,889.9	2,060.5	2,761.7	2,975.3	2,578.6
Recurrent spending	1,823.5	1,979.4	2,506.5	2,562.8	2,255.5
Salaries and wages	1,269.2	1,283.0	1,520.4	1,584.5	1,628.5
Goods and Services	221.6	260.6	342.0	345.5	285.1
Scholarships and training	230.0	251.1	344.5	372.0	156.2
Grants and subsidies	102.7	184.6	299.7	260.8	185.7
Capital spending	66.5	81.2	255.1	412.5	323.1
Capital equipment	6.3	18.8	33.3	25.5	26.1
Infrastructure development	60.2	62.3	221.8	387.1	297.0

Source: Ministry of Finance and Treasury, 2018

Table 2.3: Structure of education spending at 5-year intervals

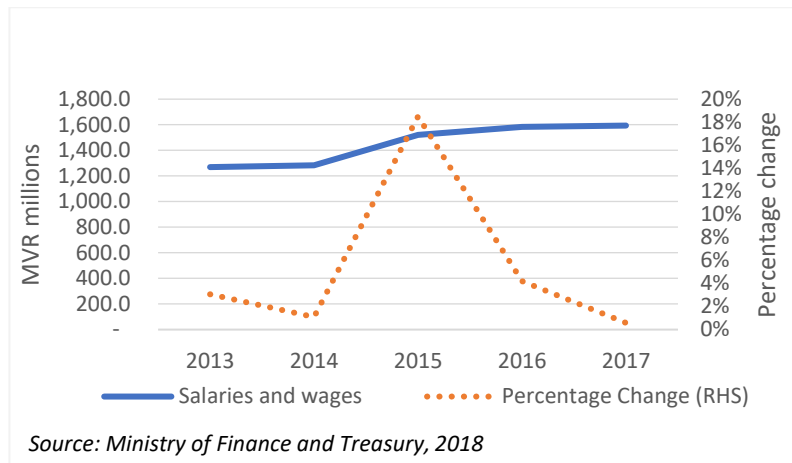
	2008	2013	2017
Total spending on education	100%	100%	100%
Recurrent spending	95%	96%	87%
Salaries and wages	66%	67%	63%
Goods and Services	14%	12%	11%
Scholarships and training	6%	12%	6%
Grants and subsidies	9%	5%	7%
Capital spending	5%	4%	13%
Capital equipment	2%	0%	1%
Infrastructure development	3%	3%	12%

Source: Ministry of Finance and Treasury, 2018

2.3.1 Analysis of salary expenditure

The main component of education spending is on salaries and wages. Spending on salaries and wages accounts for 63% of spending by the sector. The compound annualized growth rate of salaries and wages was 5%. Changes in the personnel expense are sluggish except for 2015, although it grew positively in each of the last 5 years. In 2015, there was a significant increase in spending on salaries and wages – 18%; primarily accounted for an increment in the teachers' salary at the start of the year.

Figure 2.14: Spending on salaries and wages by the education sector



From the data available on the payroll budget of the education sector, there are over 7,500 budgeted posts for teachers in the sector and accounts for 74% of the sector payroll budget. In contrast, there are over 4400 non-teaching posts that accounts for 26% of the payroll budget. There are significant differences in the salary structure between teaching and non-teaching staff of the sector. For teaching staff, 58% of the payroll for teachers are accounted for basic salary and 36% for allowances. For non-teaching staff, 65% is accounted for the basic salary and 28% is accounted for the allowances. This indicates that teachers are paid higher allowances compared to their counterparts in non-teaching posts.

Figure 2.15: Education sector salary composition in 2017-all staff

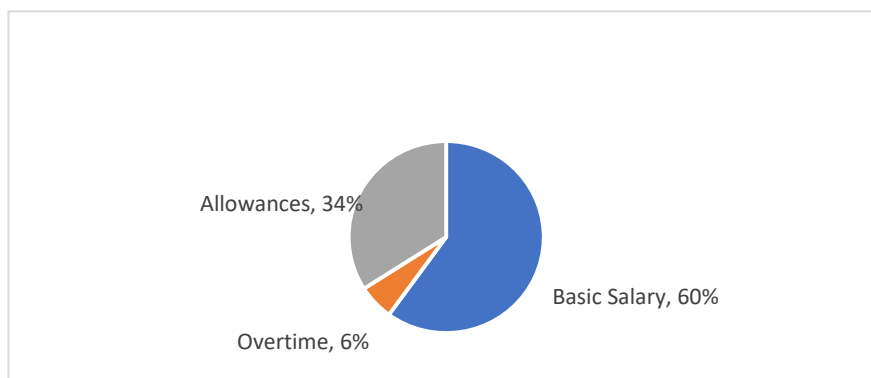


Figure 2.16: Education sector salary composition in 2017-teachers

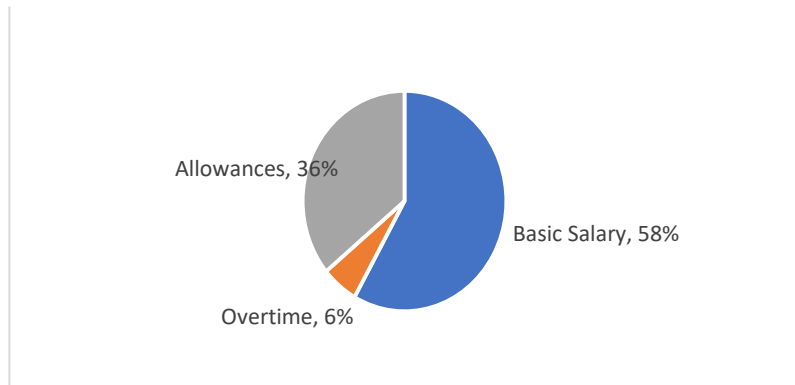


Figure 2.17: Education sector salary composition in 2017 - Non-teachers

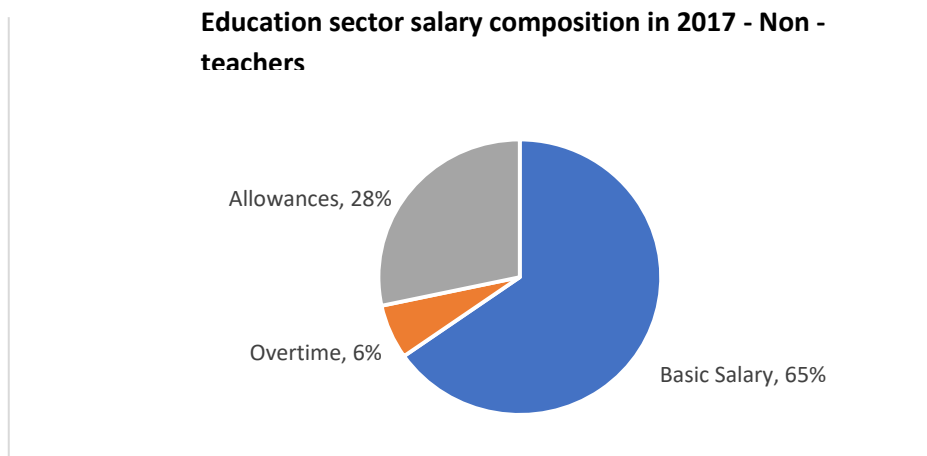


Table 2.4: Budget salary structure of education sector 2017 (MVR millions and % share)

Basic Salary	954.2	60%	685.9	58%	268.3	65%
Overtime	94.8	6%	68.6	6%	26.3	6%
Allowances	541.1	34%	424.7	36%	116.4	28%
Total	1,590.1	100%	1,179.2	100%	411.0	100%

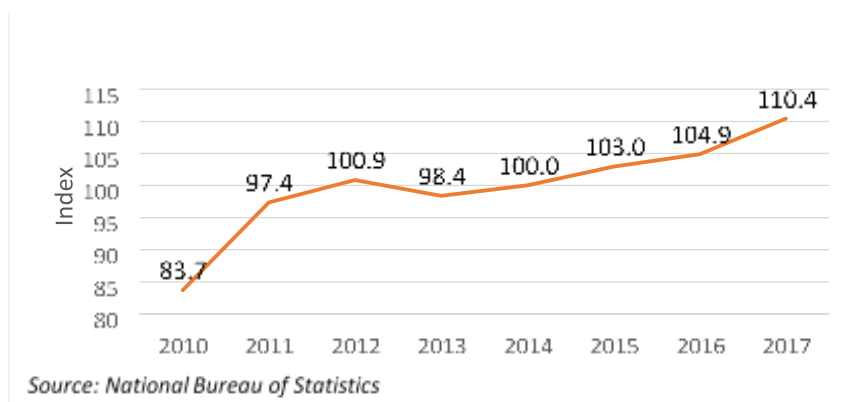
In terms of the payroll expense per staff, teachers take-home pay is MVR 12,975 per month on average, while the non-teaching staff has a take-home pay of 7,112 per month

on average. The difference is contributed by the changes in the salary structure of teachers in 2015 which effectively increased the salaries paid to teachers.

A teacher with a Bachelors' or a Masters' degree earns MVR 17,374 per month in the new pay scale of 2015. This translates to USD 13,521 per annum. This is below the average pay of the teachers in developed countries, but comparable to the small developing countries (OECD, 2018).

The wage index data compiled by the National Bureau of Statistics (NBS) shows that the salary of the education sector was growing in the past 5 years (Figure 2.18). The index measures the take-home pay of the staff who can be compared across back-to-back quarters on a quarterly basis. The wage index shows that take-home pay of the education sector has grown by 12% between 2013 and 2017.

Figure 2.18: Education sector wage index



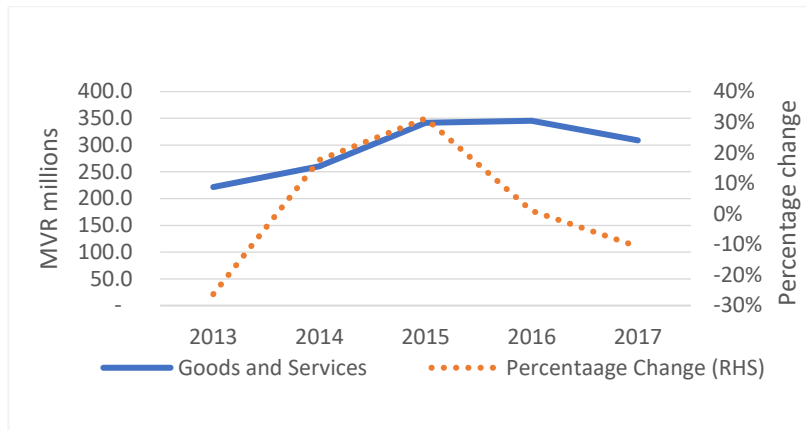
2.3.2 Analysis of non-salary expenditure

This section discusses the details of non-salary spending except for infrastructure spending. The main components of the non-salary spending include spending on goods and services, scholarships, grants and subsidies and capital equipment.

Goods and services mainly consist of spending on operational supplies, operational services, consumables, travels, and repairs and maintenance. The spending on this component was growing in the last 5 years, although the spending in 2017 was reduced. In comparison with the spending on this component in 2013, the compound annualized growth rate stands at 5%. The average spending on goods and services over the last 5

years amounts to MVR 291.0 million. The share of spending on goods and services remained stable between 11% and 13% over the last 5 years.

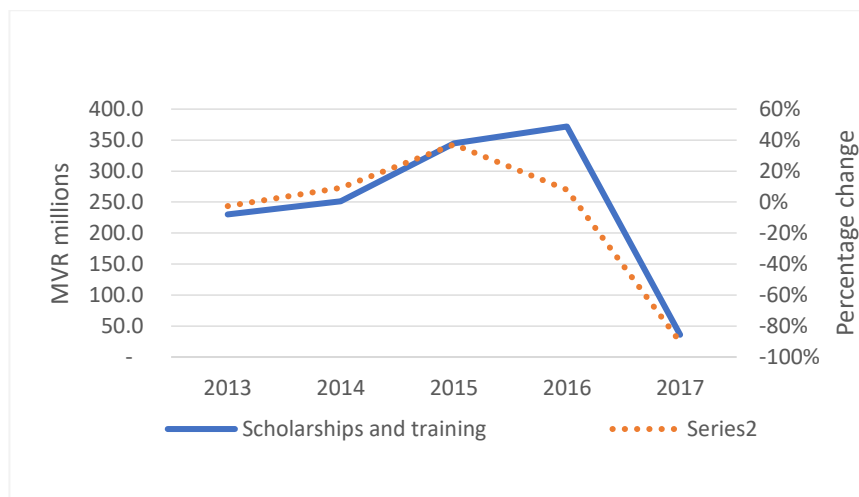
Figure 2.19: Spending on goods and services by the education sector



Sources: Ministry of Finance and Treasury, 2018. (Updated 2019)

The scholarships and training component includes the scholarships given to students under the National Student Loan Scheme (NSLS) and staff training. Spending on scholarships increased until 2016 at an average growth rate of 13%. However, in 2017, the government changed the policy towards the NSLS, whereby the government wanted to effectively change the NSLS to a revolving fund and changed the set-up of the fund. Subsequently, the spending on scholarships via the fund reduced by 58% compared to the previous year. It is likely that spending on scholarships will increase in 2018 after the NSLS setup has been completed.

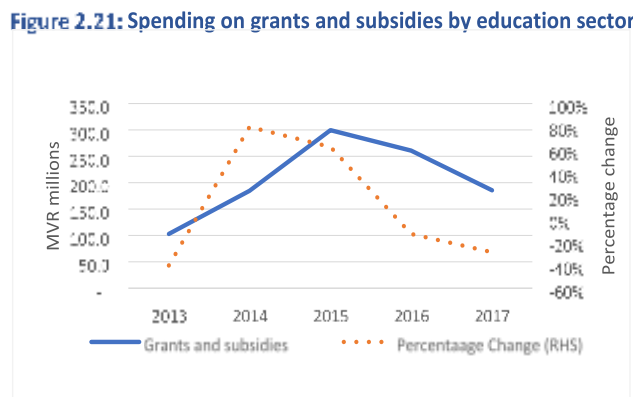
Figure 2.20: Spending on scholarships and training by the education sector



Source: Ministry of Finance and Treasury, 2018. (Updated 2019)

Grants and subsidies mainly represent transfers from the government to students for textbooks and stationery, subsidies to pre-schools, grants for various school associations and grants to fund the prizes for top achievers. There is a steep growth in this component until 2015 and since then there have been policy changes. Subsidies to preschools are internalized to the ministry by bringing in the preschool teachers on the payroll of the ministry. Hence, the spending on subsidy is expected to be reduced significantly in the future and its effect can be seen in 2017. Furthermore, the government provides textbooks and stationery free of cost to all students and pay their examination fees. The school digitalization project was announced for the 2018, hence it will dramatically reduce the budget for subsidies on funding the textbooks. The government spent around 9% of the total education spending on grants and subsidies in 2008. The share of spending on subsidies and grants fell to 5%, although it increased to 7% in 2017.

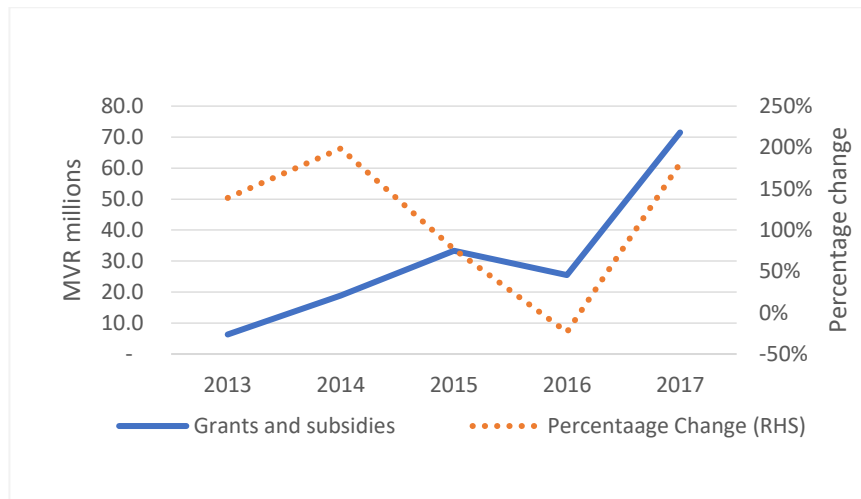
Figure 2.21: Spending on grants and subsidies by education sector



Source: Ministry of Finance and Treasury, 2018. (Updated 2019)

Spending on capital equipment remained around 1% of the total education spending. This component includes the purchase of machinery and equipment (mostly computers, printers, photocopy machines, etc.) to be used at the schools. Investments in equipment heightened since 2014 and remained consistent at that level since.

Figure 2.22: Spending on capital equipment by the education sector

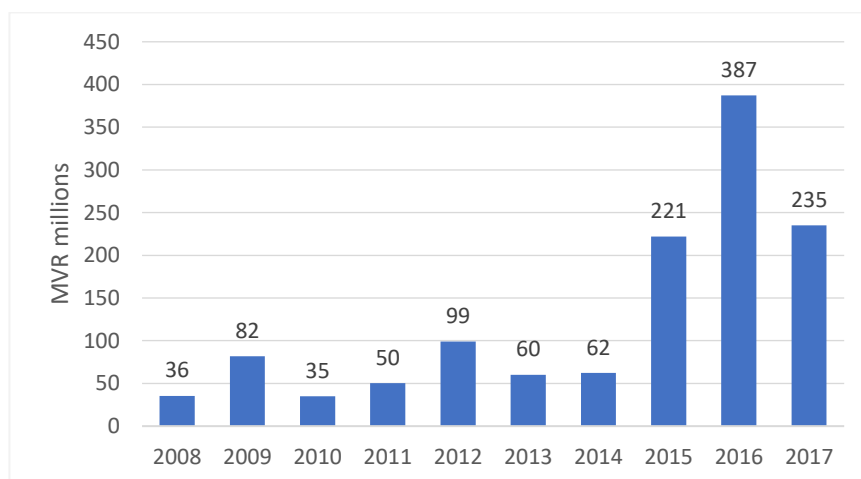


Source: Ministry of Finance and Treasury, 2018. (Updated 2019)

2.3.3 Investment in education infrastructure

The education sector spent MVR 1,026.1 million for infrastructure development of the sector over the last 5 years for 172 projects. Spending on infrastructure increased substantially in 2015 and remained high since (Figure 2.23). In 2015, the government spent MVR 220.9 million on education infrastructure, in contrast to MVR 62.0 million in 2014. The government spent MVR 386.1 million and MVR 296.9 million on education infrastructure in 2016 and 2017 respectively.

Figure 2.23: Public sector investment program



Source: Ministry of Finance and Treasury, 2018. (Updated 2019)

In terms of funding, 90% of the infrastructure spending was funded from the domestic budget for total infrastructure spending between 2013 and 2017. 10% was funded via

grants and a small amount funded by trust funds, such as the Education Development Fund and various other school funds, established in the sector.

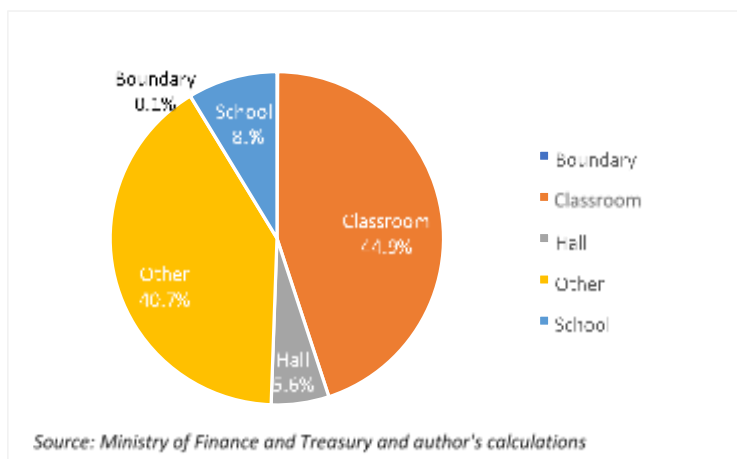
Table 2.5: Education infrastructure spending by funds 2013-2017

	2013	2014	2015	2016	2017	Total
Grants		5.0	17.7	29.8	50.0	102.5
Domestic Budget	58.2	55.3	203.0	357.3	244.9	918.8
Trust Funds	2.0	1.7	0.2	-	2.0	5.9
Grand Total	60.2	62.0	220.9	386.1	296.9	1,026.1

Source: Ministry of Education, 2018

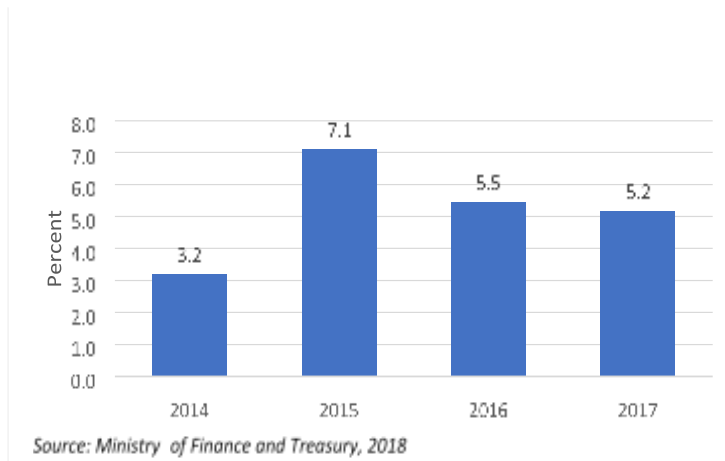
The types of projects include building of classrooms, auditoriums, and halls, building of boundary walls and building of whole schools. Classroom projects represent about 45% of the value of the projects between the years 2013 and 2017, building schools represent around 9% of the value. Other projects include a number of upgrading and enhancement of existing infrastructure.

Figure 2.24: Education infrastructure project types



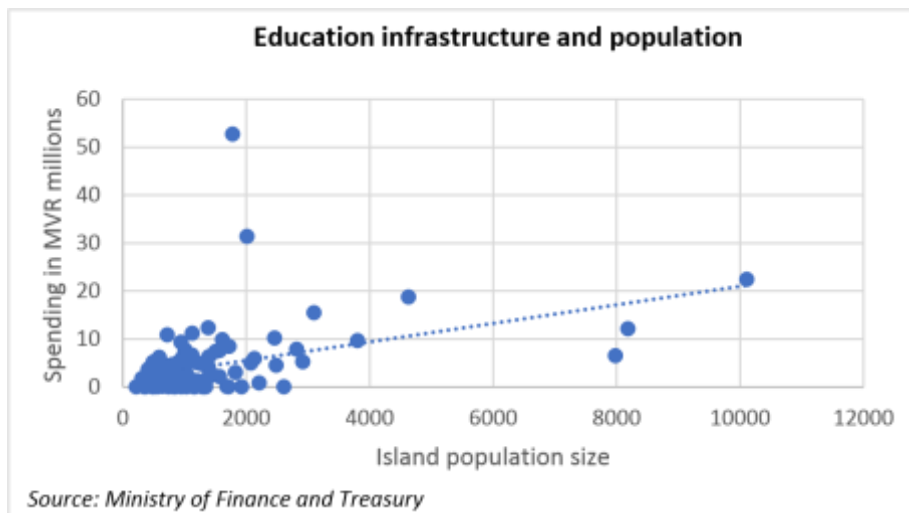
As a percent of the total development budget of the government, education infrastructure projects constitute over 5% of the development spending in the last 2 years. The share peaked in 2015 when it reached 7.1% (Figure 2.25).

Figure 2.25: Education infrastructure spending as a % of total infrastructure spending



Looking at the regional variation of infrastructure spending, a lot of focus was on small islands. Majority of the projects that were carried out are in islands with a population of fewer than 2,000 people and projects also tend to be less than MVR 10 million. This manifests an overarching problem in providing public services in the Maldives where high-cost of infrastructure reaches hundreds of people in general. In fact, 64% of education infrastructure spending over the past 5 years was spent on islands with less than 2,000 people. Excluding Malé, this figure reaches 80%.

Figure 2.26: Education infrastructure and population



2.4 Sources of funding

The funding for the education sector comes from two sources – domestic and foreign. Domestic sources consist of funding from the consolidated revenue fund of the government and various trust funds established in the sector. Foreign sources refer to the cash grants and project grants coming from bilateral and multilateral sources.

An overwhelming majority of the funding for the education sector comes from domestic sources. In 2017, 97.9% of the total spending by the Education Ministry is funded by domestic sources. 2.1% of the funding came from foreign sources.

Almost all of the recurrent spending is funded via domestic sources. Foreign funding contributes to 15.5% of the capital spending in 2017.

Table 2.6: Funding sources of education spending

	2013	2014	2015	2016	2017
Total education expenditure					
Domestic funding (MVR millions)	1,869.9	2,053.0	2,730.8	2,937.6	2,525.7
External Funding (MVR millions)	20.1	7.6	30.9	37.7	52.9
Recurrent expenditure					
Domestic funding (MVR millions)	1,803.4	1,976.8	2,493.3	2,554.9	2,252.6
External Funding (MVR millions)	20.1	2.6	13.2	7.9	2.9
Capital expenditure					
Domestic funding (MVR millions)	66.5	76.2	237.5	382.8	273.1
External Funding (MVR millions)		5.0	17.7	29.8	50.0
Total domestic funding (MVR millions)	1,869.9	2,053.0	2,730.8	2,937.6	2,525.7
Total external funding (MVR millions)	20.1	7.6	30.9	37.7	52.9
Total domestic funding (as a % of GDP)	3.7%	3.6%	4.4%	4.5%	3.5%
Total external funding (as a % of GDP)	0.0%	0.0%	0.1%	0.1%	0.1%

External funding is usually driven by the presence of a large project. During the last 5 years, the “Enhancing Education Development Project” funded by the International Development Association (IDA) of the World Bank drove the pattern of the foreign financing received by the education sector. In 2017, 95% of the total foreign financing can be attributed to this project. Table 2.7 shows the major foreign financing received over

the past 5 years. In addition to IDA, UNIC and UNESCO are among major multilateral donors. Among bilateral donors, India, Japan, Turkey come on top in the past 5 years.

Table 2.7: Foreign funding received 2013-2017

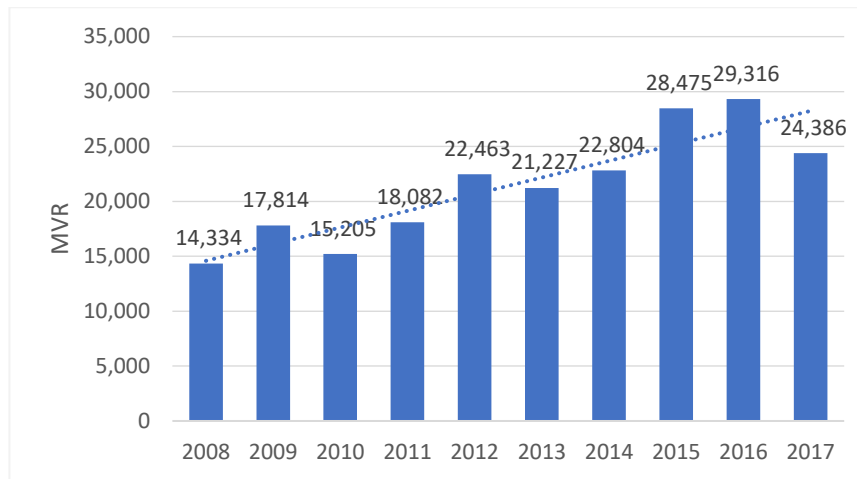
	2013	2014	2015	2016	2017	Total
IDA		5.00	17.67	29.78	50.04	102.49
India	17.06		4.09	-	-	21.15
UNIC	1.65	1.59	5.22	1.84	1.56	11.86
Japan			3.08	1.39	0.01	4.49
Malaysia	0.06	0.02	0.02	3.10	0.90	4.10
Turkey	0.45	0.16	0.39	0.09	0.01	1.10
UNESCO	0.54	0.20	0.04	0.24	0.03	1.06
Others	0.31	0.88	0.37	1.27	0.35	3.18
Total	20.07	7.86	30.87	37.72	52.90	149.43

Source: IDA – International Development Association, UNIC – United Nations Information Centre, UNESCO – United Nations Educational, Scientific and Cultural Organization.

2.5 Public education spending unit costs

The unit cost of public spending on education is on a positive trend over the past 10 years, as depicted in Figure 2.27. In 2008, education spending per student is at MVR 14,334, and by 2017 it rose to MVR 25,838. This depicts a compound annualized growth of 6.1% per year.

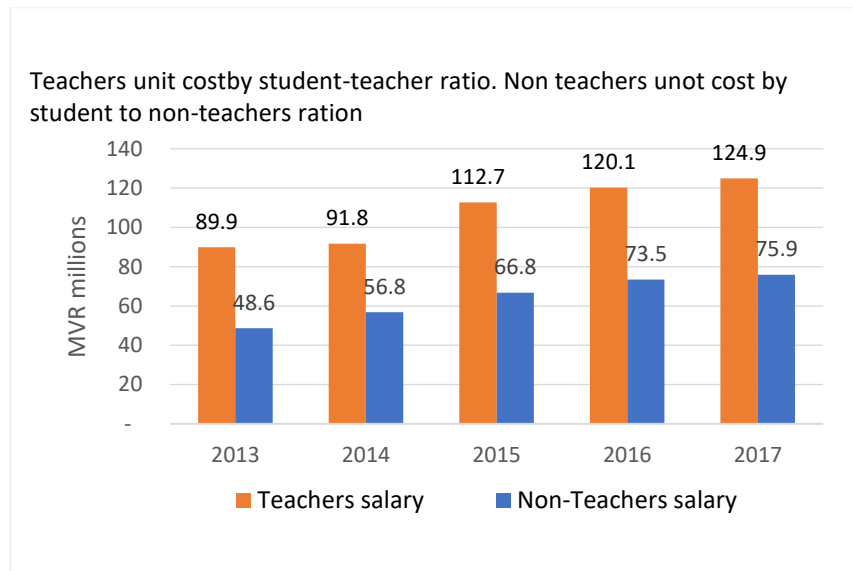
Figure 2.27: Recurrent education spending per student



Source: Ministry of Finance and Treasury, 2018. (Updated 2019)

Further breakdown into the unit costs shows that unit cost of salary has increased gradually over the past 5 years (Figure 2.28). The unit costs of salary are calculated via student to staff group (either teachers or non-teachers) ratio. Student to staff group ratios are used to calculate the unit costs as it looks at the costs keeping the student ratios constant. Since the unit cost of salary expenditure with respect to student-teacher ratio is increasing, it implies that financial resources for salaries are being constrained every year. This means that the salary pot for teachers is growing at a slower pace than the student-teacher ratio. A similar story can be told for non-teachers' salary expenditure in education.

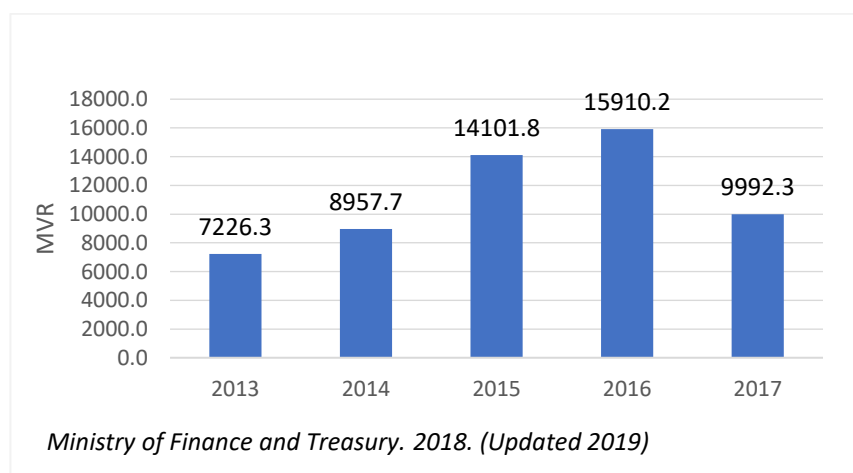
Figure 2.28: Unit salary expenditure



Source: Ministry of Finance and Treasury. 2018. (Updated 2019)

However, financial resources for other recurrent spending kept on increasing over the past 5 years, except for 2017. In the year 2017, the amount of money allocated for education spending fell, as indicated in Figure 2.29. In other years, it either shows that either efficiency of financial resources did not increase in the education sector or the government is allocating more resources to the education sector to achieve the targets.

Figure 2.29: Operational expenses per student



2.6 Household contributions to education

The Household Income and Expenditure Survey (HIES) provides insights into household spending on education. The last HIES was carried out in 2016. However, the data was not published at the time of initial drafting of this ESA. Hence, HIES 2010 is used to analyze household spending.

The HIES 2010 shows that an average household spends 2.6% of the income on education. This translates to a monthly spending average of MVR 17.27 million on education in 2010. Using CPI index to move this number to 2017 and assuming no structural growth in household education spending, this translates to MVR 23.65 million per month in 2017. On a per-student basis, it translates to MVR 2,371 in 2010 and MVR 3,251 in 2017.

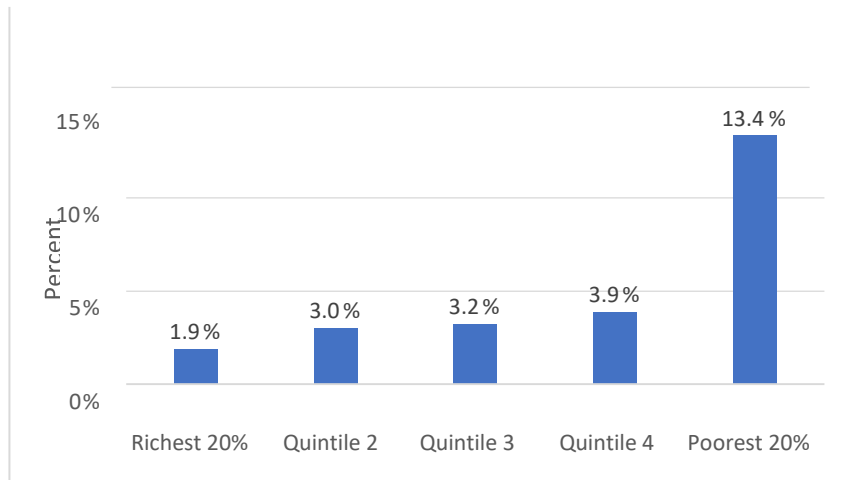
Table 2.8: Household spending on education

Income Group	HH monthly spending on education (MVR) 2010	HH monthly spending on education (MVR) 2017*
Richest 20%	8.30	11.37
Quintile 2	3.97	5.43
Quintile 3	1.87	2.57
Quintile 4	1.29	1.76
Poorest 20%	1.84	2.52
Grand Total	17.27	23.65

Note: 2017 numbers are estimated by the author using CPI indices. It is assumed that no structural changes occurred in the spending pattern of an average household during this period.

Glancing at the breakdown across the income groups, the richest quintile of the population spends around 1.9% of the income on education (Figure 2.30). Meanwhile, the poorest quintile spends 13.4% of the income on education, depicting a significant disparity between the income classes. This may be a reflection of how households try to improve the quality of education on top of the universal free education from the government and additional pressures on income that puts on the poor households.

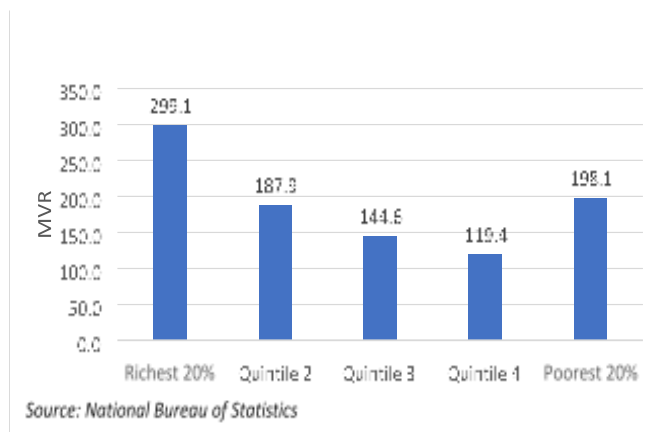
Figure 2.30: Percent of income spent on education



Source: National Bureau of Statistics

In terms of the absolute values, the richest quintile spends MVR 8.3 million on education while the poorest spends about MVR 1.8 million per month. For each household, this translates to MVR 299 per month to the richest quintile of households and MVR 198 for the poorest quintile of households (Figure 2.31).

Figure 2.31: Monthly household income spent on education



Source: National Bureau of Statistics

More than half of the household spending is spent on Secondary Education, as shown in Table 2.9. More than 20% of the household spending on education is spent on Primary

Education. More than 12% of household spending on education is spent on various training and education not defined by level and travel abroad for educational purposes.

Furthermore, plotting the household education spending by income groups show a pattern. The income group differences can be explained by other demographic characteristics of the household, such as the number and the average age of children in the income group. Richer households spend most extensively on Secondary Education, which will primarily be explained by expenditure on private tuitions fees (Table 2.9).

Table 2.9: Household spending by level of education

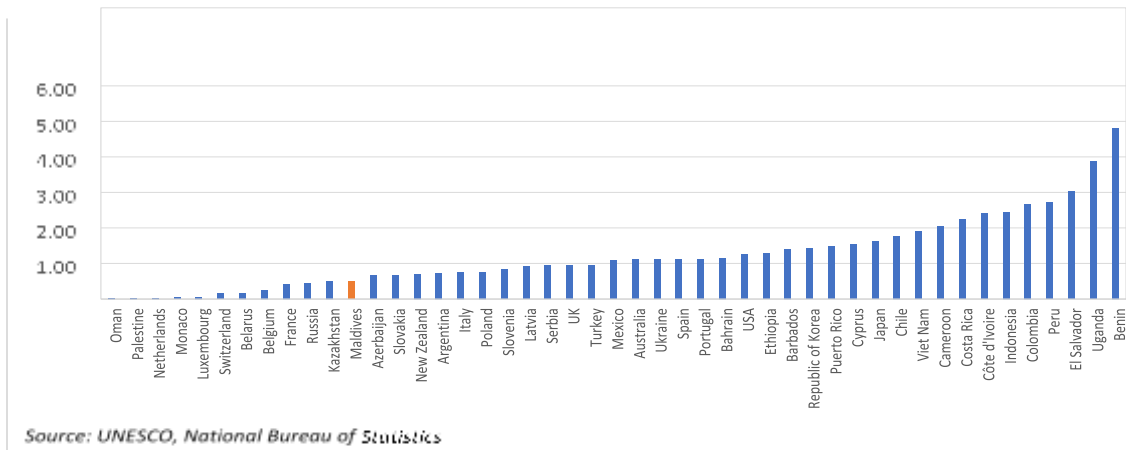
	Richest 20%	Quintile 2	Quintile 3	Quintile 4	Poorest 20%	Grand Total
Travel abroad	472,159	172,390	378,509	16,128	1,134,437	2,173,624
(Educational purpose)						
Pre-primary and primary education	1,356,169	956,528	493,901	350,792	308,381	3,465,771
Secondary education	5,560,738	1,817,759	684,577	603,340	211,353	8,877,767
Post-secondary non-tertiary education	186,670	259,816	37,834	41,373	8,751	534,445
Tertiary education		38,844				38,844
Education not definable by level	726,956	721,353	279,903	273,479	176,353	2,178,044
Grand Total	8,302,692	3,966,690	1,874,725	1,285,113	1,839,275	17,268,496

Using the HIES 2010 data and public spending data, without any adjustments, it shows that 11.2% of the spending of the total education spending is contributed by the households and 88.8% comes from the government.

In comparison with other countries with data available on the UNESCO education database, Maldives household spending on education is lower than in most countries. Maldives' households spend around 0.5% of GDP on education. In comparison with

similar countries, Barbados households spend around 1.4% of GDP and Bahrain households spend 1.2% of GDP (Figure 2.32). However, it has to be noted that estimation of the Maldives is a national estimation while other countries' estimation is taken off the UNESCO UIS and may not be directly comparable. It provides an indicative picture.

Figure 2.32: Household spending on education as a % of GDP



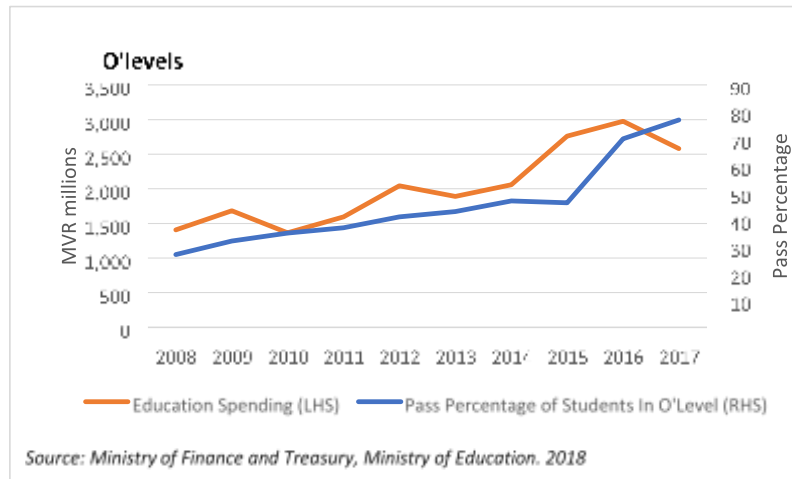
2.7 Relationship with learning outcomes

The purpose of spending on education is to increase the returns to education via future economic growth and productivity. Contributions to future growth can be assessed by how effective the spending is today. As such, the focus is on increasing the pass percentage in the general examinations. As a metric for the outcome, pass percentage of at least 5 or more subjects is used.

The spending on education and outcome as measured by pass percentage in GCE ordinary level examinations show a positive correlation, suggesting that higher spending has been effective.

The two series show a positive correlation of over 83%, as can be seen in Figure 2.33.

Figure 2.33: Relationship with education spending and pass percentage in O' levels



However, the above observation must be read with caution. There is a marked shift in the pass percentage in the year 2016 and 2017, which may be explained via a policy shift. Further, although there is a positive association between education spending and outcomes, a proper study will need to be made to claim that the extent of education spending on the learning outcomes is significant.

2.8 Key findings

1. The Maldives allocates a significant portion of the budget on education. However, from 2015 to 2017 the percentage share of education in the national budget had decreased from 12.7% in 2015 to 11.5% in 2016 and 11.0 % in 2017.
2. In terms of GDP, Maldives spending on education was at 3.6% in 2017. Compared against South Asia and other small island economies, Maldives spends a lower percent of GDP on education. Yet, Maldives is reported to have the highest GDP per capital income of over USD 11,000.
3. The education sector investments have recently seen a hike due to the infrastructure scale-up of the government. Investment in education infrastructure in the past 3 years is unprecedented.
4. The recurrent spending represents about 87% of the total education sector spending, of which 63% of the total education spending is on salaries and wages. The unit costs of operation expenditure have generally increased over the past 5 years, although it

fell in 2017. Unit costs in terms of teachers' salaries (with respect to student-teacher ratios) also gradually increased in the past 5 years. It is possible to obtain efficiency gains in education spending.

5. Between 11% and 13% of the total education spending over the past 5 years is spent on goods and services for the sector. Scholarships and training and grants and subsidies represent about 13% of the total education spending in 2017. A number of fiscal consolidation measures have been taken in recent years and spending in education has also taken a hit in 2017. Furthermore, the breakdown of spending across various levels of education is not readily available at the Ministry or the government. It is important to monitor spending across various levels of education and make changes to the composition of spending according to the changes in demographics, enrolment and other policy goals (such as increasing the quality of education in certain areas).
6. In terms of the payroll expense per staff, teachers take home MVR 12,975 per month on average, while the non-teaching staff takes home 7,112 per month on average. There was a pay increment for teachers in 2015.
7. Education spending in the Maldives is primarily funded domestically. Over 90% of the funding comes from domestic sources. The rest comes from foreign sources for projects that are run mostly with international donors. There are many funds available via multilateral agencies where funding is provided to achieve various social goals. More targeted programs can be developed to tap these funds to further achieve the goals of the sector.
8. Public education unit costs increased to MVR 25,838 depicting a growth of over 6% annually over the past 10 years.
9. Households were estimated to spend over MVR 23 million per month on education in 2017. This translates to 0.5% of GDP. The poorest households spend comparatively more in terms of the share of the income compared to the richer households.
10. Changes in the structure of spending are likely due to the current enhancement programs carried out by the ministry, such as the school digitization project.
11. A public expenditure review for education has not yet been done. Further studies are necessary to evaluate the impact of the education investment on learning outcomes. There is a need to undertake an expenditure review together with a cost-benefit analysis during the next ESP period.

2.9 Recommendations

1. Obtain policy level commitment on the percentage share of the budget over the medium term. It is important to secure the budget allocation towards the education sector to make plans for the medium term.
2. Allocation of expenditure within the ministry can be made more efficient. It is important to identify areas for efficiency gains and for new expenditure proposals.
3. Realign budget breakdown consistent with the goals of the Ministry.
4. Education spending is largely spent via domestic budget funding. It will reduce the burden on the domestic budget if multilateral and bilateral foreign financing can be increased.
5. Changes in the structure of spending are likely due to the current enhancement programs. The possible changes should be considered when making future plans and decisions.
6. A public expenditure review for education has not yet been done. Further studies are necessary to evaluate the impact of the education investment on learning outcomes. There is a need to conduct an expenditure review together with a cost-benefit analysis during the next ESP period.

Chapter 3: Access, Enrolment, K-12 Grades, and Out-of-School Children and Youth

3.1 Access, coverage, completion, kindergarten to 12th grade

Historically, in the Maldives, schools evolved from traditional schools, known as Edhuruge, Makthab or Madhrasa. They were privately owned or operated by island communities and were self-financing. The Edhuruge is a gathering of children in a private home with the objective of teaching them to read the Quran, to read and write Dhivehi, the mother tongue of Maldivians, and to provide some rudiments of arithmetic (Mohamed, A. & Ahmed, M. 2008). Similarly, as in many other countries, education was propagated by religious institutions as a way of spreading and preserving local traditions as well as training clergy (UNESCO 2017). The Makthab was more formal, offered a limited curriculum that included learning to read the Quran, literacy in Dhivehi language and basic arithmetic, while in the Madhrasa the curriculum was broader and included more subjects. These institutions had contributed towards achieving many educational objectives, including a high rate of literacy and the preservation of national culture and tradition (Ministry of Education, 1992). The present system of education is the result of a merger between the traditional system of schooling and a Western style of schooling introduced since 1960 (Mohamed, A. & Ahmed, M. 2008). As the islands of the Maldives are geographically spread over a vast area and separated by sea, providing educational services to the islands is a challenging task. Despite this challenge, the Maldivian education system has achieved progress in terms of access, enrolment, coverage and completion. The Ministry of Education has highlighted that progress has also been made in the pass rates at the GCE O' Level examinations taken after the completion of Lower Secondary school. (Ministry of Education, 2017). This progress needs to be seen in the light of many students at the Lower Secondary school moving to an alternative path and not sitting the GCE O/L examinations.

Alternative technical and vocational pathways including TVET and BTEC options have been introduced to retain students at the school – especially those less academically

inclined. If Higher Secondary education is understood to include those studying in technical and vocational pathways not specifically linked to general education leading to GCE A/L examinations, it may be said that access to Higher Secondary education has increased, especially with the introduction of Technical and Vocational pathways which include TVET and BTEC options. It must, however, be acknowledged that the low transition rate of students in recent years from GCE O/L studies to GCE A/L studies is a matter of concern that needs to be carefully studied. A new scheme of scholarships, tertiary education loan schemes, and a special scheme for skill development were launched over the last five years with the intention to support more than 2500 local students annually to access Higher Education and training in higher education institutes inside and outside the Maldives. Furthermore, to bring improvements in the education system, the Ministry of Education, in collaboration with The Maldives National University, has facilitated, over the last three years, a teacher training programme for 3000 teachers to upgrade themselves with their qualification level (Shiham. A, 2015). The Maldives recognised education as a universal human right as far back as 1932 in the first written constitution and provides 12 years of compulsory schooling and 14 years of free schooling for all students (Nazeer, 2017).

3.2 Enrolment analysis at all levels

Table 3.1 shows the total population of the country at each age category, the number of students within the official age of enrolment at each category and the number of students who are enrolled at each age category.

The Net Enrolment Ratio (NER) for females and males at Pre-Primary are 92.6% and 92.7% respectively. The gender difference at this level is negligible. The NER percentage in the Primary schools is reported at 95.9%, with 95.5% for boys and 96.3% for girls. According to 2018 data from MoE, at the Primary level, there is a slightly higher NER for girls.

In Table 3.1, the Gross Enrolment Ratio (GER) in Lower Secondary level is slightly higher than 100% while the NER percentage is much lower. The NER percentage in Lower Secondary schools is reported at 90.5% with 87.8% for girls and 92.9% for boys. The NER percentage in Higher Secondary is still low, 44.5%, for various reasons: (i) several students leave school at the end of Lower Secondary as some are not eligible to enrol in Higher Secondary education because they do not pass the required number of O' Level exams. Among those who do not qualify for entry into Higher Secondary education, some enrol

in TVET or other Post-Secondary education programmes, (ii) some students join the workforce after grade 10.

Table 3.1: Gross and Net Enrolment Rates at all levels of education

Gross and Net Enrolment Rate (%)
(March 2018)

Level / Age Group	Population			Enrolment (Official age)			Enrolment			Gross Enrolment Ratio			Net Enrolment Ratio		
	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes
Pre-Primary (NUR-UKG): Age 3-5	11314	10543	21857	10491	9762	20253	10582	9929	20411	93.5	93.2	93.4	92.7	92.6	92.7
* Primary level (Gr. 1 - 7) : Age 6 - 12	25,318	23,782	49100	24167	22902	47069	24244	22992	47236	95.8	96.7	96.2	95.5	96.3	95.9
Lower Secondary level (Gr. 8 - 10) : Age 13 - 15	8,279	7,812	16091	7694	6861	14555	8512	7777	16289	102.8	99.6	101.2	92.9	87.8	90.5
Upper Secondary level (Gr. 11 - 12) : Age 16 - 17	4,110	3,891	8001	1598	1962	3560	1769	2208	3977	46.0	56.7	49.7	38.9	50.4	44.5
Primary and L. Secondary level (Gr. 1 - 10) : Age 6 - 15	33597	31594	65191	31861	29763	61624	32756	30769	63525	97.5	97.4	97.4	94.8	94.2	94.5

Source: Ministry of Education, 2018.

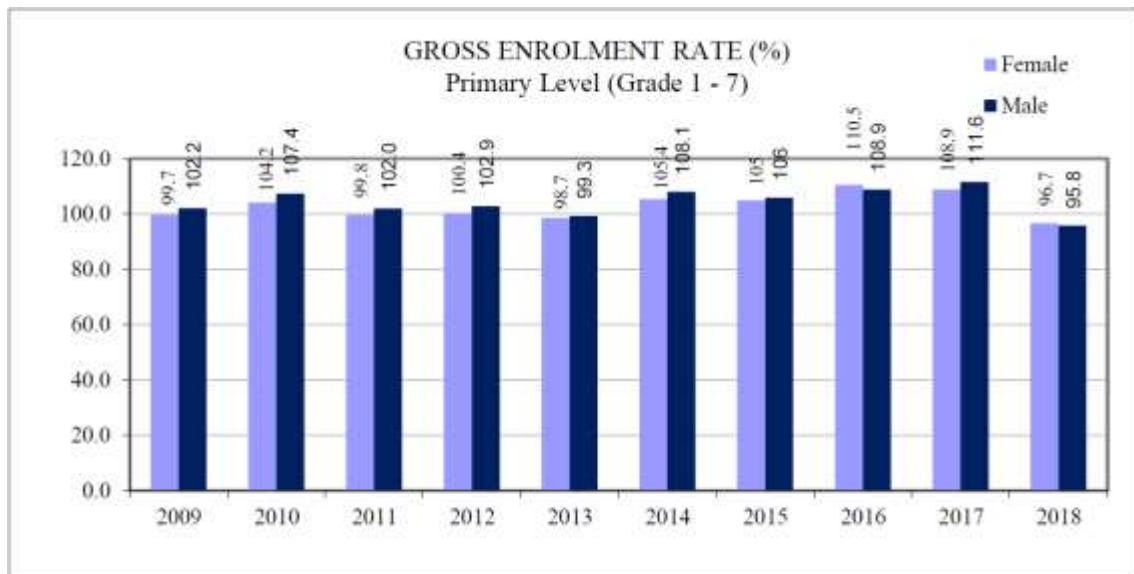
Note: Population – Age- specific Projected Population figures for 2018 were provided by the National Bureau of Statistics.

The gender difference at the Higher Secondary level is significant, with NER of 50.4% for girls and 38.9% for boys. The policy of the Ministry of Education is to ensure that an increased number of adolescents enroll and complete the Higher Secondary education or, are provided alternative pathways of TVET.

3.2.1 Enrolment at Primary level

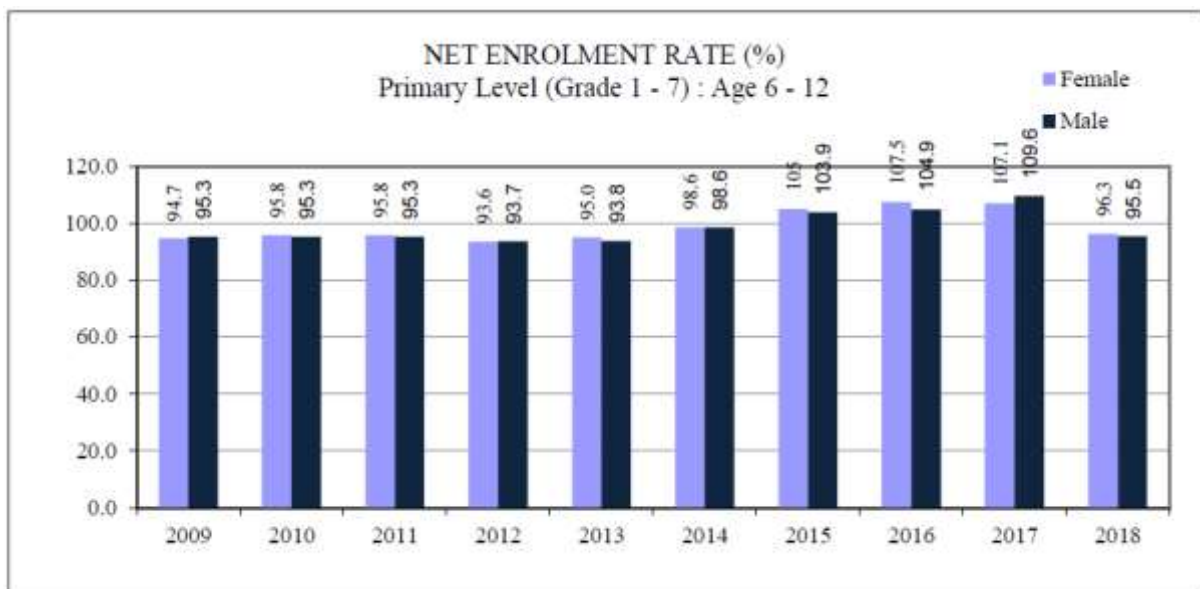
The Maldives achieved seven years of Universal Primary Education over a decade ago. In fact, 10 years of free education has been assured for over a decade. As shown in figure 3.1 Gross Enrolment Ratios (GER) are above 100% from 2014 to 2017. A drop in the Primary GER in 2018 is due to the change of data set used in calculating the ratio. Until 2017, the MoE relied on the census data obtained from the National Bureau of Statistics. In 2018, the MoE obtained age-specific data from the Department of National Registration (DNR) which is deemed more credible, for calculating the enrolment ratios. The NER is shown to be above 100% in some years as a result of lower age based projected population compared to the enrolled population (Figure 3.2).

Figure 3.1: Gross Enrolment (%) Primary Level



Source: Ministry of Education, 2018

Figure 3.2: Net Enrolment (%) Primary Level



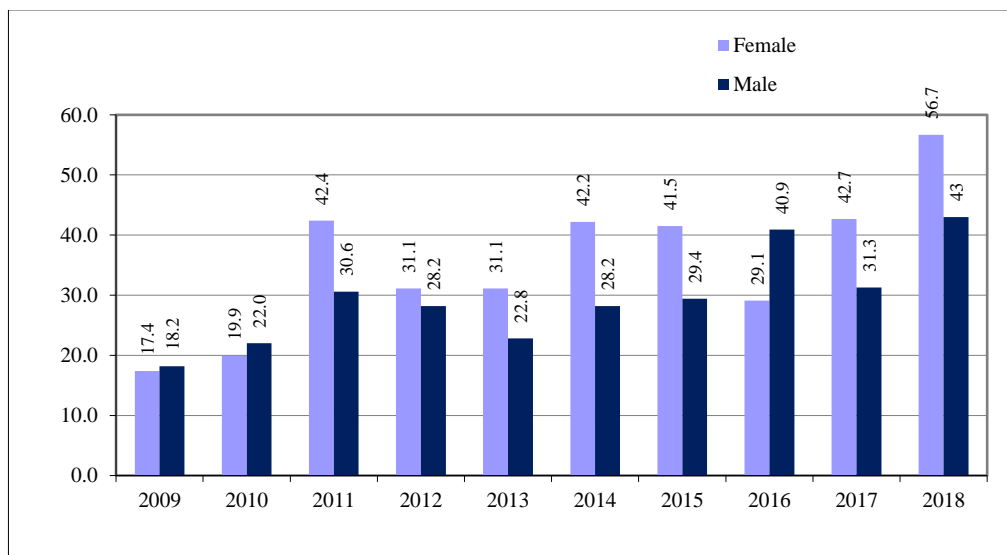
Source: Ministry of Education, 2018

Gender indicator: In both cases of GER and NER, there is no clear pattern shown at the gender parity level (Figure 3.3, Figure 3.4).

3.2.2 Enrolment at Higher Secondary Level

The Gross Enrolment Ratios in Higher Secondary education show that only around 44% of the students in the age group are enrolled in Higher Secondary education or Grades 11 and 12. However, since 2014 there is a slow but increasing trend (Figure 3.3). When examining the gender indicator at the level of Higher Secondary education, it is noted that females outnumber males. This gender discrepancy has been significant since 2013. The low transition rate from Lower to Higher Secondary and the significant gender disparity (which, in recent years, has been more than 10%) need a careful review.

Figure 3.3: Gross Enrolment % higher Secondary



Source: Ministry of Education, 2018

3.2.3 Student Numbers at Government, Private and Community Schools

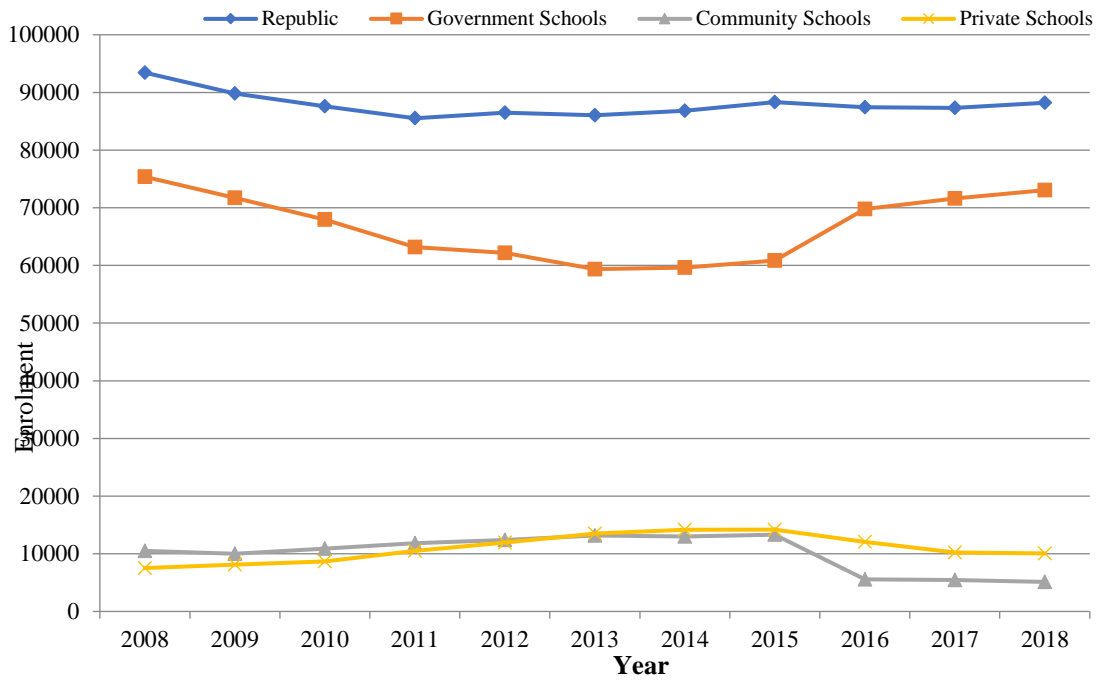
Enrolment in private schools increased during the period 2006-18, as international schools were introduced during this period. Especially in Malé, enrolments in private schools almost tripled from 3053 in 2006 to 9,116 in 2016 but have declined in the last two years to 8015 in 2018. In the atolls, as Table 3.2 shows, the ratio of students in government schools, compared to those in private schools has increased during the period 2013-17. This is because Preschools were incorporated into government schools following the government's decision to offer 14 years of free education. Figure 3.4 shows the trend in student enrolment across the country in government, private and community schools.

Table 3.2: Student Enrolment Numbers at Government, Private and Community Schools 2006-2018 Male' and Atolls

STUDENT ENROLMENT IN MALDIVES (GROSS)													
(2006 - 2018)													
Provision	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Republic													
Total	100495	97131	93433	89841	87575	85521	86510	86068	86799	88341	87420	87295	88211
Government Schools	82354	79051	75377	71729	67979	63186	62168	59368	59630	60841	69803	71588	73035
Community Schools	9691	10383	10528	10006	10909	11826	12403	13176	13020	13309	5562	5478	5121
Private Schools	8450	7697	7528	8106	8687	10509	11939	13524	14149	14191	12055	10229	10055
Male'													
Total	29623	29777	27007	25876	25565	24520	26583	27191	28365	30361	31442	31195	32170
Government Schools	20038	20164	18626	17917	16285	15154	15770	15558	16689	18405	18483	19172	20618
Community Schools	6532	7270	6356	5800	6383	6389	6275	5573	4792	4941	3843	3889	3537
Private Schools	3053	2343	2025	2159	2897	2977	4538	6060	6884	7015	9116	8134	8015
Atolls													
Total	70872	67354	66426	63965	62010	61001	59927	58877	58434	57980	55978	56100	56041
Government Schools	62316	58887	56751	53812	51694	48032	46398	43810	42941	42436	51320	52416	52417
Community Schools	3159	3113	4172	4206	4526	5437	6128	7603	8228	8368	1719	1589	1584
Private Schools	5397	5354	5503	5947	5790	7532	7401	7464	7265	7176	2939	2095	2040

Source: Ministry of Education, 2018

Figure 3.4: Student Enrolment Trends at Government, Private and Community Schools 2008-2018



Note : 135 community schools were converted to government schools in 2005 due to an educational policy change

Source: Ministry of Education, 2018

3.2.4 Early Childhood Education Provision

Early childhood education is available free of charge in all atolls. Early childhood education is provided in all the inhabited islands of the Maldives as shown in Table 3.3. The government is implementing a policy of equal opportunity for early childhood education by supporting the opening of kindergartens in the atolls although providing facilities on islands with student populations lower than 20 is a tangible challenge. In 2018, the Net Enrolment Rate in Pre-Primary education was at 92.7%.

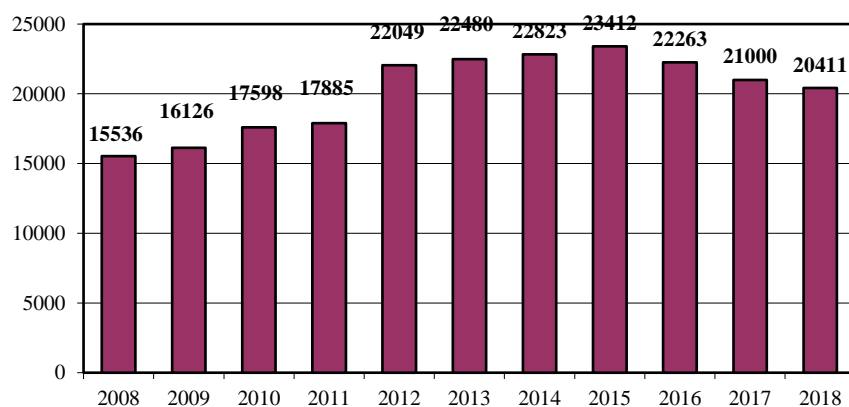
Table 3.4 shows the total number of students in Nursery, Lower Kindergarten (LKG) and Upper Kindergarten (UKG) in 2018. There were 10,582 male students and 9,829 female students enrolled in Pre-Primary education. As mentioned above, female enrolment is a little lower than male enrolment.

Table 3.3: Early Childhood Provision Coverage in the Maldives in 2018

Name of Atoll	Nurs.		LKG		UKG	
	M	F	M	F	M	F
Haa Alifu	92	99	171	142	179	143
Haa Dhaalu	183	178	250	261	286	235
Shaviyani	41	45	166	134	164	129
Noonu	84	82	135	123	133	132
Raa	198	184	196	181	192	188
Baa	78	89	103	110	113	95
Lhaviyani	39	50	98	99	99	88
Kaafu	76	70	141	125	135	136
Alifu Alifu	57	41	82	70	102	84
Alifu Dhaalu	82	81	106	88	111	112
Vaavu	7	2	22	10	20	11
Meemu	28	31	56	58	54	47
Faafu	27	27	78	58	70	64
Dhaalu	27	36	58	57	81	70
Thaa	67	62	117	103	128	114
Laamu	18	25	159	118	153	148
Gaafu Alifu	44	39	100	76	91	97
Gaafu Dhaalu	32	23	126	98	154	122
Gnaviyani	87	76	106	103	104	112
Seenu	186	195	197	218	238	194
Atoll Total	1453	1435	2467	2232	2607	2321
Male'	1306	1238	1362	1317	1387	1286
TOTAL	2759	2673	3829	3549	3994	3607

Source: Ministry of Education, 2018

Figure 3.5: Enrolment of Pre-Primary (Nursery, LKG, UKG) 2008-2018



Source: Ministry of Education, 2018

Table 3.4: Enrolment trends in Pre-primary, by provider 2018

Institution Provider	Age	Nursery			LKG			UKG			Total		
		Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes
All Schools	< 3												
	3	2629	2532	5161	55	68	123	21	27	48	2705	2627	5332
	4	130	141	271	3762	3456	7218	80	80	160	3972	3677	7649
	5				11	24	35	3803	3434	7237	3814	3458	7272
	6				1	1	2	90	64	154	91	65	156
	7								2	2		2	2
Total		2759	2673	5432	3829	3549	7378	3994	3607	7601	10582	9829	20411
Institution Provider	Age	Nursery			LKG			UKG			Total		
		Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes
Government	< 3												
	3				2	1	3				2	1	3
	4				2450	2197	4647	3	2	5	2453	2199	4652
	5					1	1	2621	2354		2621	2355	4976
	6					1	1	2	1	3	2	2	4
	7												
Total					2452	2200	4652	2626	2357	8	5078	4557	9635
Institution Provider	Age	Nursery			LKG			UKG			Total		
		Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes
Community & Private	< 3												
	3	2629	2532	5161	53	67	120	21	27	48	2703	2626	5329
	4	130	141	271	1312	1259	2571	77	78	155	1519	1478	2997
	5				11	23	34	1182	1080	2262	1193	1103	2296
	6				1		1	88	63	151	89	63	152
	7								2	2		2	2
Total		2759	2673	5432	1377	1349	2726	1368	1250	2618	5504	5272	10776

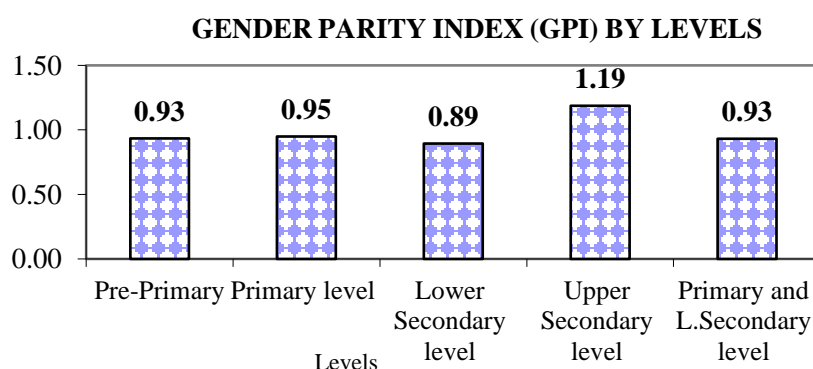
Source: Ministry of Education, 2018

3.3 Access to education and equitable Access

3.3.1 Gender disparities in enrolments (all levels)

The Maldives has long achieved gender parity in education. Anecdotal evidence indicates that a few parents prefer to home school their female children when they are at Pre-Primary age. Homeschooling is not within the formal education system yet, and hence this is an area which needs to be explored in order to provide access to all children, including those with disabilities, and to ensure completion rates. Figure 3.6 shows the gender disparity index by levels. There is a clear trend of fewer female children being enrolled than male children in the Pre-Primary to Lower Secondary education. This trend is reversed at the Higher Secondary education level. When students continue from Lower to Higher Secondary education only about 38% of the male students are enrolled. This issue is addressed in detail in the Higher Education Master Plan. As found in most developing countries (Figure 3.7), there is a significant disparity between male and female enrolments of students above age 16 in the Upper Secondary education. Fewer male students are enrolled compared to female students in this age category. To ensure continuity of education for both boys and girls, further studies need to be carried out to identify the possible reasons for the existence of the current situation.

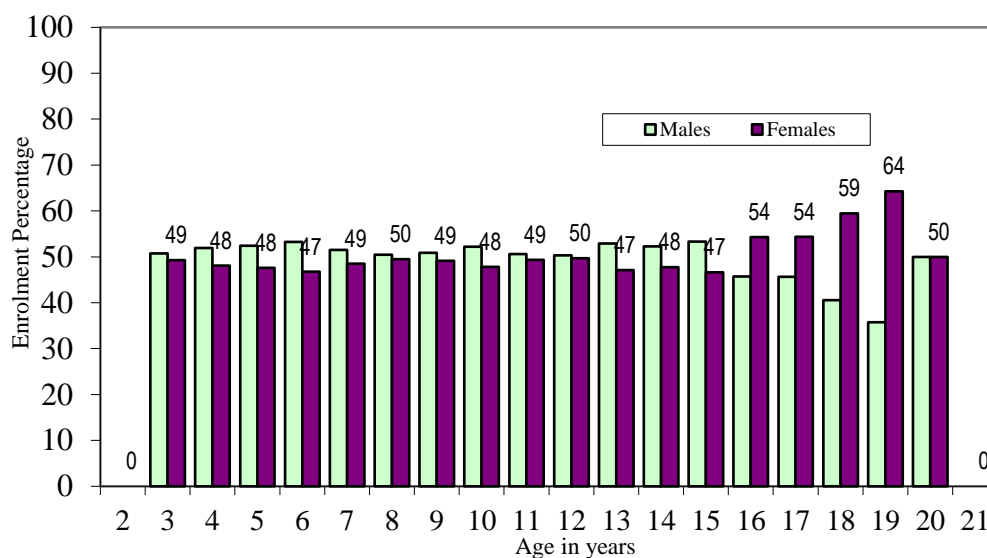
Figure 3.6: Gender Disparities in Education



Source: Ministry of Education, 2018

Note: The closer the GPI is to 0, the greater is the gender disparity in favour of males. A GPI of 1.0 on the other hand, indicates gender parity. A GPI greater than 1.0 indicates a gender disparity in favour of females, meaning more females than males attend school.

Figure 3.7: Age-specific Enrolment by Gender, 2018



Source: Ministry of Education, 2018

3.3.2 Coverage: The impact of socio-economic and geographical disparities in enrolments

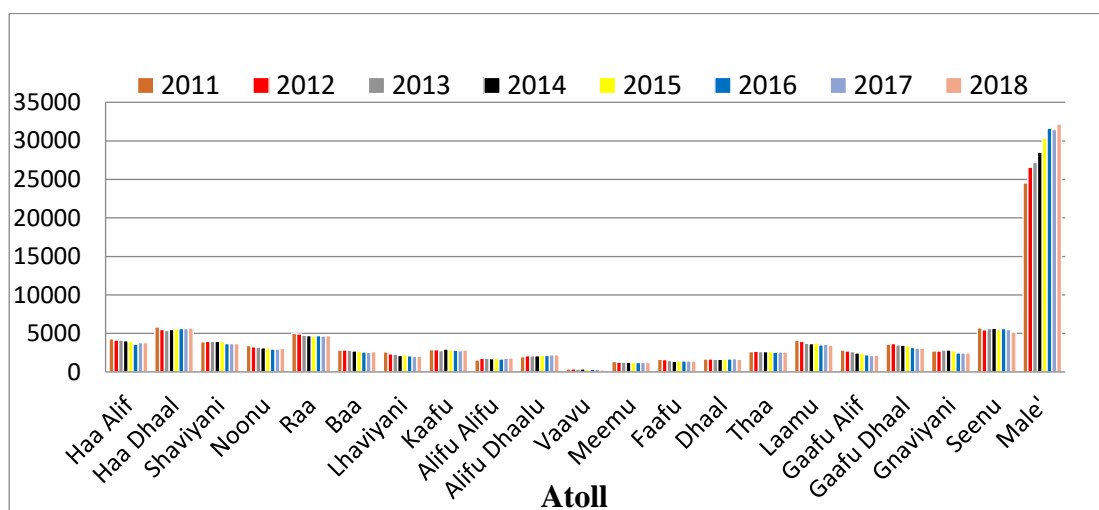
Table 3.5 shows the total number of students enrolled each year in different atolls. There was a decline in student enrolment in almost all the atolls except Alif Alif, Alif Dhaalu and Malé. Gaafu Alif Atoll has the biggest decline in the enrolment rate (-24.37%) and Malé has the highest increase (25.99%). There are population movements especially to Malé for better opportunities in education, health and other social services. By 2018, an increase in student enrolment (of 2.17%) in Malé may be a sign that this movement from islands to Malé is still on the rise. One aspect to be further examined is the effect of the creation of alternative pathways at the Secondary level such as TVET and BTEC and the effect of online as well as block mode programmes for Higher Education. With Malé being the capital and having more facilities and services, a huge proportion of the students are saturated in schools in Malé as shown in Figure 3.8. Hence, the government has taken additional measures to decentralize education by providing resources and facilities in all the atolls.

Table 3.5: Changes in enrolment percentage in each atoll in 2017 and 2018

Name of Atoll	2017		2018	
	Total	change *	Total	change *
Haa Alifu	3,783	-11.88%	3,797	0.37%
Haa Dhaalu	5,646	-3.09%	5,696	0.89%
Shaviyani	3,698	-6.24%	3,663	-0.95%
Noonu	2,977	-13.00%	3,064	2.92%
Raa	4,690	-6.18%	4,698	0.17%
Baa	2,569	-9.25%	2,637	2.65%
Lhaviyani	2,037	-21.59%	2,077	1.96%
Kaafu	2,784	-3.90%	2,828	1.58%
Alifu Alifu	1,771	14.55%	1,801	1.69%
Alifu Dhaalu	2,224	12.04%	2,226	0.09%
Vaavu	342	-9.52%	283	-17.25%
Meemu	1,229	-9.37%	1,229	0.00%
Faafu	1,422	-12.38%	1,444	1.55%
Dhaalu	1,727	1.71%	1,625	-5.91%
Thaa	2,581	-2.57%	2,582	0.04%
Laamu	3,597	-12.40%	3,467	-3.61%
Gaafu Alifu	2,138	-24.37%	2,191	2.48%
Gaafu Dhaalu	3,101	-14.76%	3,086	-0.48%
Gnaviyani	2,460	-10.84%	2,464	0.16%
Seenu	5,513	-13.11%	5,183	-5.99%
Malé	31,487	25.99%	32,170	2.17%
TOTAL	87,776	0.23%	88,211	1.73%

Source: Ministry of Education, 2018

Figure 3.8: Total number of students enrolled in each atoll from 2011-2018



Source: Ministry of Education, 2018

The distribution of schools or coverage of education facilities in the outer islands are shown in table 3.6. As the islands of the Maldives are dispersed across the country with a vast area of sea as a barrier, providing school facilities and distributing these resources equitably is challenging. For instance, consider for the islands of Vaavu Atoll. In spite of their small population, the government has to build and support three schools with small enrolments on three different islands of the atoll since the islands are separated by the sea. Table 3.7 shows the number of trained and untrained teachers in Malé and in the outer islands who are either locals or expatriates. As shown in the table, student-teacher ratio in Malé is 12:1 while in the atolls, it is 8:1 indicating that there are fewer numbers of students in the outer islands that are being catered to by a teacher. A point to be also noted is that, proportionally, the number of expatriate teachers and untrained teachers are higher in the atolls.

Table 3.6: Number of schools and enrolment in Malé and atolls by provision, 2018

Name of Atoll	GOVERNMENT				COMMUNITY				PRIVATE				TOTAL			
	Schools	Male	Female	Total	Schools	Male	Female	Total	Schools	Male	Female	Total	Schools	Male	Female	Total
Haa Alifu	14	1894	1703	3597	3	64	66	130	2	28	33	61	19	1986	1802	3788
Haa Dhaalu	15	2737	2570	5307	7	164	157	321	3	19	21	40	25	2920	2748	5668
Shaviyani	14	1861	1713	3574	4	41	45	86					18	1902	1758	3660
Noonu	13	1477	1417	2894	7	70	69	139	1	14	13	27	21	1561	1499	3060
Raa	16	2238	2074	4312	6	127	120	247	6	71	64	135	28	2436	2258	4694
Baa	12	1284	1179	2463	4	37	43	80	7	41	46	87	23	1362	1268	2630
Lhaviyani	4	950	991	1941					2	65	67	132	6	1015	1058	2073
Kaafu	9	1387	1284	2671	2	31	30	61	4	45	40	85	15	1463	1354	2817
Alifu Alifu	8	894	809	1703	1	2	6	8	4	55	35	90	13	951	850	1801
Alifu Dhaalu	10	1085	969	2054	7	82	81	163					17	1167	1050	2217
Vaavu	3	158	116	274					1	7	2	9	4	165	118	283
Meemu	8	612	558	1170	3	28	31	59					11	640	589	1229
Faafu	5	701	689	1390	1	9	11	20	2	18	16	34	8	728	716	1444
Dhaalu	6	756	803	1559	2	27	36	63					8	783	839	1622
Thaa	13	1257	1195	2452	6	67	62	129					19	1324	1257	2581
Laamu	13	1796	1623	3419	2	18	25	43					15	1814	1648	3462
Gaafu Alifu	9	1109	999	2108	3	17	18	35	2	27	21	48	14	1153	1038	2191
Gaafu Dhaalu	11	1575	1386	2961					2	69	39	108	13	1644	1425	3069
Gnaviyani	4	1050	1051	2101					3	169	154	323	7	1219	1205	2424
Seenu	11	2172	2109	4281					10	421	440	861	21	2593	2549	5142
Malé	14	10432	10074	20506	3	1767	1770	3537	20	4082	3933	8015	37	16281	15777	32058
Atolls Total	198	26993	25238	52231	58	784	800	1584	49	1049	991	2040	305	28826	27029	55855
TOTAL	212	37425	35312	72737	61	2551	2570	5121	69	5131	4924	10055	342	45107	42806	87913

Source: Ministry of Education, 2018

Note: Special Classes are not included in their enrolments

Table 3.7: Teachers Serving at Different Levels, by sex and Job Categories, 2018

	Trained				Trained Total	Untrained				Untrained Total	Total	Temporary		Temporary Untrained Total	Local			Expat			Total No. of Teachers	Total No. of Students	Student Teacher Ratio
	Local		Expat			Local																	
	M	F	M	F		M	F	M	F			Both Sex	M		F	Both Sex							
Republic																							
Pre-Primary	-	1,158	27	3	1,188	-	151	-	-	151	1,339	-	434	434	-	1,309	1,309	27	3	30	1,339	20,411	15
Primary (Grades 1 - 7)	830	2,670	312	407	4,219	109	254	-	-	363	4,582	207	325	532	939	2,924	3,863	312	407	719	4,582	47,236	10
Lower Secondary (Grades 8 - 10)	547	1,154	787	442	2,930	2	52	-	-	54	2,984	161	197	358	549	1,206	1,755	787	442	1,229	2,984	16,289	5
Higher Secondary (Grades 11 - 12)	134	216	184	140	674	1	6	-	-	7	681	24	39	63	135	222	357	184	140	324	681	3,977	6
Subtotals by Sex	1,511	5,198	1,310	992	9,011	112	463	-	-	575	9,586	392	995	1,387	1,623	5,661	7,284	1,310	992	2,302	9,586	87,913	9
Atoll																							
Pre-Primary	-	590	-	3	593	-	151	-	-	151	744	-	399	399	-	741	741	-	3	3	744	12,515	17
Primary (Grades 1 - 7)	755	1,775	255	249	3,034	100	224	-	-	324	3,358	196	295	491	855	1,999	2,854	155	260	415	3,269	31,018	9
Lower Secondary (Grades 8 - 10)	473	793	725	264	2,255	2	51	-	-	53	2,308	155	194	349	475	844	1,319	815	283	1,098	2,417	10,790	4
Higher Secondary (Grades 11 - 12)	91	146	151	90	478	1	5	-	-	6	484	20	37	57	92	151	243	161	60	221	464	1,532	3
Subtotals by Sex	1,319	3,304	1,131	606	6,360	103	431	-	-	534	6,894	371	925	1,296	1,422	3,735	5,157	1,131	606	1,737	6,894	55,855	8
Male'																							
Pre-Primary	-	568	27	-	595	-	-	-	-	-	595	-	35	35	-	568	568	25	-	25	593	7,896	13

Primary (Grades 1 - 7)	75	895	57	158	1,185	9	30	-	-	39	1,224	11	30	41	84	925	1,009	78	187	265	1,274	16,218	13
Lower Secondary (Grades 8 - 10)	74	361	62	178	675	-	1	-	-	1	676	6	3	9	74	362	436	42	158	200	636	5,499	9
Higher Secondary (Grades 11 - 12)	43	70	33	50	196	-	1	-	-	1	197	4	2	6	43	71	114	34	41	75	189	2,445	13
Subtotals by Sex	192	1,894	179	386	2,651	9	32	-	-	41	2,692	21	70	91	201	1,926	2,127	179	386	565	2,692	32,058	12
Total	1,511	5,198	1,310	992	9,011	112	463	-	-	575	9,586	392	995	1,387	1,623	5,661	7,284	1,310	992	2,302	9,586	87,913	9.2

Note: 1. This table does not include supervisors, assistant headmasters, headmasters, assistant principals and principals who may teach in addition to their administrative duties.

2. Schools overlap in levels. Overlapping teachers have been enumerated in the level the teacher takes most periods.

3. Trained: Have MAB (Maldives Accreditation Board) accredited advanced certificate or higher teaching qualification.

4. Total number of students in this table does not include children with special needs

Source: Ministry of Education, 2018

3.4 Completion of education

As shown in Table 3.8, the number of students enrolled in Pre-Primary, Primary and Lower Secondary remained almost the same over the years. This trend is shown in figure 3.12. However, as mentioned earlier there are some fluctuations in numbers due to the 13-year age group enrolled in the Primary level¹⁰. Students who are not 13 before February of that year would be in Grade 7. The completion rate of all these students is ensured by promoting all the students automatically to the next levels. In addition, the implementation of the UFAA programme in the year 2018 created an alternative pathway to complete a certificate that is equivalent to Secondary education as well (see TVET chapter).

Overall access to education at the Pre-Primary level is high. A factor to be noted, however, is that females share of 2018 enrolment (9,829) at the Pre-Primary level is 3.2% lower than that for males (10,582). This discrepancy continues to Primary and Secondary levels. The reason for this disparity is unknown and warrants careful study.

Access to and participation rate at the Primary level is also high. Attention given to attendance policy as well as checking on 'children at risk' at the system level may play a helping role to ensure there are few dropouts from the system. While completion rate at the Primary level is high, NALO results point to less than satisfactory learning achievement of many students in language and mathematics, indicating many students are completing the Primary level without a solid foundation in the skills of literacy (Dhivehi and English languages) and numeracy (Mathematics) and are pushed up to the next level where they are likely to confront major difficulties in learning. This may be contributing to the decision to create, at the Secondary level, a different pathway to complete a certificate that is equivalent to Secondary education. It must be noted that this has been done without addressing, to date, the unsatisfactory system-level NALO results.

The NER in Lower Secondary is at 90.5% with a slightly lower ratio (87.8% for girls). A sharp drop in enrolment is noticeable at the Higher Secondary education level. This reduction in enrolment to around 43% at the Higher Secondary level is a matter of serious concern. Possible reasons (inability to pass the required number of passes at GCE O/L for admission into Grade 11, possible lack of interest in studying for the GCE A/L, wanting to leave school

¹⁰ NER percentage in Lower Secondary is shown lower than 100% as a result of the 13-year age group enrolled in Primary grades¹⁰. NER percentage in Higher Secondary is low, 44.5%, for various reasons

to seek work, etc.) for this decline in enrolment are discussed elsewhere in this document. It is also important to highlight that girls outnumber boys in enrolment at this level. Only 38% of those entering Higher Secondary education are boys. The reason for the gender disparity is yet to be studied.

Table 3.8: Completion rates and passage to next level

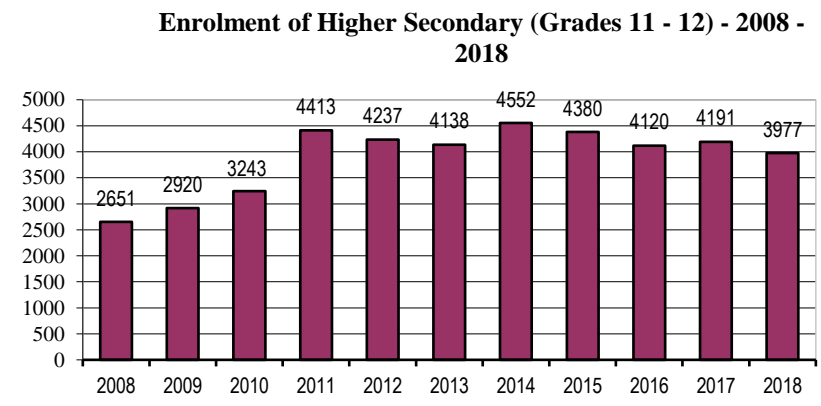
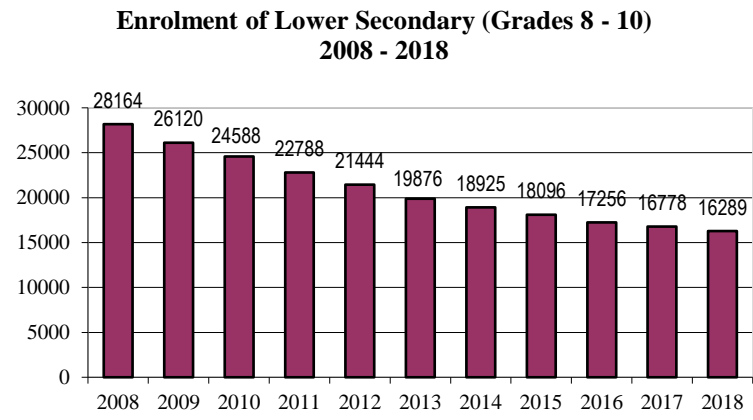
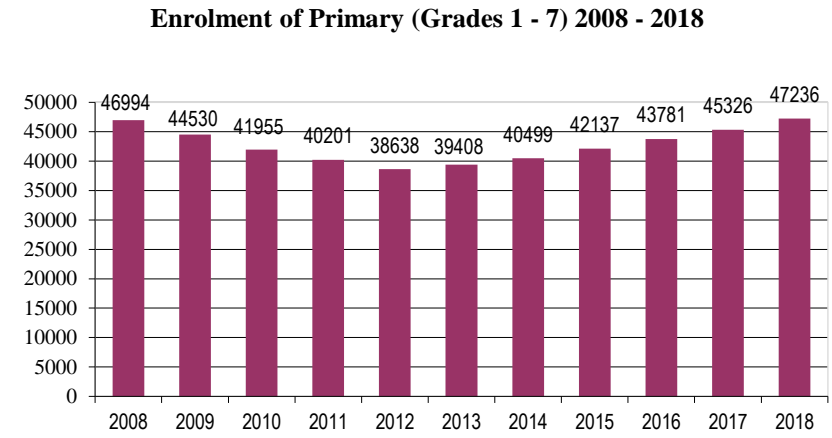
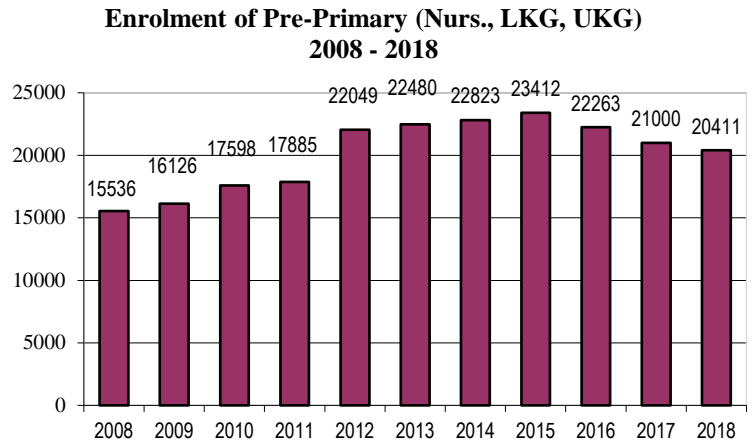
LEVEL	2011			2012			2013			2014		
	Male	Female	Both Sex	Male	Female	Both Sex	Male	Female	Both Sex	Male	Female	Both Sex
Pre-Primary (Nurs., LKG, UKG)	9024	8861	17885	11,212	10,837	22049	11,364	11,116	22480	11,666	11,157	22823
Primary (Grades 1 - 7)	20926	19275	40201	20,058	18,580	38638	20,337	19,071	39408	20,930	19,569	40499
Lower Secondary (Grades 8 - 10)	11693	11095	22788	10,895	10,549	21444	10,249	9,627	19876	9,836	9,089	18925
Higher Secondary (Grades 11 - 12)	2094	2319	4413	2,099	2,138	4237	1,826	2,312	4138	1,903	2,649	4552
Special Classes*	135	99	234	82	60	142	113	82	195	176	108	284
	43872	41649	85521	44346	42164	87575	43889	42208	86097	44511	42572	87083

LEVEL	2015			2016			2017			2018		
	Male	Female	Both Sex	Male	Female	Both Sex	Male	Female	Both Sex	Male	Female	Both Sex
Pre-Primary (Nurs., LKG, UKG)	12,041	11,371	23412	11,586	10,677	22263	10,890	10,110	21000	10,582	9,829	20411
Primary (Grades 1 - 7)	21,731	20,406	42137	22,342	21,439	43781	23,215	22,111	45326	24,244	22,992	47236
Lower Secondary (Grades 8 - 10)	9,357	8,739	18096	8,960	8,296	17256	8,714	8,064	16778	8,512	7,777	16289
Higher Secondary (Grades 11 - 12)	1,870	2,510	4380	1,776	2,344	4120	1,834	2,357	4191	1,769	2,208	3977
Special Classes **	208	108	316	255	113	368	340	141	481	212	86	298
	45207	43134	88341	44919	42869	87788	44993	42783	87776	45319	42892	88211

* The fall in pre-school student population in the atolls is due to the discontinuation of nursery classes in the community /privately owned pre-schools

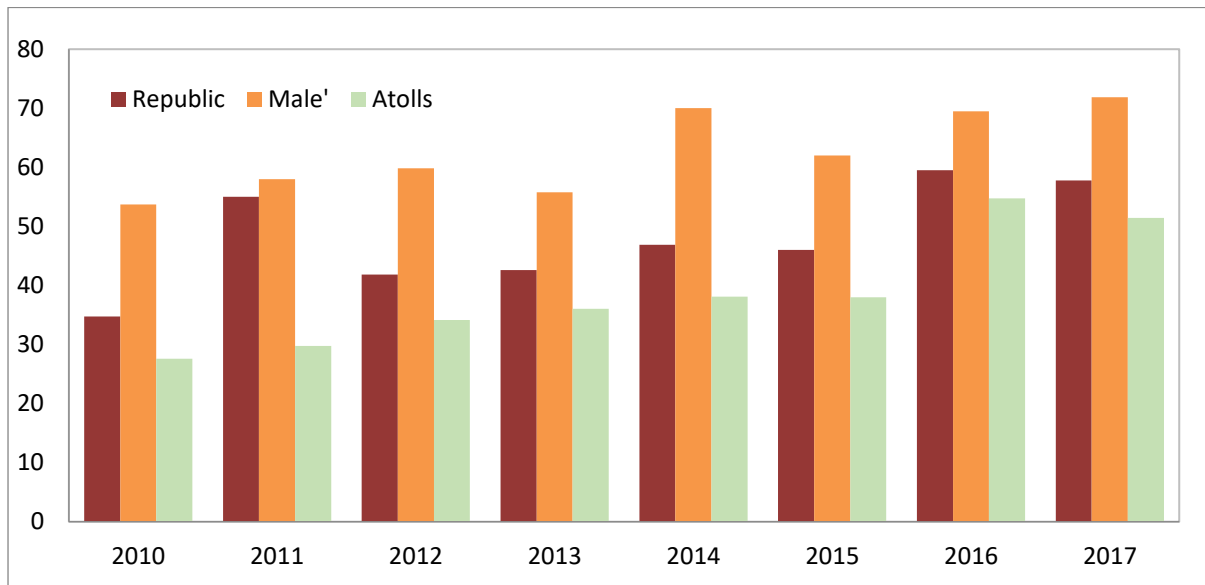
** Classes conducted for children with disabilities. Source: Ministry of Education, 2018

Figure 3.9: Number of students enrolled in Pre-Primary, Primary, Lower Secondary and Higher Secondary from 2008-2018



Source: Ministry of Education, 2018

Figure 3.10: Pass % of students who sat for GCE O' Level exam 2010-2017



Source: Ministry of Education cited in Statistical Year Book of National Bureau of Statistics. 2017 data updated by Ministry of Education.

Figure 3.10 shows the percentage of students who completed the GCE O' Level examination from 2010 to 2017. From 2010 to 2011 there was an increase in a number of students who sat for O'Level exam. However, a sharp drop was noted from 2011 to 2012. The overall percentage of outer islands students sitting the O'Level examination has increased from 2011 to 2016, after which there has been a slight decline in 2017. This recent decline in the number of students from the atolls sitting the O'Level exams may be indicative of the internal migration to Male' from the atolls. Some atolls show a consistent decline in the number of students sitting the exam from 2014 to 2017. Table 3.9 shows the number of students from Gaaf Alif dropping from 214 students in 2011 to 146 students in 2017. Similarly, from Gaaf Dhaal atoll, the number of students dropped from 267 in 2014 to 189 in 2017. A similar decline is also observed from the southern-most two atolls of Foah mullah and Addu. On the contrary, from Haa Alif and Shaviyani atolls, the number of students sitting O'Level exam has increased between 2014 and 2017.

What appears clear from statistics on the total number sitting the GCE O'Level examination is that, in recent years, there has been a decline, compared to past years, in the rate of increase in the total number sitting the O'Level examination. Students who were not performing well academically were channelled to alternative, vocationally/technically oriented pathways and did not sit the GCE O/L exams. This would very likely affect the pass rates at GCE OLevel examinations as well.

According to Table 3.9, the pass percentage in 5 subjects in the GCE O'Level examination at the national level is erratic. In 2014, 47% was the pass percentage in 2014 while it dropped to 46% in 2015 and rose up again to 60% in 2016. However, the pass percentage has dropped again to 58% in 2017.

There is a significant increase in the percentage of students who passed from the atolls over the last four years for which data are available. In 2014, the percentage of students from the atolls who passed in five subjects was 38%. This percentage rose to 55% in 2016 and dropped to 51% in 2017.

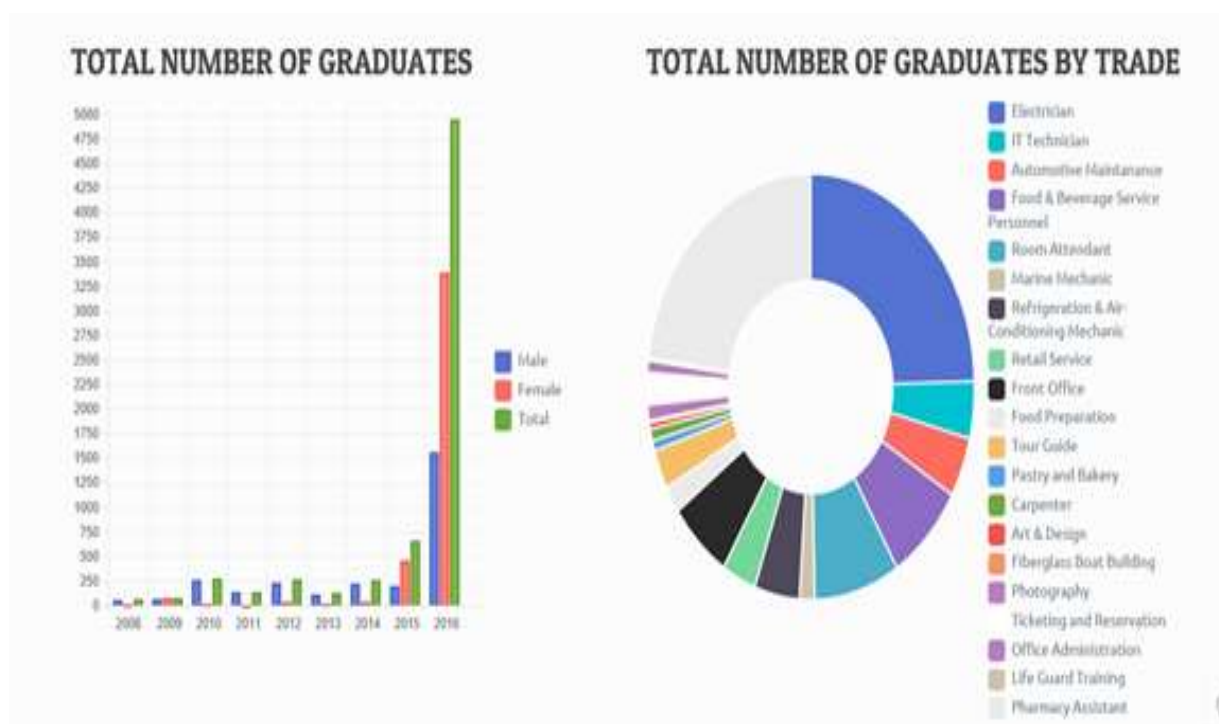
Further study is needed to closely examine possible causes for the changing patterns of the number of students sitting the O'Level exam as well as the percentage of students passing in five subjects. There have been several changes that were introduced during this period, including major curricula reform, decentralized models of management and professional development. Special intervention programmes were introduced through which, individual students were guided, based on their academic performance, to take an alternative vocational/technical pathway. Monitoring of teaching and learning was strengthened, while teachers were provided with guidance on how to help students focus.

Table 3.9: Number of students who sat for O'Level exams

Region	2014			2015			2016			2017		
	Candidates	Passed	% passed	Candidates	Passed	% passed	Candidates	Passed	% passed	Candidates	Passed	% passed
	كائيدات	مؤتو	مؤتو %	كائيدات	مؤتو	مؤتو %	كائيدات	مؤتو	مؤتو %	كائيدات	مؤتو	مؤتو %
Republic	5,404	2,534	47	5,272	2,409	46	5,498	3,272	60	5,220	3,015	58
Male'	1,490	1,043	70	1,665	1,031	62	1,782	1,238	69	1,617	1,162	72
Atolls	3,914	1,491	38	3,607	1,378	38	3,716	2,034	55	3,603	1,853	51
HA	281	129	46	283	94	33	262	177	68	288	143	50
HDh	327	128	39	343	109	32	362	176	49	314	135	43
Sh	263	116	44	251	121	48	243	176	72	289	157	54
N	237	90	38	169	53	31	192	123	64	178	93	52
R	337	94	28	306	115	38	342	191	56	310	176	57
B	208	87	42	182	79	43	190	112	59	160	106	66
Lh	145	42	29	153	63	41	159	68	43	111	54	49
K	170	60	35	163	47	29	153	84	55	162	57	35
AA	109	43	39	86	23	27	89	38	43	88	46	52
ADh	142	51	36	137	38	28	102	42	41	125	57	46
V	25	10	40	25	12	48	25	19	76	19	9	47
M	99	45	45	90	43	48	112	58	52	84	41	49
F	98	50	51	63	31	49	99	60	61	93	46	49
Dh	88	32	36	91	39	43	83	47	57	128	54	42
Th	140	48	34	145	59	41	182	106	58	215	95	44
L	217	54	25	215	60	28	241	100	41	237	110	46
GA	214	75	35	180	86	48	171	93	54	146	101	69
GDh	267	91	34	211	93	44	200	79	40	189	91	48
Gn	171	60	35	201	59	29	172	78	45	156	74	47
S	376	188	50	313	154	49	337	207	61	311	208	67

Source: Ministry of Education cited in Statistical Year Book of National Bureau of Statistics. 2017 data updated by Ministry of Education.

Figure 3.11: Types of programmes offered in TVET



3.5 Out of School Children and Youth, Students at Risk

3.5.1 Definitions

Out of School Children (OOSC) generally refers to those children who do not have access to formal schooling, either because they are not enrolled in a school in that particular time period; they dropped out, or have not finished their basic education requirements and those who have never been sent to school in their life (UNESCO, 2017). OOSC is a phenomenon more common in groups considered to be marginalized in society.

The UNESCO Institute of Statistics defines the rate of Out-of-School Children as the “Number of children of official Primary school age who are not enrolled in Primary or Secondary school, expressed as a percentage of the population of official Primary school age. Children enrolled in Pre-Primary education are excluded and considered out of school”.

The rate of out-of-school children helps to make comparisons across countries. The higher the rate, the greater the need for interventions to target out-of-school children to achieve

the goal of Universal Primary Education. When disaggregated by geographical location and gender, this indicator can identify areas or groups needing greater support and efforts.

Five Dimensions of Exclusion: The Five Dimensions of Exclusion is the core model guiding the Global Initiative on Out-of-School Children.¹¹ It distinguishes between (i) children who are out of school and (ii) children who are at risk of dropping out. The term ‘exclusion’ has a slightly different meaning depending on the population concerned: children who are out of school are excluded from education, while children who are at risk of dropping out may be excluded within education because they may face discriminatory practices or attitudes within the school (see Table below).

Figure 3.12: The ‘Five Dimensions of Exclusion (5DE) model (UIS, December 2016)

Out-of-School Children

Dimension 1: Children one year younger than the official Primary-school entrance age who are not in Pre-Primary or Primary school.

Dimension 2: Children of Primary-school age who are not in Primary or Secondary school.

Dimension 3: Children of Lower-Secondary-school age who are not in Primary or Secondary school

Children at Risk of dropping out

Dimension 4: Children who are in Primary school but at risk of dropping out.

Dimension 5: Children who are in Lower-Secondary school but at risk of dropping out.

The Global Out-of-School Children Initiative Operational Manual has since replaced the OOSC Initiative Conceptual and Methodological Framework and serves as the ‘how-to’ guide for conducting national studies on OOSC.

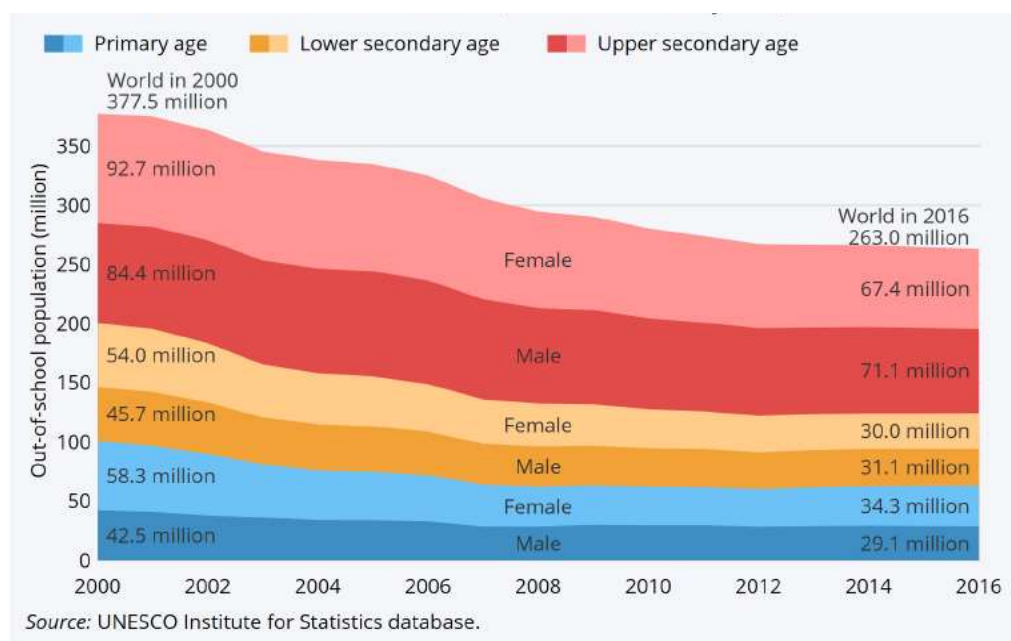
In line with the above, several countries have developed policy initiatives to monitor students at risk of dropping out and address the issue early on with supportive actions. This is the case of the Maldives (see below the part on the policies to address dropouts).

¹¹ UNICEF and UIS, 2011; UNICEF and UIS, 2016

3.1.2 The situation internationally: global, regional estimates of OOSC- Classification Framework

According to the latest data released in 2018 by the UNESCO Institute of Statistics (UIS), it is alarming that there has not been progressing in reducing out-of-school numbers worldwide¹². As highlighted by UIS, “In 2016, 263 million children, adolescents and youth were out of school, representing nearly one-fifth of the global population of this age group. The number of children, adolescents and youth who are excluded from education fell steadily in the decade following 2000, but UIS data show that this progress essentially stopped in recent years; the total number of out-of-school children and youth has declined by little more than 1 million per year since 2012”.

Figure 3.13: Global Number of out of school children adolescents and youth, 2000-16



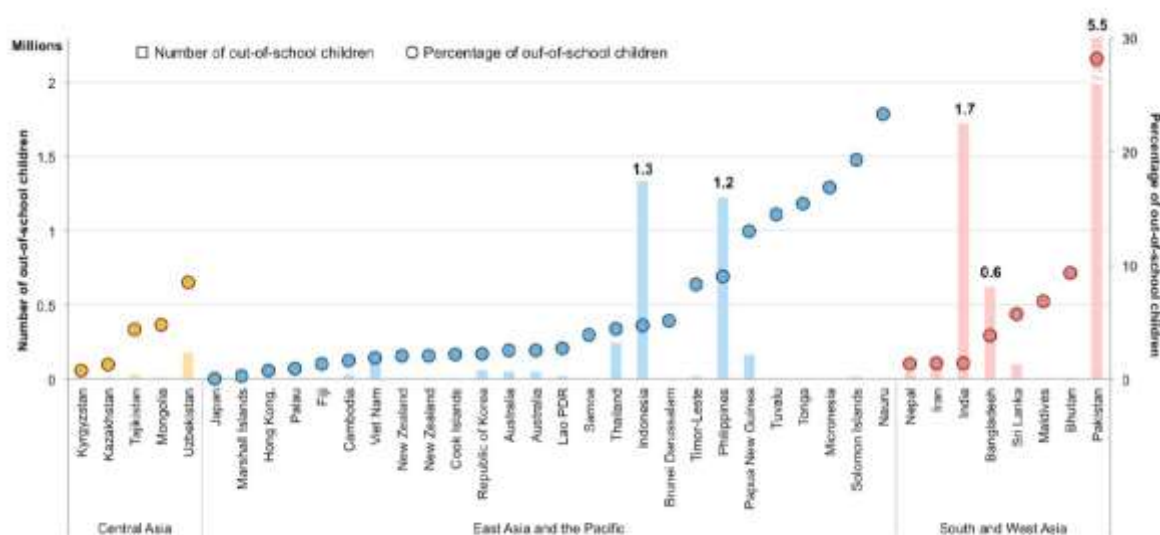
The key finding to retain from the UIS 2018 Factsheet: In all regions, out-of-school rates and numbers are far higher among youth of Higher Secondary school age than among younger cohorts. Out of 263 million children, the 139 million, or 53% of the total, are the

¹² Retrieved March 11, 2018 from:
<http://unesdoc.unesco.org/images/0026/002615/261558e.pdf>

youth of Higher Secondary school age (about 15 to 17 years old). This is a situation that is more pronounced in Africa and the South Asia region. The Maldives is also a part of this trend.

South Asia is considered to be home to one-quarter of the figures quoted, and also the region with the highest absolute number of OOSC. The highest figures were found to be in Pakistan with Nepal coming second at 34 per cent. While India has the highest absolute number of OOSC, this position comes from the fact that almost one in four children are not in school in the country (Figure 3.15). The data on OOSC regarding the Maldives should be also analysed under the lens of absolute numbers as the use of only the percentage does not provide an accurate picture.

Figure 3.14: Number and Rates of out of school children in selected countries, 2013 or latest year¹³



Classification of the out-of-school children and Youth: The Figure below presents a framework for the OOSC classification. As was noted (UNESCO UIS 2018), OOSC is a phenomenon largely experienced by the marginalized and disadvantaged groups but not exclusively.

¹³ Retrieved on March 11, 2018, from: <http://unesdoc.unesco.org/images/0023/002351/235152E.pdf>

The key themes under which OOSC and its precursors can be classified are as follows:

1. *Family stressors*: this ranges from low levels of parental engagement to poor health or under-nutrition of children.
2. *Economic conditions*: this is usually related to conditions of poverty within which families must live. Survival becomes the only goal under the circumstances and as a result, providing an education for children becomes an opportunity cost under need to compensate household income through child labour.
3. *Institutional factors*: these factors cut across the board from having limited access to support services to the poor quality of education given at schools.
4. *Societal factors*: these relate to factors such as the violence, abuse, and exploitation that children can be subjected to from society and the victimisation to stigmas associated with socially accepted norms.
5. *Idiosyncratic factors*: these are factors that are individual to the child in nature, which can be and are in a large way affected by the other themes identified.

There is an evidence-base of findings confirming the negative impact of OOS children and youth. If they are not addressed, the negative effects of OOSC can spill over onto the larger society in terms of areas that can, in one way or the other, be detrimental to the stability, prosperity, and the growth of the nation.

The Situation in the Maldives: Determinants and Profiles

The right to free Primary and Secondary education: The Constitution of the Maldives stipulates that no child should be excluded from the education system and that education should be free of discrimination. Article 36(b) mandates the state to provide Primary and Secondary education free of charge by the State. This is in line with the recommendations and stipulations of the international conventions that govern education globally in terms of reducing barriers to access to education (National Bureau of Statistics, 2014).

Free compulsory education from 4 to 15 years: In the Maldives, compulsory schooling starts for a child when he/she reaches 4 years of age until the completion of Lower Secondary education at the age of 15 years.

The numbers of OOSC in the Maldives at Primary and Lower Secondary: In the Maldives, a small number of students is identified that are not in schools, (MoE, 2018). The identified children were distributed as the following (National Bureau of Statistics 2014):

Primary school age children (2015) not in school (age 6-12 years): 254 children. 122 girls representing 0.63% and 132 boys representing 0.65% of the total population of 6-12-year-olds.

Lower Secondary School age children not in school (age 13-15 years): 368 children, 126 girls representing 1.6% and 242 boys representing 2.9% of the total population of age 13-15 years. The 2014 Census also indicated that out of those who were not currently in school from the age group of 6-12 years, 25% were 6 years of age which was considered as the start of formal education previously. Furthermore, from the 13-15 years age group, 50% of those “currently not studying” were at the age of 15 years. Students normally complete lower secondary education at age 15.

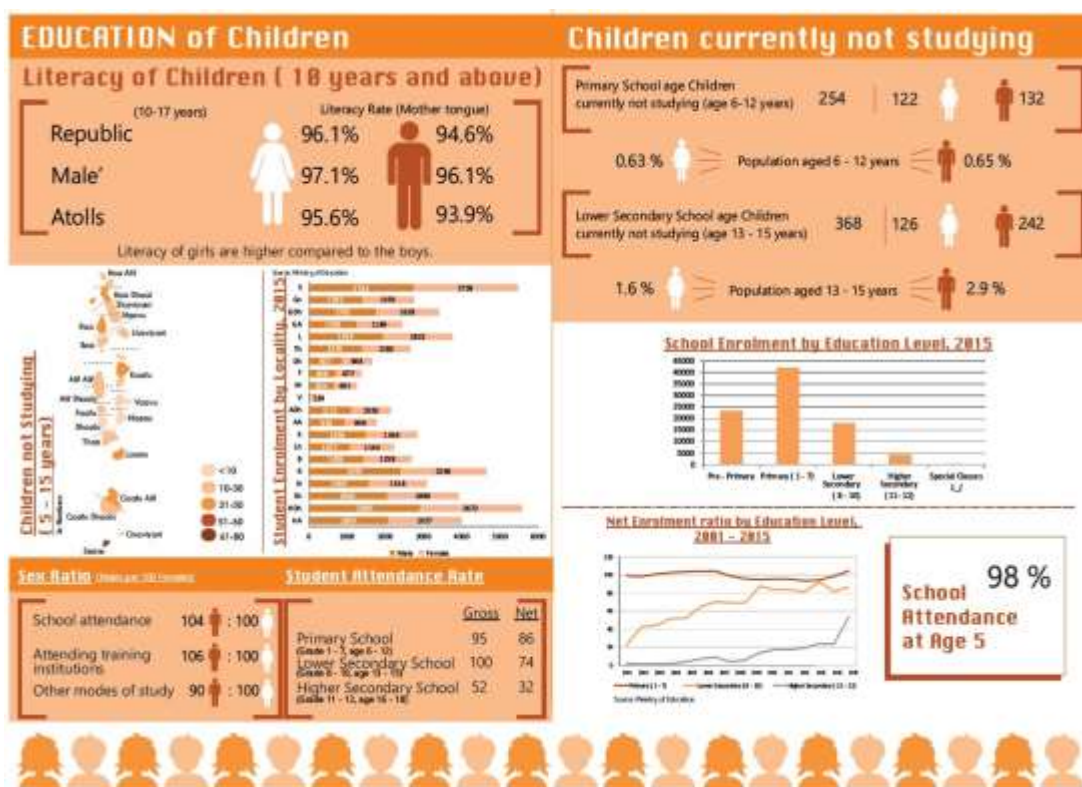
Higher Secondary age adolescents not studying/out of school (age 16-18): The number of students out of school in the age category of 16-18 years remains undetermined (UNICEF, 2016). But the enrolment data analyzed at the beginning of the chapter shows that only 43% of students of a cohort in Lower Secondary education continue to Higher Secondary education. This is a trend confirmed in various reports. However, recent statistics show more students are retained in school with the alternative pathway interventions that have been introduced since 2015 (Vinavi, explained further in 3.4.5)

In addition, according to the UNICEF report (2016), the official statistics from the Maldives Police Service (MPS), the Juvenile Justice Unit (JJU), and the Ministry of Law and Gender (MoLG) show that adolescent boys who move to Malé are frequently manipulated to become part of the criminal enterprise and, as a result, fail to attend school on a regular basis. According to data from JJU for 2015, almost 95% of those who are found to be in dispute with the law do not attend any school.

The OOSC in the Maldives is close to negligible for Primary and Lower Secondary education in comparison to the South Asia data. If the absolute numbers are considered, then the around 600 children and youth who are out of school are small in comparison with other South Asian countries. The Maldives is part of the trend in the sub-region that shows a record number of 15-18-year-old youth out of school, exceeded only by the Africa region. In fact, sub-Saharan Africa (27 million), is on the top of out of school adolescents and Southern Asia follows with 18 million.

Figure 3.15 below produced by MoE in 2016, illustrates students and youth that are not in school.

Figure 3.15: Literacy levels at different ages



Source: Ministry of Education, 2016

OOSC and Youth, and Higher Education Gap: As was shown at the beginning of the chapter on enrolments in all levels of education, the gap emerges at the level of Higher Secondary education and when moving onto Higher Education with the figures being skewed in favour of enrolment in Malé. Students are more independent at this age and parents feel more comfortable to let them move to other islands either for study or employment.

OOSC and Youth and Gender disparity: Gender disparities are close to negligible compared to other countries in the region. For instance, in Malé, the enrolment of female students remains higher after the age of Lower Secondary (16 years and above), while in the atolls this figure increases only after the age of 20 years. There is no discernible explanation for this difference in terms of the atolls and the age category as outlined by the National Bureau of Statistics (2014).

Impact of the geographic dispersion: It is imperative that when discussing the situation in the Maldives, the geographical dispersion of the population be taken into context, and the small population often found in small islands scattered across the Indian Ocean, which in itself, poses barriers in providing equal access to education for every child. However, the government of the Maldives is attempting to bridge these barriers via the introduction of various teaching modalities like multi-grade teaching and virtual classroom teaching.

3.5.3 Demographic and Socio-Economic Determinants

The demographic and socioeconomic determinants can vary in the Maldives compared to other countries within the South Asian region. One core reason behind this is that the Maldivian government took steps earlier on in the 80s followed through in the 90s and then, later with the enactment of the 2008 Constitution, steps to ensure that access to education remains the right of every child in the country.

However, the Maldives is not without its fair share of issues when it comes to the emergence of OOSC. The main stressors and factors that contribute to the OOSC situation in the Maldives are discussed below:

1. Family stressors
 - a. Migration: Children often migrate without their family or parents and stay with third parties and families that take them in, either in return for labour or at a fee payable to the hosting party. Figures for 2015 puts the number of students enrolled in 22 schools of Malé at 20,066, of which 1,98 (or 9.46%) were reportedly not living with their own parents¹⁴.
 - b. Domestic violence: Findings of qualitative analysis (Asia Foundation 2012) show that often those who are recruited into gangs often come from broken families mired with the ugliness of domestic violence, their escape and salvation which comes in the form of the sense of belonging to a “structure” that is whole rather than broken. More often than not, these are also children who are OOSC for various reasons that are linked to the effects of coming from broken families.
2. Economic conditions
 - a. Poverty: While poverty in its traditional sense is not applicable to the context of the Maldives, the Government of Maldives (GOM) fully recognizes the imbalances that exist in terms of regional differences within the country. With personal incomes significantly higher in Malé in comparison to those living in the atolls, economic infrastructure is also better maintained in the capital than elsewhere in the country (Asian Development Bank, 2002). It is this very disparity that forces a lot of older siblings in large families to find work at the resorts and drop out of school.

¹⁴ Ministry of Education and UNICEF Maldives (2015). Children who migrate to Male’ for Education.

However, this scenario would have shifted at present. In the late 1900s and early 2000s, jobs in the Tourism Industry and the Fisheries Industry became very popular leading to drop-outs from schools to join these fields.

- b. Costs associated with schooling: For families that migrate to Malé, the vicious circle of having to pay exorbitant amounts for rent puts in economic stress on families and children from such household at disadvantage.

3. Institutional Factors

- a. Overuse of suspension from school: This was one of the key areas highlighted in the report on children who migrate to Malé seeking education. However, MoE is addressing this issue with a policy initiative.
- b. School not being proactive: Schools need to be more proactive in referring children and families to external support services so that problems can be addressed timely before suspension from schools is necessary. School counsellors can play a vital role in addressing the socio-emotional needs of vulnerable students.

4. Societal Factors

- a. Violence, abuse and exploitation from society: Children who live without parents or orphans under institutionalized care can often end up being victims.
- b. The stigma associated with teen pregnancies: In the Maldives, a 100% Muslim nation, the stigma associated with out of wedlock pregnancies are double fold for the teenaged girl who should rightfully be in school.
- c. Traditional belief systems: This can either be in the form of children who are kept at home owing to 'traditional' values or 'religious' values, discrimination based on gender, usually in disadvantaging females who are prevented from attending formal schooling.

5. Idiosyncratic Factors

- a. Lack of motivation to learn: This can stem from disabilities in a child that might not be adequately supported both at home and at school, leading to exhaustion with the learning process as a whole.

3.5.4 Policy initiatives to address OOSC and drop-outs in the Maldives

The overarching education policy of the previous government was “No child left behind”, released the policy on 14 years of education, through which the government provides free education for all the children from 4 years to 18 years of age. With this policy, Pre-Primary education was made free in the atolls in 2016 and for the rest of the country in 2017. This policy also includes free Higher Secondary education, free BTEC A’ Level and free GCE A’ Level programmes. However, the programme needs to be evaluated to understand the impact of alternative pathways on learning outcomes. It is presumed that the current government will review and revise this policy.

The UFAA program office was established to help achieve the “No child left behind” policy. ‘UFAA’ means ‘Happy’. It is responsible to propose reforms and design programmes that would enable children to stay in school, learn and be happy, ensuring that no child is left behind. The core belief is that every student has strengths and skills and that, given the opportunity, he/she can excel in it, especially when the student is involved in something that he/she loves and is happy at doing. It should be noted in here that UFAA programme was introduced by the previous government. The focus of the current government is on inclusive and holistic education. The UFAA programme office has already been dissolved. Therefore, it is expected that the programme initiations described below will also be revised to align with inclusive and holistic education policy.

UFAA Programme Initiatives include the following:

1. **DHASVAARU** – An internship programme piloted in 2014 for 11 schools in Malé. In 2015, the project was scaled up to cover all schools nationwide. A total of 3754 students have been trained between 2014-2017, of which 63% have been certified. Dhasvaaru has over 80 different skill courses to choose from and can be completed in six months.
2. **BTEC** – First vocational stream in schools introduced in 2014. One in every nine students completing O’ Level and one in every 16 students doing Higher Secondary now opt for BTEC.
3. **VINAVI** – 10 Plus programme introduced in 2016 to guide and support students who have completed formal schooling, until they reach 18 years of age. Aiming to ensure that every student is meaningfully engaged in employment, education or training. Every school reaches out to its alumni regularly to check in and offer support. This was not carried out for a long period of time.
4. **ATTENDANCE POLICY** - In 2016, a child-centred attendance policy was sent to all schools nationwide. By working together with schools and families, MoE

created a supportive culture where children come to school every day which in turn will help them to reach their full potential. Absenteeism in schools dropped by 30% in the first two months of the introduction of the policy, and hence, it is widely accepted by schools as well as parents. 649 OOSC cases were identified from the time the policy was introduced of which 592 cases have already been solved with students successfully agreeing to enrol back into schools. By the end of the year 2018, 57 students were still at the intervention level.

5. **OUT OF SCHOOL CHILDREN** - All schools nationwide were asked to identify out-of-school children in their local area. To date, all schools have completed data collection except for schools in Malé and Addu City. 157 children have been noted as OOSC and 18% of these cases have been supported and closed. MoE carried out work with both families and schools to enrol and support these students within the education system. MoE ensured that the students will have access to education with the help of the local school.
6. **RISK ASSESSMENT** – MoE believes that for effective and crucial academic performance, a child needs love, care, and to be brought up in a safe environment. Risk Assessment is conducted for all Grade 1 students to identify any risks of making progress in learning and/or failure in school and provide support for children who may need it. Identifying risk factors early on, helps students deal with them, with minimal intervention. So far 6616 students have been assessed nationwide. 2011 students were identified for support of which 92% of students have been supported and moved to zero risk zone. 151 students are still being supported and their risk indexes have been remarkably minimized.
7. **BURUNU** – Named as Burunu, which is a “nakaïy” (a 14-day cycle of a season) of “hulhangu” (west) monsoon, and which begins with a storm followed by a period of calm; the time when seeds are sown. Burunu is the new behaviour management policy, endorsed by MoE in 2018. Ufaa Office piloted the policy in some of the Male' schools. Learning materials, including a manual and video clips, were developed and shared with all the schools. A 3-hour orientation for this policy was conducted in all schools before starting the implementation. The new behaviour management policy is student-centred and focuses on restorative justice. Special care is given in choosing actions to be taken on students to ensure positive outcomes.

Further initiatives of MoE include:

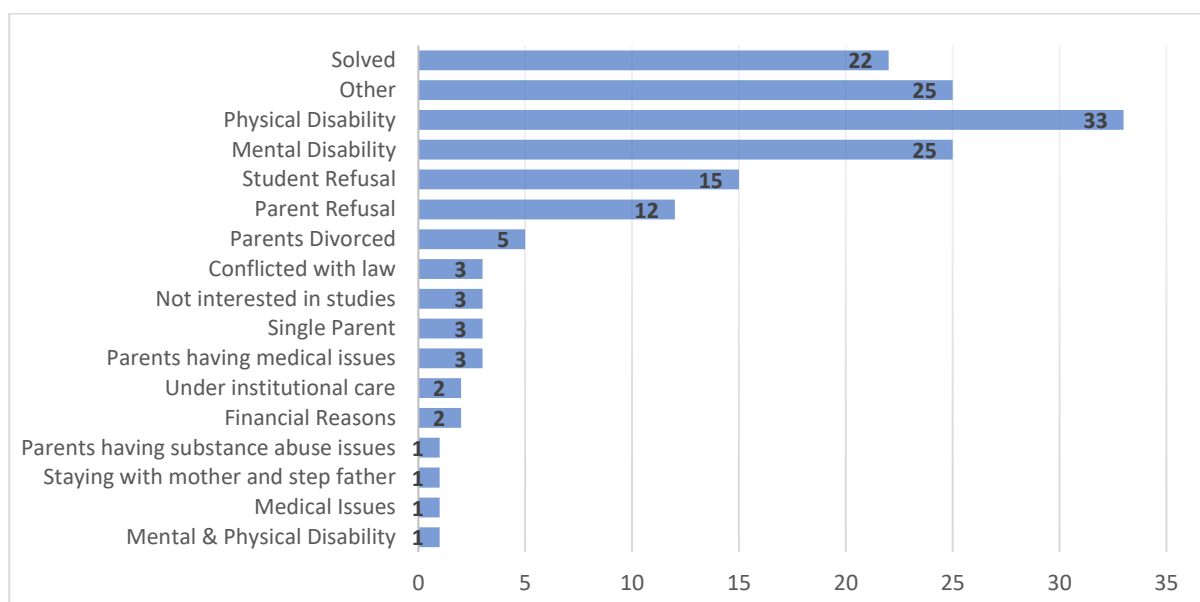
Support children with disabilities: Through the work carried out to retain children in learning, other vulnerable groups have also been identified such as children with disabilities. Comprehensive inclusive education policy has been in effect since 2013. The last three years have seen key policy initiatives that have been introduced to ensure learning for these children.

In the past four years, teachers have been trained in numbers that doubled the previous numbers, ensuring that every school has a Special Education Needs (SEN) Teacher. In islands, where needed, SEN units have been established and have teachers ranging from 12 – 30, based on the number of students needing support.

MEMIS Integration with DNR: In order to ensure that all school-going age children are enrolled in schools, Maldives Education Management Information System (MEMIS) is always updated with the most recent updates of Department of National Registration (DNR) records.

Child Protection Policy: A comprehensive Child Protection Policy was introduced in 2017 that outlines reporting and referral procedures for cases where the safety and security of a child are deemed questionable. For such children support services that are available in and out of school are sought and arranged. At no point is the attendance of a child compromised, and this is ensured through regular monitoring of student attendance.

Figure 3.16 OOSC identified from Atolls, by Categories



Source: Ufaa Programme Data, 2016

3.5.5 Key issues and challenges for the OOSC and Youth

MEMIS is in its early developmental stage. Ensuring prompt generation of readily available statistics to prepare analytical reports is not yet possible. The lack of proper data management capabilities is a formidable challenge. For instance, the former Ufaa programme maintained the data for Vinavi programme on Google Drive, which means that proper statistics are not readily available on hand when it comes to providing information for making policy decisions. Tracking students yearly and maintaining data in the required manner poses great challenges in terms of verification. In addition, risks are posed for data to be mismanaged at all points.

The lack of proper statistic and research into the theme of OOSC is a key challenge that needs to be overcome if the issue is to be clearly identified in terms of its scope and for directing adequate resources to target the phenomenon in an adequate manner. As OOSC is an issue that cuts across various socio-economic determinants, finding solutions need to be across a multi-dimensional platform that seeks to put the best foot forward for the children involved.

Children who show high levels of disability pose challenges. It is important to work with local health centres in order to address issues faced with such children so that they can either be enrolled into the formal education system.

3.6 Key findings

1. There has been tangible improvement on access, coverage and completion.
2. The NER for females and males at Pre-Primary are 92.6% and 92.7% respectively. The NER in Primary schools is 95.9%, with 96.3% for girls and 95.5% for boys.
3. The NER in Lower Secondary schools is 90.5% with 87.8% for girls and 92.9% for boys. This can be due to various factors such as some (very few) female students being home-schooled (informally) for different reasons. This needs to be further studied.
4. The NER in Higher Secondary is low at 44.5% because some students cannot get access to higher secondary education. Entry figures for higher secondary education show much less for males than for females, (50.4% for girls and 38.9% for boys) displaying a stark disparity between male and female enrolments of students above the age of 16. To ensure the continuity of education, further studies need to be carried out to identify, among others, whether the higher secondary education programmes provided in the Maldives are attractive or appropriate for male students.
5. A few students join the work force after Grade 10. Ministry of Education has taken several steps to promote the completion of higher secondary education and to provide an alternative pathway for all the students to continue education. These include action taken with the previous policy on “No Child Left Behind” policy and implementation of former UFAA programme and MEMIS in all the islands to closely monitor all the students and their progress and creating alternative pathways for students with different learning interests. It is important to review and realign these policies, and at the same time, monitor the progress of the programmes through MEMIS.

3.7 Recommendations

- 1 Equity in TVET in schools’ programmes. Although many female students join the TVET programmes, their participation in the work industry such as hospitality is less compared to males. To minimize gender disparity and to change the perception of society about females working in particular areas, programmes need to be conducted to raise awareness in society on the opportunities available for females in fields of work such as Hospitality.
- 2 It is important to have a strong central database where OOSC cases can be flagged if they are not registered in a school so that government agencies can work proactively to support families to ensure that their children attain a good education.

- 3 A simple alternative learning programme that can be implemented in all islands with ease: content, delivery modes and approaches that adapt to the special circumstances and life challenges of children. Among the learning programmes discussed in this section are those that respond to the needs and adapt to the realities of outer island's children, children from vulnerable groups, and children in conflict with the law,
- 4 Promote open learning and flexible learning methods: this is particularly important in the case of OOSC who share the burden of looking after household income avenues to support their families. These children do not keep to conventional schooling hours. Therefore, if the system is to reach out to them and bridge the gap in education, exploration of flexible open learning methods is crucial.
- 5 The close partnership between government and non-government organizations/non-state actors in support of innovative and community-based approaches: It is unquestionable that the benefits of working together to achieve consensus, especially on issues concerning children, is the way forward. Non-state actors and NGOs can fill in key gaps where they have comparative advantage and are able to deliver services more efficiently.
- 6 Recruit and train teachers/facilitators from the community: Community engagement at all levels is crucial if any policy or program intervention is to be successful. Especially in a country like the Maldives, where disparities arise from geographical challenges, it is important that teachers and facilitators are trained from the community itself so that the skilled and learned are retained within the community that can assist students who are both in the formal and non-formal schooling. Furthermore, this ensures that adequate support with a personal touch is available on hand, because it is only logical that teachers or facilitators who are a part of the community and know the ins and outs of the said community would have a larger involvement in all its affairs and work that much harder to give their best to where they belong.
- 7 Monitoring and evaluation of learning: This should always be a continuous process, done periodically without fail so that the system is always under continuous assessment in terms of being checked for quality of education that is delivered. Failure to do so would result in disparities emerging especially across locations in the formal and non-formal methods of delivery, and thus putting back the barriers that were brought down to increase access to the OOSC in the first place, which would be a huge step backwards in terms of addressing the education needs of the children.

Chapter 4: Quality of Education

4.1 Components of quality of education

Quality of Education is at the core of the 2030 Sustainable Development Goal 4. The focus on the quality of education services is a result of the growing evidence of a global “learning crisis” and the learning divide between and within countries confirmed through global, regional and national learning assessments, (UNESCO Institute of Statistics; GEM 2017; World Bank, 2018 ¹⁵). The analytical framework to examine the Quality of Education Services (GEM 2017; World Bank 2018) ¹⁶ comprises several key components: the quality of inputs, the quality of teaching and learning practices, the quality of learning outcomes, the enabling environment that includes the system and the socio-economic context.

The World Development Report (World Bank 2018) argues that a nation must take action on three fronts to address the learning crisis:

- “First, assess learning, to make it a serious goal. Countries need to put in place a range of well-designed student assessments to help teachers guide students, improve system management, and focus society’s attention on learning. These measures can spotlight hidden exclusions, inform policy choices, and track progress”. In the Maldives, by 2018, work toward developing a culture of assessment has made further progress with the implementation of the National Assessments for Learning Outcomes (NALO).
- Second, act on evidence to make schools work for all learners. Countries should start by targeting areas with the largest gaps between what happens in practice

¹⁵ Data at http://bit.do/WDR2018-Fig_O-2; World Development Report, The World Bank, 2018.

¹⁶ The World Bank, World Development Report, 2018. Learning, Washington DC; GEM, UNESCO 2018

and what evidence suggests works for learning. The best place to start is these three key areas: prepared learners; skilled and motivated teachers; inputs and management focused on teaching and learning. In the Maldives, the curricula reform operates as the vehicle to bring evidence in the classroom to examine what works to improve learning for all.

- Third, align actors to make the whole system work for learning. Even evidence-based classroom innovation may have little impact if system-level technical and political factors prevent a focus on learning. Countries can escape low-learning traps by deploying information and metrics to make learning politically salient; building coalitions to shift political incentives toward learning for all and using innovative and adaptive approaches to find out which approaches work best in context. All the above components are examined in the Maldives ESA, although not using the same depth of analysis. The above key components of quality are adjusted to the Maldives case based on current policy reforms and priorities in the country (see Table 4.1). In this chapter, the quality components will be analysed following the adjusted quality components of Table 4.1.

Table 4.1: The Components of the Quality of Education Services

Quality of Inputs	Quality of Classroom Process	Quality of Learning Outcomes
-Infrastructure facilities	-Teaching and learning process,	-Learning Outcomes
-Curricula reform	-Teaching and Learning for inclusion	-Measurement - National Assessment (NALO)
-Teacher quality	-Curricula implementation (and Multi-grade teaching)	
-Textbooks, teaching and learning materials,	- Technology to improve teaching and learning	
-Technology for education		
The enabling environment: Quality Assurance Mechanisms		

4.1.1 The Global Targets (SDG 4) to Measure Learning

Target 4.1: By 2030, ensure that all girls and boys complete free, equitable and quality primary and Secondary education leading to relevant and effective learning outcomes.

Within the framework of the SDG 4, countries will be asked to show the progression of learning skills. The learning metrics for global monitoring are under development, under the direction of the UNESCO Institute of Statistics. The validated metrics on learning (or reporting scales) will also help countries define the minimum proficiency levels that will be used to monitor progress towards SDG Target 4.1¹⁷. But countries will decide the age and the grade for which the learning metrics will be applied.

In the Maldives, under the National Curriculum Framework, minimum standards are already defined to be achieved by grade in three domains (English, Dhivehi and Mathematics).

4.1.2. Assessments and Examinations in the Education System of the Maldives

Internationally, all types of assessments are part of 4 categories:

Classroom Assessments: to provide information and feedback to students, parents, teachers, and others. With this information, teachers can reflect on each student's level of *achievement*, as well as on specific inclinations of the group, to customize their teaching and learning plans.

National Assessments: to provide feedback on the overall health of the system at a particular grade/age *level(s)* and monitor trends in learning.

International Assessments: To provide feedback on the comparative performance of the education system at a particular grade/age level(s).

National Examinations: To select or certify students as they move from one level of the education *system* to the next level (or into the workforce).

The Assessments in the Maldives: the Maldivian Education System commenced implementation of its own national assessment programs in 2003. The focus of these assessments was on the "Literacy and Numeracy" skills for Grades 4 and 7. The first "National Assessment on Students' Achievement Levels" (NASAL) was conducted in 2003 with a follow-up in 2005 and 2008. After 2008, the title of the program was changed to "Diagnostic Test" and was continued until it rebranded and started again in 2015 as

¹⁷ Retrieved on March 10 from: <http://uis.unesco.org/en/blog/roadmap-workable-tools-measure-learning-achievements-worldwide>.

“National Assessment of Learning Outcomes”, (NALO) with the support from the ongoing World Bank project (2013-18).

The **National Assessment of Learning Outcomes (NALO)** is implemented by the Quality Assurance **Department** (QAD) established in 2015 (see section 4.9) within the Ministry of Education.

The **school and classroom-based assessments** are under the responsibility of the National Institute of Education (NIE), as part of the curricula reform and the teacher training programs.

Examinations: School completion examinations are conducted every year at the end of Grades 10 and 12. These are the O’ Level and A’ Level Examinations conducted for students who finish Secondary (Grade 10) and Higher Secondary (Grade 12) respectively. O’ Level examinations have been administered since the early 70s while the A’ Level started in the early 80s. The Department of Public Examinations (DPE) of MoE is responsible for the administration of these examinations.

International Assessments: Maldives has not participated in any international assessments such as PIRLS, TIMSS, PISA or regional assessments. With the implementation of the new curriculum, the MoE plans to measure the level of students’ performance against an international benchmark. This will help the Maldivian school system to gauge its quality *of* service against an international benchmark, enable the school system to improve the technical capacity of the country in this important area and report progress towards meeting the SDG Target 4.1.

Table 4.2 illustrates the various assessments and examinations.

Table 4.2: School-based, National Assessments and Examinations in the Maldives

	The Maldives Large Scale, System-level Assessment			
	CLASSROOM	NATIONAL	INTERNATIONAL	EXAMINATIONS
Existence	YES	YES	NO	YES
Frequency	Daily	Annually in specific subjects		Annually
Who is tested?	Selected students	All students from a sample of schools from	Depending on the type of Assessment	All students

		Grade 4 and Grade 7	(PISA, TIMSS, PIRLS, other.	
Format	Observations , questioning, orally, written, presentations, assignments and various other ways.	Test: Multiple Choice Questions	Usually multiple choice, short answers, long answers and essays	Usually essay and Multiple-Choice Questions
Coverage of curriculum	All subject areas	Numeracy and Literacy in English and Dhivehi		Covers main subject areas
Additional information collected from students	Ongoing process and part of teaching and learning	Yes		No
Scoring	Narrative report (Feedback)	Narrative report plus statistical analysis		Graded: A, B, C, D, E & U

The purpose of the NALO is to monitor and assess the quality of school education in the Maldives. It was first administered in 2015 for English Language and Mathematics in Grades 4 and 7; in 2016 **for** Dhivehi Language in Grades 4 and 7; and in 2017 for Dhivehi Language, English Language and Mathematics.

Table 4.3: National Assessments of Learning Outcomes

	English	Math	Dhivehi
2015	Yes, Grades 4 and 7	Yes, Grades 4 and 7	
2016			Yes, Grades 4 and 7
2017	Yes, Grades 4 and 7	Yes, Grades 4 and 7	Yes, Grades 4 and 7

NALO assess skills and competencies in the specific areas of Dhivehi Language, English Language and Mathematics of **students** who are in Grade 4 and Grade 7.

The standards measured in NALO are **described** as a set of skills for each subject as identified in the national curriculum.

Skills assessed in Languages:

- Knows names of objects, birds and animals not seen in daily life
- Knows meanings, spellings, and opposites of words used in daily life
- Correct sentence formation, punctuation, and sequencing
- Comprehends very simple sentences or a simple paragraph
- Parts of speech, gender, number, tense, etc.
- Comprehends grade-appropriate texts or poems of intermediate difficulty
- Identifies different text types
- Identifies features of a text type (narrative)
- Comprehends complex passages of high difficulty

Skills assessed in Mathematics:

- Number Sense {related to concepts and basic number competency}
- Fraction, Decimal, Ratio and Percentage
- Basic shape, Geometry and Visual Estimation
- Algebra {Concepts and application}
- Mensuration {Area, Volume and Surface area}
- Measurement, Data, Interpretation, Analysis and Graphs
- Application in daily life, Commercial Mathematics, Word and Visual Problem
- Reasoning and Problem Solving {advanced or challenging problems}

NALO also examines student and teacher factors related to students' learning outcomes.

The value of NALO findings are multiple: (a) support a better understanding of the learning issues and distribution of learning outcomes by location and gender and (b) provide inputs to shape policies towards the improvement of learning for all.

The strength of NALO and **setting benchmarks**: A quick review of available NALO available reports,¹⁸ indicates that the NALO provides distributional information such as mean scores, as well disaggregation by gender, and location (urban/rural). However,

¹⁸ NALO Report, 2017.QAD, MoE, Maldives.

distributional information on educational performance beyond mean scores by presenting (i) the Percent of Students Reaching Minimum Proficiency Benchmark (ii) the Percent of Students Reaching Intermediate Proficiency benchmark and (iii) the Percent of Students Reaching Advanced Proficiency benchmarks should be more clearly established. This will help to distribute findings on students' learning along with an achievement scale. Setting benchmarks is a part of the international assessment (Box 4.1).

Box 4.1: Setting benchmarks

Explaining learning outcomes scale as a benchmark: how PIRLS is doing?

To provide an interpretation of the results summarized on the PIRLS achievement scale for reading comprehension at the fourth grade, PIRLS describes achievement at four points along the scale as international benchmarks: Advanced International Benchmark (625), High International Benchmark (550), Intermediate International Benchmark (475), and Low International Benchmark (400). To develop the descriptions, the TIMSS & PIRLS International Study Centre conducted a scale anchoring analysis together with the PIRLS 2016 Reading Development Group (RDG). The descriptions of achievement at the International Benchmarks are based on the reading skills and strategies demonstrated by fourth-grade students achieving at each level of the scale. (PIRLS web site)

Fostering a culture of assessing learning outcomes: The re-establishment of the NALO in the Maldivian Education System and its delivery in 2015, 2016 and 2017, including the respective analytical reports, constitute a notable achievement. This is an achievement considering the time needed for NALO conception, administration and delivery. For instance, international assessments are delivered every 3 or 4 years to provide more time for analysis and use of results for adequate policy development. The MoE needs to review NALO administration and delivery with a view to reducing the frequency of NALO administration while reinforcing dissemination of NALO results and analysis along with coordinated work to inform policies to improve learning.

On the assessment of technical capacity: A Master of Education (Educational Assessment) course was introduced at the MNU, supported by the MoE/QAD through the World Bank-supported project. The graduate students will be the enumerators to conduct the national assessments in the regions and to provide support to individual schools in establishing effective classroom assessment strategies.

A policy for National Assessment: has been drafted in 2018 and is in the process of being endorsed. This will be followed by an assessment framework that will guide the relevant agencies in conducting different processes of assessment, and for preparing the human and other resources for implementing the process.

4.2 Findings

1. A culture of national assessments is being established that helps to link inputs with the expected learning outcomes. The results of findings need to be more widely disseminated and discussed at appropriate levels of the system to ensure that action is taken to improve learning outcomes.
2. While NALO results are said to be widely shared, evidence from the field and feedback from various consultations with key stakeholders working in the system do not point to adequate awareness of system level student learning performance indicated by NALO results. A policy for National Assessment is in the process of endorsement.
3. Various types of assessments, school-based, NALO, and examinations are conducted by different MoE entities.
4. The curricula implementation and other innovations /reforms such as MGT need to be more directly linked with the findings in the NALO assessments (a type of impact evaluation).
5. NALO provides information on distribution regarding specific skills. This will help to establish learning benchmarks. International assessments are designed to analyse results based on learning benchmarks.
6. So far, no assessments are undertaken on school readiness at the level of the Pre-Primary, and on skills at the level of TVET.

4.3 Recommendations for policy options

1. The policy for National Assessment should consider the appropriate frequency of administering the NALO to provide sufficient time for analysis and policy response.
2. Further coordination is needed among entities responsible for classroom-based assessment, NALO and examinations.
3. Use the opportunity of NALO to link learning results with ongoing changes in the classroom, curricula reform and Multi-grade teaching to establish impact evaluations. Strengthen the relevance of NALO questionnaire to the national

- curriculum by ensuring that the type and level of questions that are assessed from each competency are linked with the competencies in the new curriculum.
4. Establish benchmarks for learning outcomes distribution and comparison with other similar countries through participation in international assessments.
 5. Develop new assessments, especially in the area of Learning Readiness. The following could be considered: (i) child development and learning readiness before Grade 1 and (ii) Skills Assessment in and out of school.

4.4 National Assessment of Learning (NALO) - grades 4 and 7

National Assessments are administered uniformly using the same sets of test papers across the nation. The objective of National Assessments is to assess performance against national standards and learning goals and provide feedback to policymakers and key stakeholders. The results of such assessments serve as a common metric for all the atolls, islands and schools. The importance of the Ministry of Education to continually and rigorously focus on results and on the assessment of effectiveness is well known (Greaney and Kellaghan 2008). To achieve this, it is important to ensure that a quality Educational Assessment is carried out with quality instruments. If assessment instruments are poorly designed, the assessment can be a waste of time and money (Greaney and Kellaghan, 2008).

4.4.1 NALO 2017 and comparison with the years 2015 and 2016

During the initial editing phase of the present ESA, the Quality Assurance Department (QAD) released the report of the NALO 2017. While the timeline was tight to incorporate all results, it is crucial, for policy development purposes, to include at least the comparative average marks of the NALO in 2015, 2016 and 2017 in English, Math and Dhivehi.

The results of Table 4.4 show a comparison of the average marks of the NALO of Dhivehi, Mathematics and English from the years 2015, 2016 and 2017. The results show that the average marks of Grade 4 Dhivehi have decreased while that of Grade 7 has increased. There is no significant change in Grade 4 or Grade 7 English. However, there is a slight increase in Grade 7 Mathematics. Although there are some differences in the NALO marks in 2015 and 2017, it should be noted that NALO 2015 was undertaken while the students were given instructions based on the old curriculum while NALO 2017 was carried out while the students were instructed on the new curriculum. Hence, there can be a change due to the change in competency levels and instructional design.

Table 4.4: Students' Achievements in Dhivehi, English and Mathematics in Grades 4 and 7 (2015-2017)

	Dhivehi			English			Mathematics		
	2016	2017	% Change	2015	2017	% Change	2015	2017	% Change
Grade 4	62.20	56.80	-5.40	52.90	53.17	0.27	57.50	57.04	-0.46
Grade 7	56.76	66.00	9.24	51.10	49.84	-1.26	44.60	49.47	4.87

Source: Quality Assurance Department, MOE (2018)

The 2017 report finds that Maldivian girls outperformed boys in all 3 subjects in both Grades 4 and 7 across the Maldives. A multiple regression analysis showed that students in the outer islands consistently outperformed students in Malé in Dhivehi language despite having a lower percentage of qualified teachers than in Male'. By contrast, students in Malé outperformed students in the outer islands in English, with the exception of a few outer islands. A range of issues needs to be also considered in the analysis of factors impacting learning outcomes: curricula implementation, quality of textbooks and teacher guides, as well as content and pedagogy of initial and in-service training, among others.

4.5 The NALO 2016

The objective of the NALO in the Maldives was to carry out a National Assessment of learning outcomes of Grades 4 and 7 and to find out the factors that are associated with the students' results. A stratified random sample of 2,567 students and 219 teachers from Grade 7, and 2,535 students and 205 teachers from Grade 4 were selected for the survey from 112 schools. The English and Mathematics achievement tests and the student questionnaires were administered to all students in Grades 4 and 7 in the sampled schools. The teachers' questionnaires were simultaneously administered to all the teachers who taught English and Mathematics in 2015 in the schools of the selected students.

4.5.1. Mathematics for Grade 4

As shown by the normal distribution curve of Grade 4 Mathematics, the standard deviation is 15.6, which means that the marks deviate from the mean by quite a large value. The curve is skewed to the right, which shows that most students score more than 50. There is also a large difference between the minimum and maximum values showing a disparity of marks among students.

Figure 4.1: : Normal distribution curve of Grade 4 Mathematics

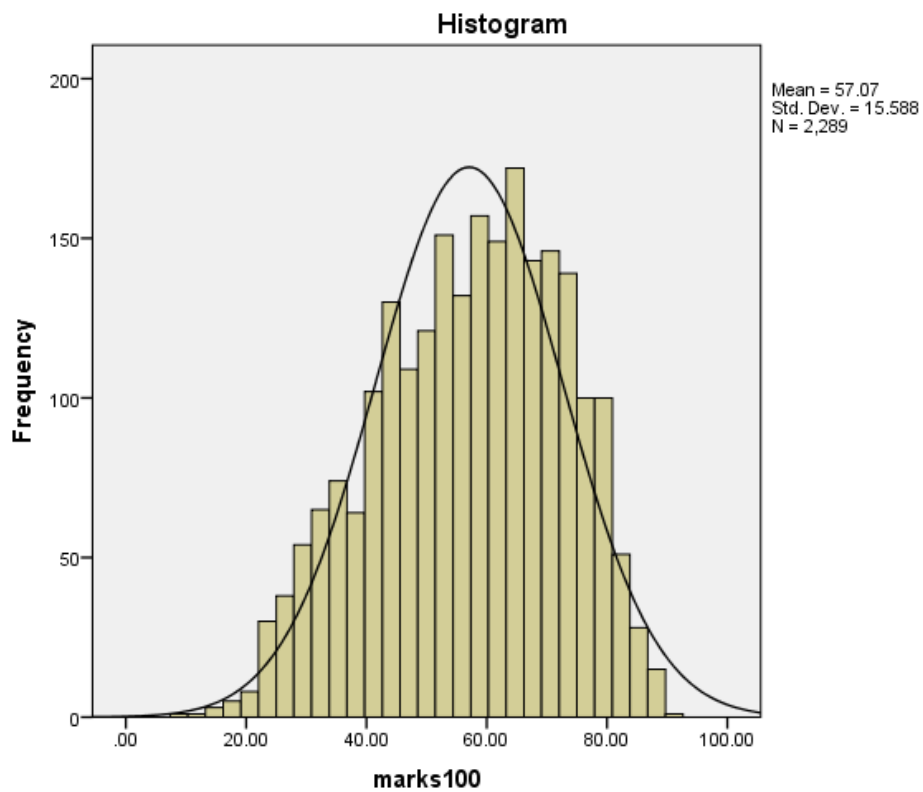


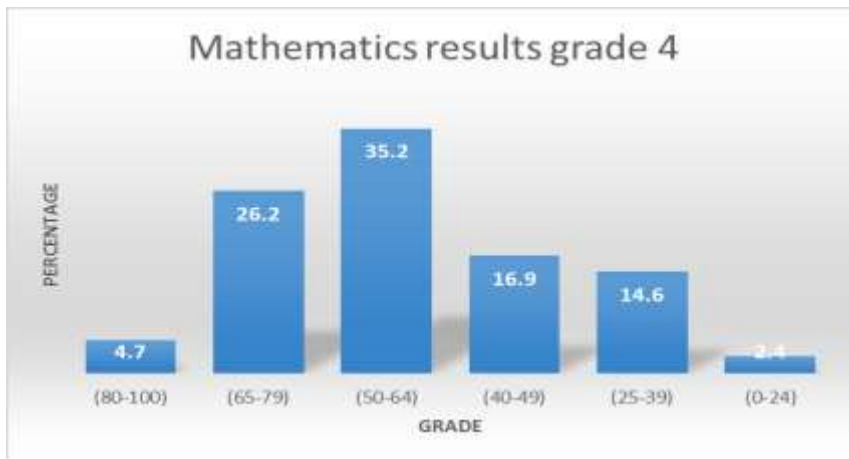
Table 4.5: Descriptive statistics of Grade 4 Mathematics

Descriptive	Value
Mean	57.07
Standard Deviation	15.6
Minimum	8.8
Maximum	91.2

The analysis of data shows that the mean (average) score of Grade 4 Mathematics for the whole nation is 57.5. The lowest score is 8.8 and the highest score is 91.2.

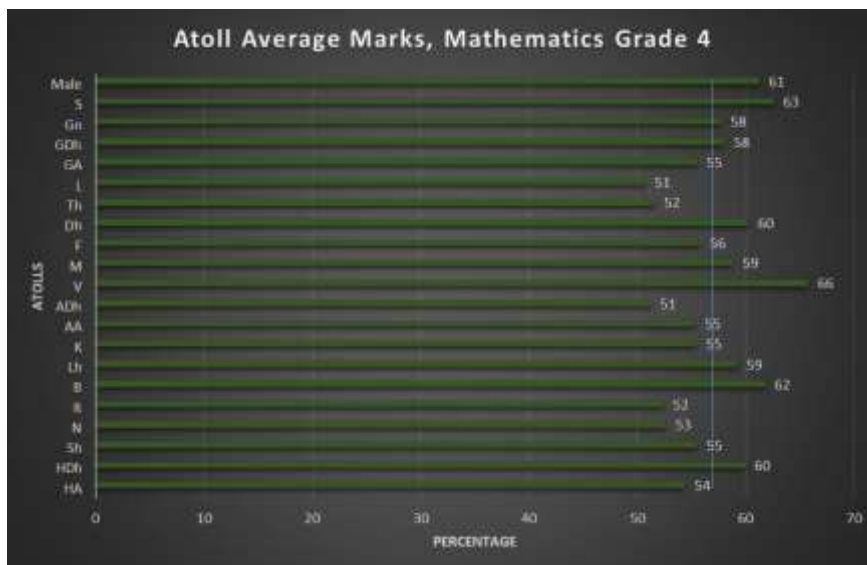
Figure 4.1 shows that only 4.7% of Grade 4 students achieved above 80% in Mathematics. The majority of the students achieved higher than 50% in Mathematics. However, there are 2.4% of students whose scores were in the lowest 24 percentile of the marks 2.4. The data indicate that Seenu Atoll, Vaavu Atoll and Baa Atoll have higher mean Mathematical scores compared to other atolls (figure 4.2). It is an interesting fact that the mean Mathematics score for female students is significantly higher than that of male students (Figure 4.3).

Figure 4.2: Mathematics results and National average score



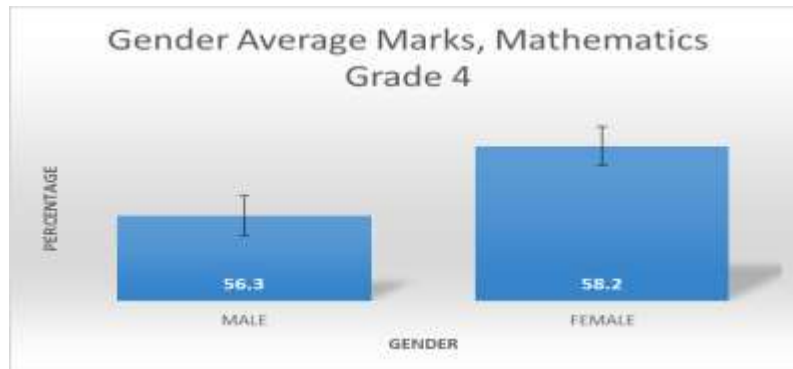
Source: Quality Assurance Department, MoE, 2017

Figure 4.3: Mathematics results and Grade 4 atoll average



Source: Quality Assurance Department, MoE, 2017

Figure 4.4: Gender and Mathematics score



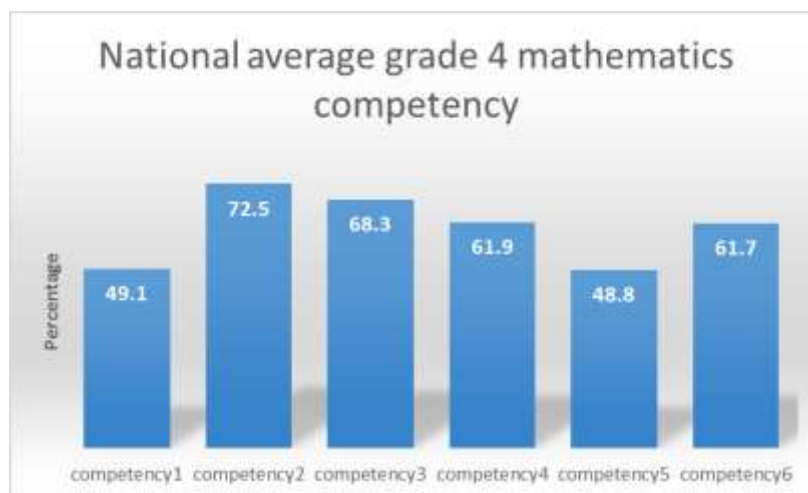
Source: Quality Assurance Department, MoE, 2017

4.5.2 Mathematical competency skills

The Mathematical competencies on which Grade 4 students were assessed included:

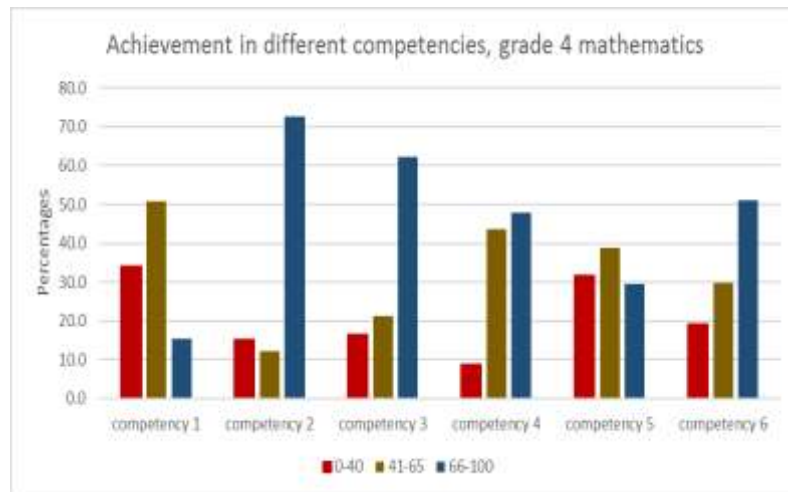
1. Number Sense {related to concepts and basic number competency}
2. Arithmetic Operations {four basic operations, properties and shortcuts}
3. Fractions {concepts and applications}
4. Basic Shapes {geometry and visual estimation}
5. Measurements, Data Interpretation, Analysis and Graphs
6. Application in daily life {commercial Maths, word and visual problems}.

Figure 4.5: Mathematics competencies, the national average



Source: Quality Assurance Department, MoE, 2017

Figure 4.6: Achievement in different Mathematical competencies



Source: Quality Assurance Department, MOH, 2017

Figure 4.5 shows the mean scores for different Mathematical competencies of Grade 4 students. Students scored best on competency two which is arithmetic operations {four basic operations, properties and shortcuts}. Figure 4.5 also shows the data disaggregated into different score bands. In the competency two, more than 70% of the students scored above 66%. More than 30% of the students scored less than 40 % in competency one. As the level of higher-order thinking increases from competency two to five, there is a trend which shows a decrease in the percentage of students who score well. This means students scored less in higher order thinking skills.

4.5.3 English for Grade 4

The table and normal distribution curve of Grade 4 English shows that the standard deviation is 21.0 which means that the marks deviate from the mean by a very large value. The curve is not skewed. However, there is a very large difference between the minimum and maximum values showing a disparity of marks between students in Grade 4 English.

Figure 4.7: Normal distribution curve of Grade 4 English

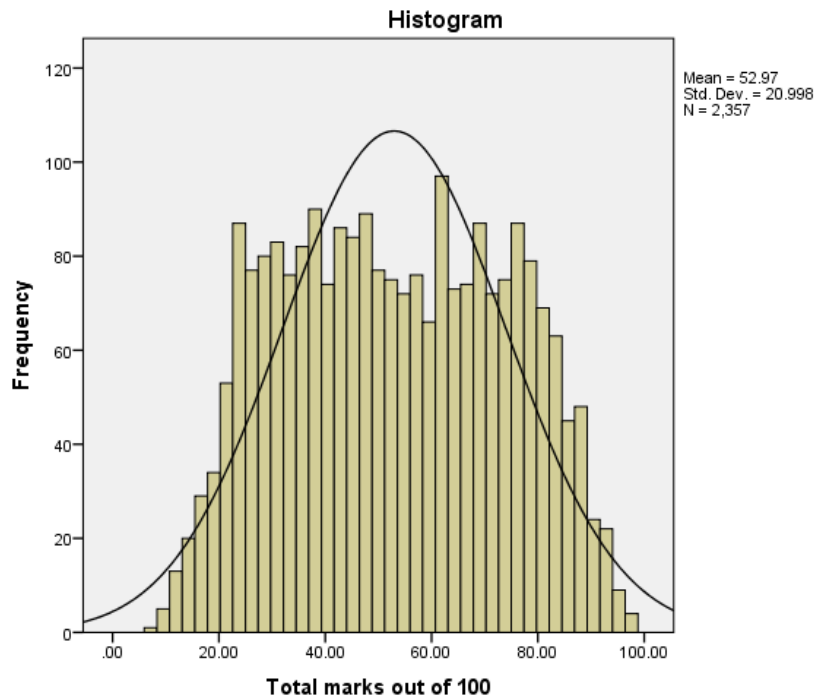
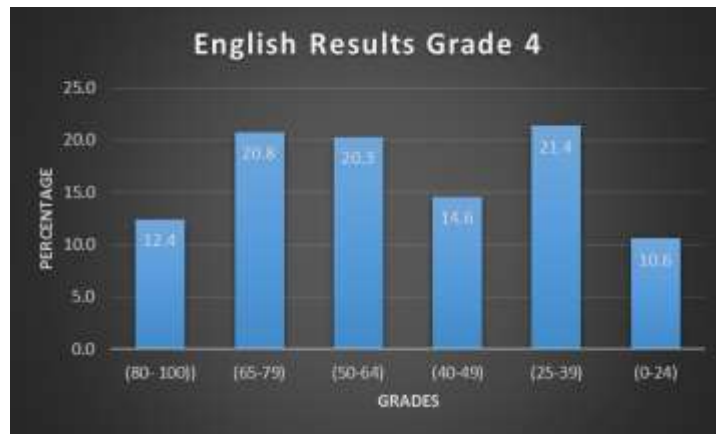


Table 4.6: Descriptive statistics of Grade 4 English

Descriptive	Value
Mean	52.9
Standard Deviation	21.0
Minimum	7.1
Maximum	97.6

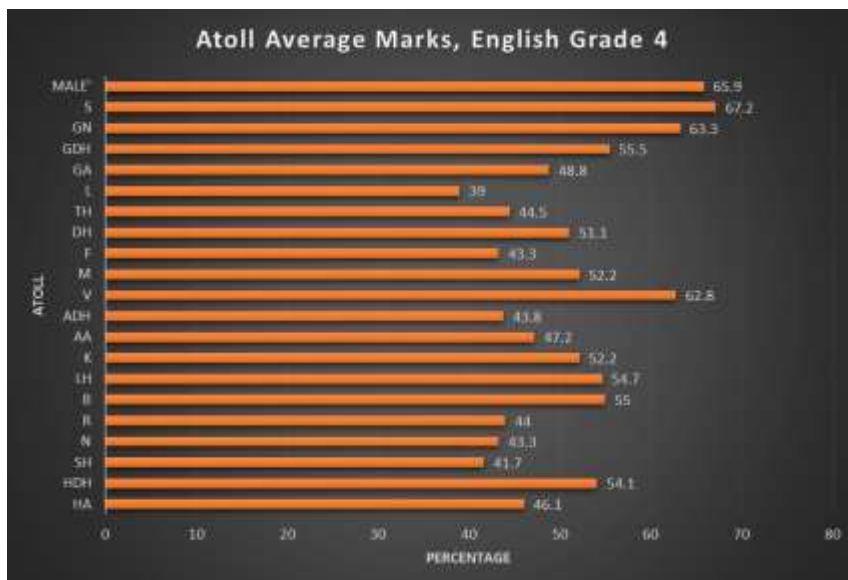
The national average marks for Grade 4 English is lower (52.9%) than that for Mathematics. In addition, the percentage of students who scored above 80 marks is lower for English compared to that of Mathematics (Figure 4.6). More 10% of the students' scores were in the lowest 24 percentiles of the marks. Further analysis of the data shows the mean scores of English are higher for Malé, Gnaviyani and Seenu Atolls compared to the other atolls (Figure 4.7).

Figure 4.8: Grade 4 English results



Source: Quality Assurance Department, MoE, 2017

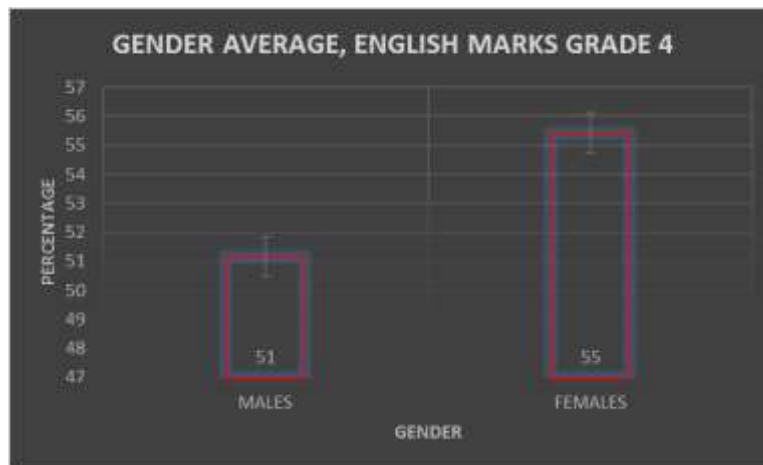
Figure 4.9: Grade 4 English results by atolls



Source: Quality Assurance Department, MoE, 2017

The results also show that there is a statistically significant relationship between gender and English scores. The mean English scores for female students is higher compared to that of the male students (figure 4.8).

Figure 4.10: Grade 4 English results by gender



Source: Quality Assurance Department, MoE, 2017

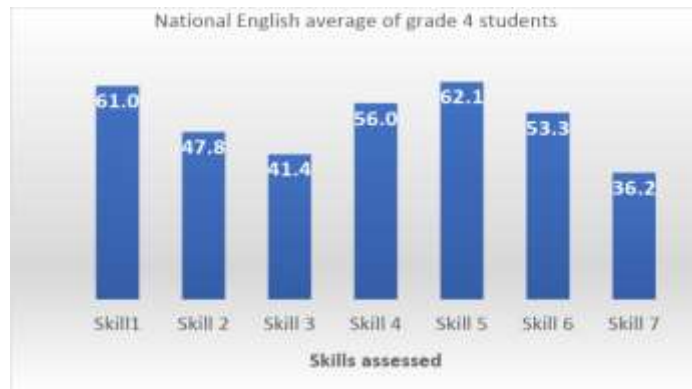
4.5.3 English Competency Skills

English Language skills of Grade 4 students which were assessed consisted of the following.

1. Knows names of objects, birds and animals not seen in daily life
2. Knows meanings, spellings, and opposites of words used in daily life
3. Correct sentence formation, punctuation, and sequencing
4. Comprehends very simple sentences or a simple paragraph
5. Parts of speech, gender, number, tense, etc.
6. Comprehends passages of intermediate difficulty
7. Comprehends complex passages of high difficulty.

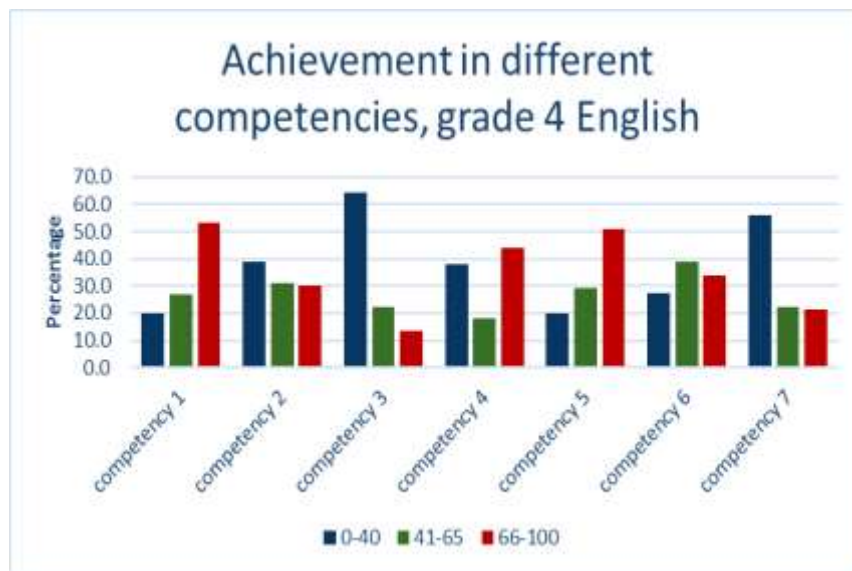
A comparison of the mean scores for different skill sets showed that the highest mean scores were found for skill five: “parts of speech, gender, number, tense, etc.” Students scored least in skill number 7: “comprehension of complex passages of high difficulty” (Figure 4.9). As shown in figure 10, more than 50% of the student scored above 65 in skill number one: “knows names of objects, birds and animals not seen in daily life”. On the contrary, more than 60% of the students scored between 0 and 40 in competency 3: “correct sentence formation, punctuation, and sequencing”.

Figure 4.11: Grade 4 mean English competency scores



Source: Quality Assurance Department, MoE, 2017

Figure 4.12: Achievement in different English competency scores for Grade 4



Source: Quality Assurance Department, MoE, 2017

Figure 4.13: Normal distribution curve of Grade 7 Mathematics

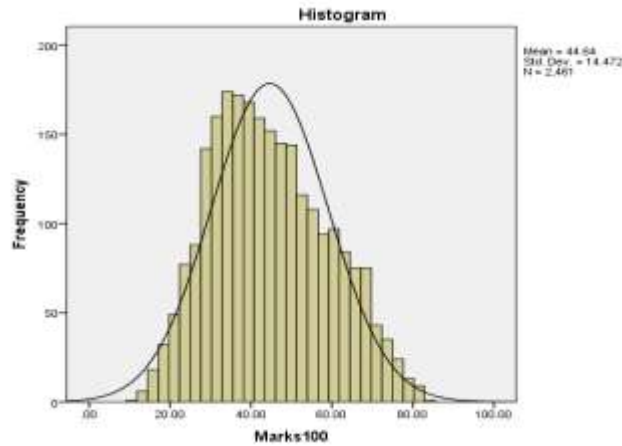


Table 4.7: Descriptive statistics grade 7 mathematics results

Descriptive	Value
Mean	44.5
Standard Deviation	14.5
Minimum	10.5
Maximum	84.2

The normal distribution curve of the Grade 7 Mathematics shows that the standard deviation is 14.5 which means that the marks deviate from the mean by quite a large value (Figure 4.11). The curve is a little skewed to the left which shows that most students score less than 50. There is also a large difference between the minimum and maximum values showing a disparity of marks among students in Grade 7 Mathematics, but the difference is smaller compared to Grade 4 Mathematics.

The analysis shows that the national average for Grade 7 Mathematics is below 50% (44.6%) in the Maldives (Table 4.5). The national average for Grade 7 English is higher than that for Mathematics but reaching just above 50% (51.1%). Similar to Grade 4 English and Mathematics results, the female students did better than the male students in both subjects.

Figure 4.14: Normal distribution curve of Grade 7 English

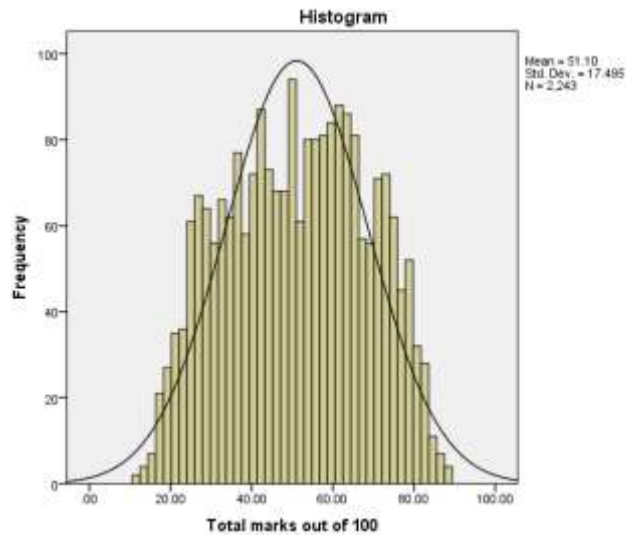


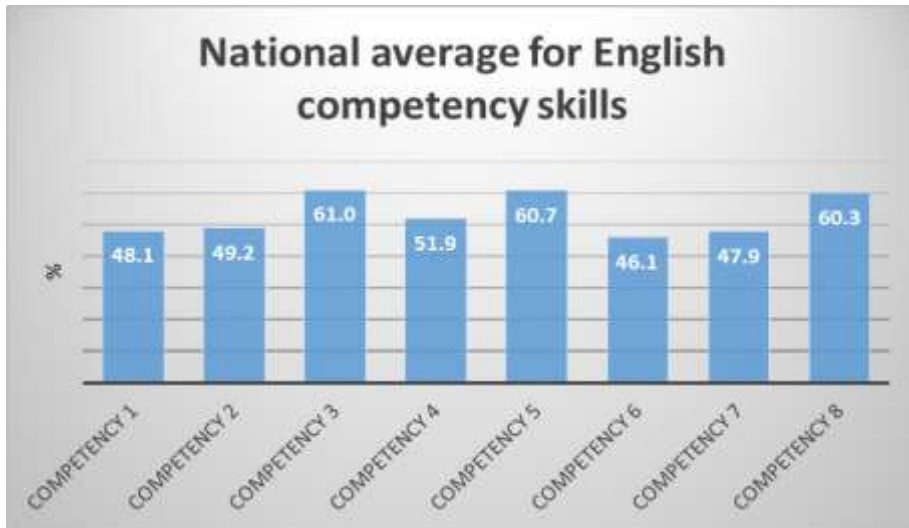
Table 4.8: Descriptive statistics Grade 7 English results

Descriptive	Value
Mean	51.1
Standard Deviation	17.5
Minimum	11.5
Maximum	88.5

The normal distribution curve of the Grade 7 English shows that the standard deviation is 17.5 which means that the marks deviate from the mean by a large value (Figure 4.12). The curve is not skewed to the right or left, but there is a significant difference between the minimum and maximum values showing a disparity of marks between the students in Grade 7 English. This difference is lower compared to Grade 4 English (Table 4.6).

Students scored best on competency three which is, “correct sentence formation, punctuation, and sequencing”. However, there were only two items in the paper which assessed these competencies. Students also scored fairly well in competency five and eight. Students scored least in the competency six: “understanding information presented in authentic material”, (Figure 4.13).

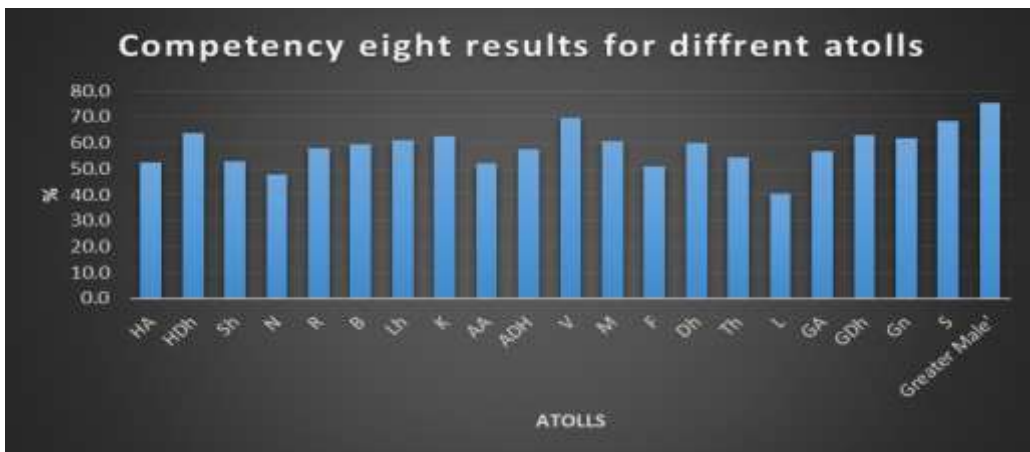
Figure 4.15: National average for Grade 7 English competencies



Source: Quality Assurance Department, MoE, 2017

Although competency eight involves comprehending complex passages of high difficulty, the national average for this competency is above 60% which is quite high showing a good understanding of a complex language. A further disaggregation by the atolls shows that the average score for students in greater Malé is more than 75%. Laamu Atoll has a mean score of 40% for the same competency (figure 4.14).

Figure 4.16: Mean scores for competencies eight by atoll



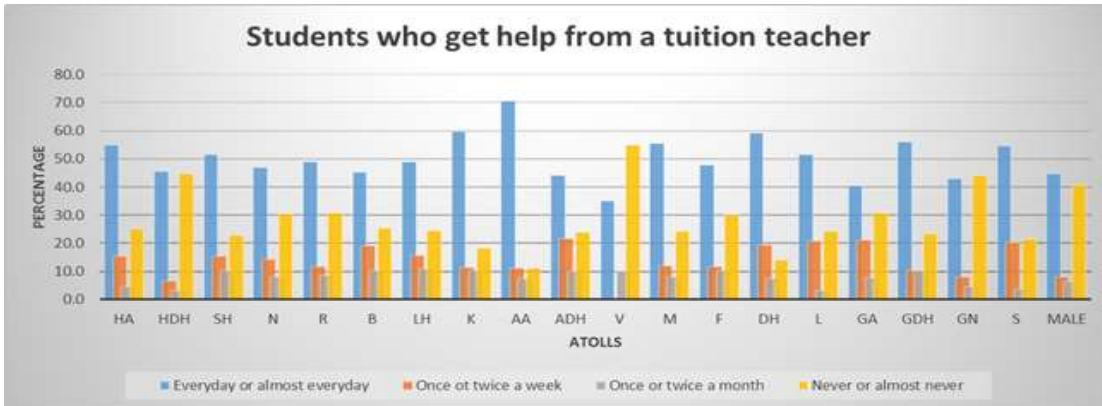
Source: Quality Assurance Department, MOE, 2017

4.5.5 Factors influencing learning outcomes

A large percentage (50%) of the students of Grade 4 in the whole country stated that they get help from a private tuition teacher on a daily basis. Only 29% of the students stated

that they never or almost never get private tuition. A similar trend in private tuition is seen in each atoll when the data were disaggregated by the atolls (Figure 4.15).

Figure 4.17: Students who take tuition in Grade 4

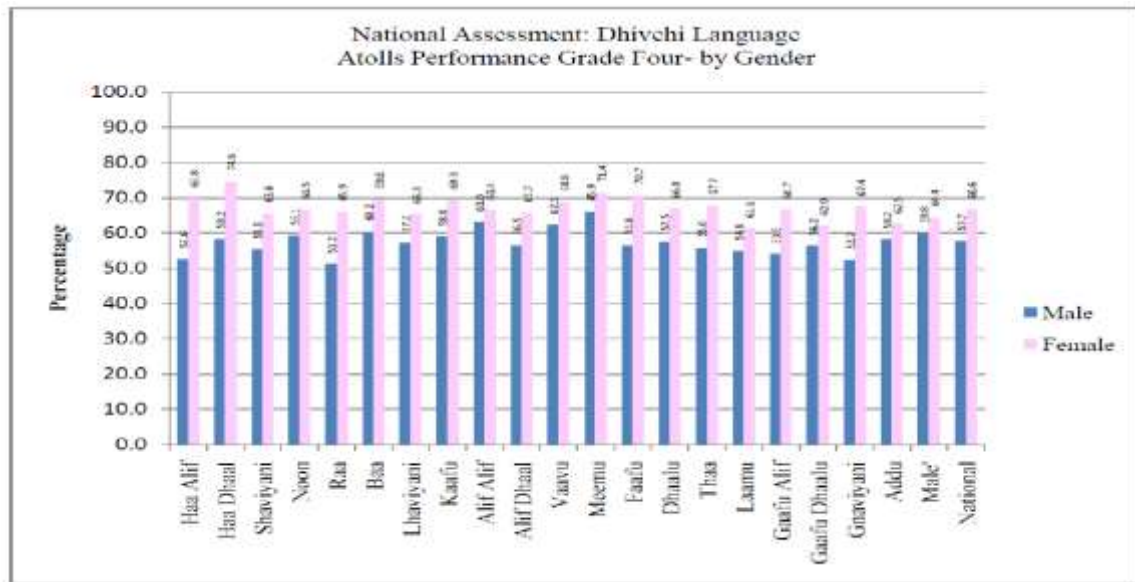


Source: Quality Assurance Department, MoE, 2017

4.5.5 Dhivehi Grades 4 and 7

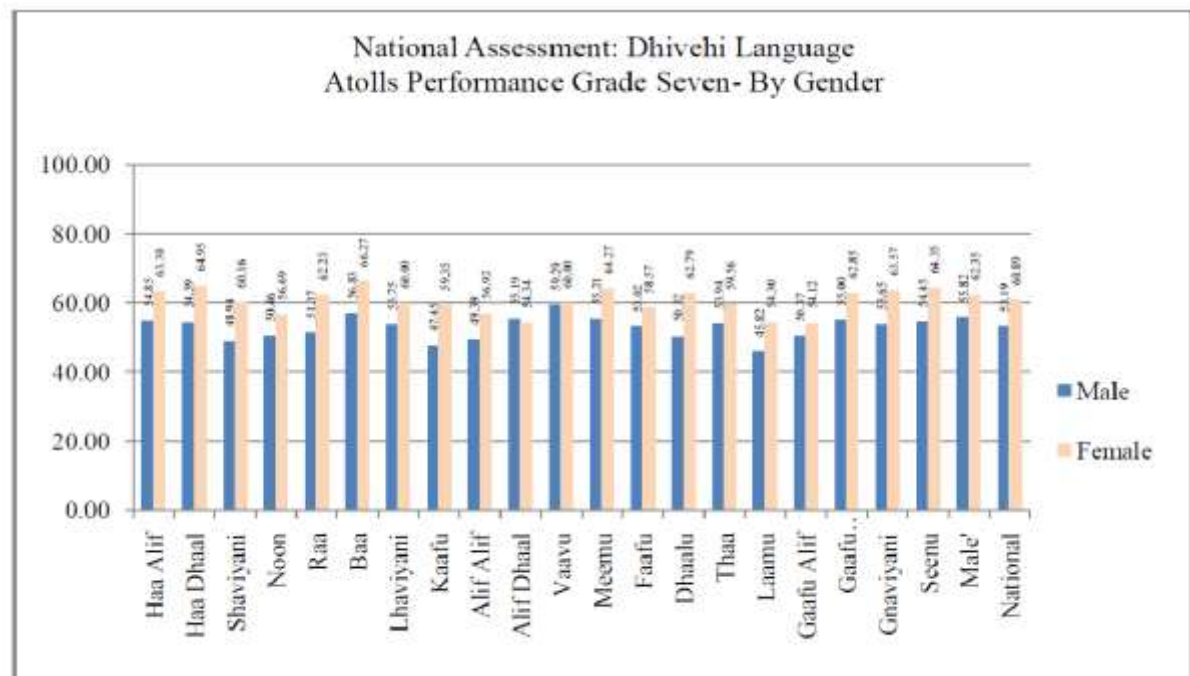
The average achievements of Grade 4 students' Dhivehi Language in 2016 NALO assessments is 62.2% compared to their counterparts in Grade 7 who have achieved only 56.76%. This indicates that approximately 37.8% of the students in Grade 4 and 43.24% of students in Grade 7 failed to achieve the minimum pass percentage of 40%. Gender analysis of both Grades 4 and 7 students in Dhivehi Language assessments showed a higher proportion of female students achieving the desired outcomes than the male students (Figure 4.16 and 4.17).

Figure 4.18: National Assessment of Dhivehi Grade 4 by gender



Source: Quality Assurance Department, MOE, 2017

Figure 4.19: National Assessment of Dhivehi Grade 7 by gender

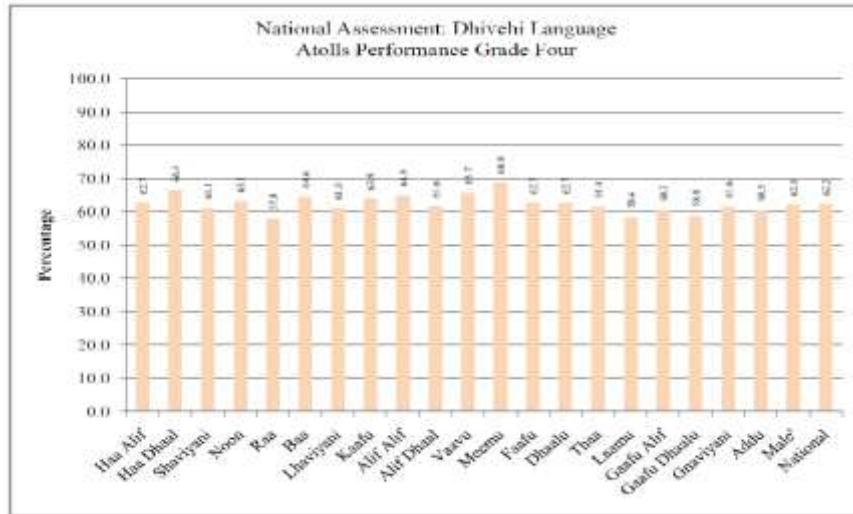


Source: Quality Assurance Department, MOE, 2017

A relatively small difference between the outcomes of outer island schools in the country was observed in both Grades 4 and 7 (figure 4.18 and 4.19). Although the difference is

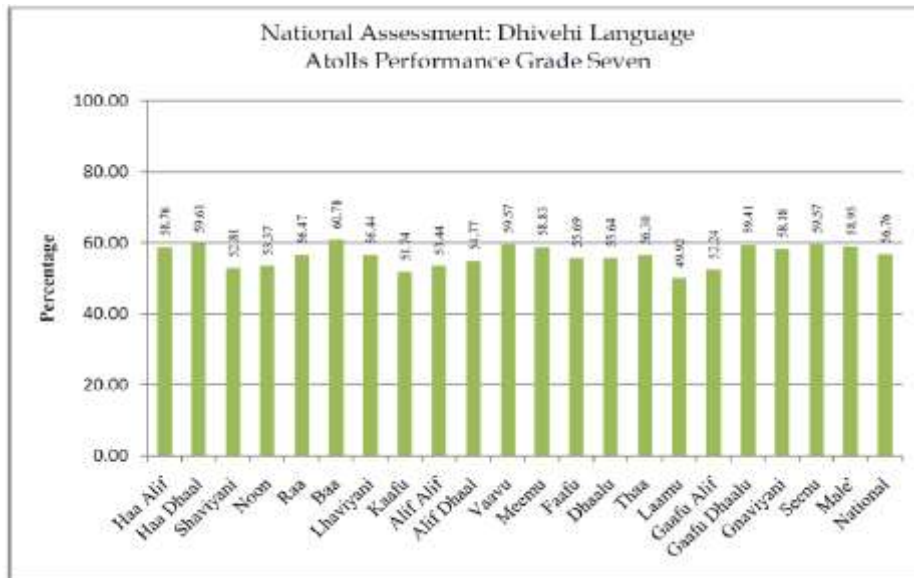
small, similar to English and Maths, Laamu Atoll seems to perform lower than the other atolls.

Figure 4.20: Dhivehi Average Atoll Levels Grade 4



Source: Quality Assurance Department, MoE, 2017

Figure 4.21: Dhivehi Average Atoll Levels Grade 7



Source: Quality Assurance Department, MoE, 2017

4.5.6 GCE Ordinary Level and SSC Exams

As shown in Table 4.9, improvement is shown in the pass rates in Mathematics and English Language in GCE O' Level and SSC exams in a few schools. According to the external School Review report (QAD, 2018), some schools set academic targets and implemented the planned activities effectively to achieve them. The review report also mentions that parents and students in such schools believe that teaching and learning in schools are progressing well.

Tuition and school self-evaluation: A very high proportion of parents also agreed that teachers took extra classes and provided additional help to the students who were performing at different levels. In some schools, staff have received training in School Self-Evaluation (SSE). Based on the SSE, in some schools, a school improvement plan is prepared and is currently being implemented. These factors that indicate a high level of involvement of teachers and the school leadership in the evaluation, planning and implementation process may have contributed to the overall improvement in academic performance. The following table has been highlighted by QAD as an example of an island school that has shown clear progress in the pass rates at the GCE O'Level and SSC examinations.

Results from most schools, however, do not display clear progress in pass rates as has been achieved by this school over the period under review.

According to QAD external school review report (2018), there is variable information regarding students who are performing below their respective grade level in Dhivehi or English language literacy. Such surveys may need to be done more carefully and consistently to obtain reliable and useful system-level information to ensure that students are achieving literacy levels appropriate to their respective grade levels.

Table 4.9: Keyodhoo School National Examinations results (past 5 years) GCE O' Level and SSC

Year	2012			2013			2014			2015			2016		
Subject	Students sat in the exam	Students passed	Pass %	Students sat in the exam	Students passed	Pass %	Students sat in the exam	Students passed	Pass %	Students sat in the exam	Students passed	Pass %	Students sat in the exam	Students passed	Pass %
Islam	13	11	85	9	8	89	12	11	92	11	11	100	12	9	75
Dhivehi	13	10	77	9	9	100	12	11	92	11	11	100	12	9	75
English	12	6	50	9	5	56	12	8	67	11	7	64	8	8	100
Maths	13	4	31	8	4	50	11	6	55	11	7	64	8	7	88
Commerce	10	3	30	6	4	67	8	8	100	8	7	88	7	7	100
Economics	10	4	40	6	4	67	8	6	75	7	7	100	6	5	83
Accounts	8	1	13	9	1	11	12	5	42	10	5	50	7	6	86
F.Science	9	6	67	.	.	.	8	8	100	9	7	78	8	6	75
Comp.Sc	1	1	100	.	.	.	.	.	.	8	6	75	5	5	100
Comp.Hard				8	8	100									

Source: Quality Assurance Department, MoE, 2018

4.6 Findings on National Assessment of Learning Outcomes

1. It is evident from the NALO results that the proportion of 4th and 7th-grade students who have attained mastery level competence in language (Dhivehi and English) and Mathematics is low. Without appropriate interventions, it is unlikely that students without mastery of basic competencies in language and mathematics will perform well as they are pushed up to higher grades. This issue needs high priority and needs to be closely studied with a view to introducing appropriate interventions to improve the quality of the school system. Failure to address this may lead to many students not having the competence to follow a general education and may complete Lower Secondary education with very little success.
2. The comparative results in Dhivehi, English and Math show mixed results indicating to the need for a sharper focus on improving the quality of learning at the system level with particular attention to reducing disparities across

geographical locations and gender. Dhivehi results declined in Grade 4 and increased in Grade 7. There is no significant change in Grade 4 or Grade 7 for English, a slight improvement in Grade 4 and a slight drop in Grade 7. In Maths, there is stagnation in Grade 4 and a significant improvement in Grade 7. The distribution curves show that there is a persistent gap between the lower performing category of students and the higher performing one. Although there are some differences in the NALO results in 2015 and 2017, it should be noted that NALO 2015 was undertaken while the students were given instructions based on the old curriculum while NALO 2017 was carried out while the students were instructed on the new curriculum. Hence, there can be a change due to the change in competency levels and instructional design. The gender gap along with the learning gaps based on location continue to persist in the 2017 NALO.

3. The national average of Grades 4 and 7 English and Mathematics results are low compared to many other countries especially in some competencies (NALO 2015 and 2016).
4. Approximately 37.8% of the students in Grade 4 and 43.24% of students in Grade 7 failed to achieve the minimum pass percentage of 40% (NALO 2015 and 2016).
5. The average achievements of Grade 4 students' Dhivehi language are 62.2% compared to their counterparts in Grade 7 who have achieved only 56.76%. This indicates that approximately 37.8% of the students in Grade 4 and 43.24% of students in Grade 7 failed to achieve the minimum pass percentage of 40% (NALO 2015 and 2016).
6. Gender analysis of both Grades 4 and 7 students in Mathematics, English and Dhivehi language assessments showed a higher proportion of female students achieving the desired outcomes than male students (NALO 2015 and 2016).
7. Equity issues: there is a clear geographical difference in the results: a disaggregation of the results by atolls showed that Laamu Atoll performed lower than all the other atolls. Greater Malé, Seenu and Gnaviyani Atoll have the highest results (NALO 2015 and 2016).
8. Students scored generally lower in competencies based on higher order thinking. Benchmarks are also needed to be clearly identified based on the new curriculum.

4.7 Recommendations

1. Further analysis is needed to understand the underlying factors behind such a large number of students taking private tuition in the Maldives and on parameters impacting learning such as the effect of private lessons (tuition) taken outside the school-based instruction.
2. Further analysis needs to be conducted to explore the reasons for the stagnation and drop in learning outcomes with a particular focus on curricula implementation, textbooks and teacher's guides.
3. Develop and establish strategies to address gender parity issues in the quality of learning, since girls achieve significantly better results than boys. For that, further analysis is needed to find out the reasons why male students are not performing as well as female students.
4. Develop strategies to address the geographical disparities in Mathematics, English and Dhivehi language. In undertaking such an analysis, it would be important to identify the reasons behind low grades in certain locations (atolls).
5. Instructional strategies need to be carefully developed to improve the Mathematics, English and Dhivehi learning outcomes results. There is a need to instil higher order thinking skills since students scored lower in these competencies.

4.8 Curriculum reform to improve learning

Curricula is a key component to achieve Sustainable Development Goal 4 to ensure inclusive equitable and quality education and promote lifelong opportunities for all, by defining content and pedagogy promoting learning outcomes (GEM, UNESCO 2017).

The International Bureau of Education (UNESCO/IBE, 2015) defines 3 types of curricula: **formal curricula**, the **implemented curricula** as it is presented in the classroom, and the **learned curricula** as it is learnt by students. It is thus, the key to consider the 3 types of curricula in the analysis of curricula reform to understand the underlying factors of success and weaknesses.

4.8.1 Overview of the national curricula reform

In the Maldives, the national curriculum was introduced in 1984 and was revised in 2000. Another revision began in 2006, seeking to draw on educational best practice on curricula internationally, and drawing inputs from the curricula frameworks in the UK, Australia

and New Zealand. This revision was the result of extensive consultation with all key education stakeholders, including members of the general public, parents, and educational professionals (Brief Study, MNU, 2016)¹⁹.

Since 2015, with support from UNICEF, new curricula for all grades defining values, expected learning outcomes and key skills and competencies, is being rolled out. The new National Curriculum Framework (NCF) is based on eight competencies and was implemented through the production of teaching and learning materials and teacher training programs. It appears to be generally well received by the schools.

The National Curriculum Framework is the blueprint aiming to organize the content of education in the Maldives; for that, it is considered as the most important policy framework trying to structure content to learning and to the broad education in the Maldives. The National Institute of Education of the MoE is responsible for its implementation.

The aim of the NCF is “to build knowledgeable future generations, possessing the skills, values, and attitudes needed to be successful in both the Maldives and in the global community”. To achieve this goal, 7 Key Competencies, across 8 Key Learning Areas are defined: Islam and Spirituality; Language and Communication; Mathematics; Environment, Science and Technology; Health and Wellbeing; Social Sciences; Creative Arts; and Entrepreneurship.

Further to curriculum content, the NCF also seeks to provide guidance on effective teaching and school management practice through the School Pedagogy and Assessment Guide (NCF, 2014).

To better understand the level of implementation of curricula reform as well as achievements, issues and responses to the issues, the following sources of information were used: (i) the findings of the brief study, “snapshot” on the implementation of the Curriculum reform prepared in 2016 but unpublished, prepared by a team of the Maldives National University (MNU), (ii) the report on the external reviews of 2016-17, prepared by the Quality Assurance Department (QAD) of the MoE in Feb 2018; (iii) the issue paper on curricula for the ESA, prepared by NIE, and (iv) the findings from the focus

¹⁹ MoE, 2016 (unpublished study). Brief Study, Preliminary study into implementation of the National Curriculum Framework. Prepared by a team of the National University of Maldives, supported by the UNICEF, Male, Maldives.

group discussions during ESA team field visits, Feb 2018). A tentative analysis of the trends identified by NALO in 2015, 2016 and 2017, under the light of the curricula implementation in the classes, especially in Grade 4 in Maths, English and Dhivehi, were not found.

Progress on implementation: By 2015, curricula implementation covered the Foundation Stage (2 years of Pre-Primary) and Key Stage 1 (Grades 1, 2, and 3); in 2016 it covered Key Stage 2 (Grades 4, 5 and 6). By 2017, it covered Grade 7 of Key Stage 3; and by 2018 the plan is to cover Grade 8 of Key Stage 3. Changes were brought to all the syllabi of the various subject areas in the Primary and Lower Secondary programs, with expected learning outcomes, along with a set of indicators. Learning outcomes refer to knowledge, skills and values. Textbooks, teacher’s guides and other learning materials were developed, and training to teachers in the form of Training of Trainers (TOTs) was delivered.

Quality of teaching and learning materials: Several learning materials were produced to support the curricula reform, some in collaboration with local authors and others through a partnership with Cambridge University Press (CUP), India. The table below shows the number of student’s textbooks and teacher’s guides that were produced from 2015-2017.

Table 4.10: Learning materials produced from 2015-2017

Year	Student’s books	Teacher’s guides
2015	33	33
2016	27	30
2017	26	23
Total	86	86

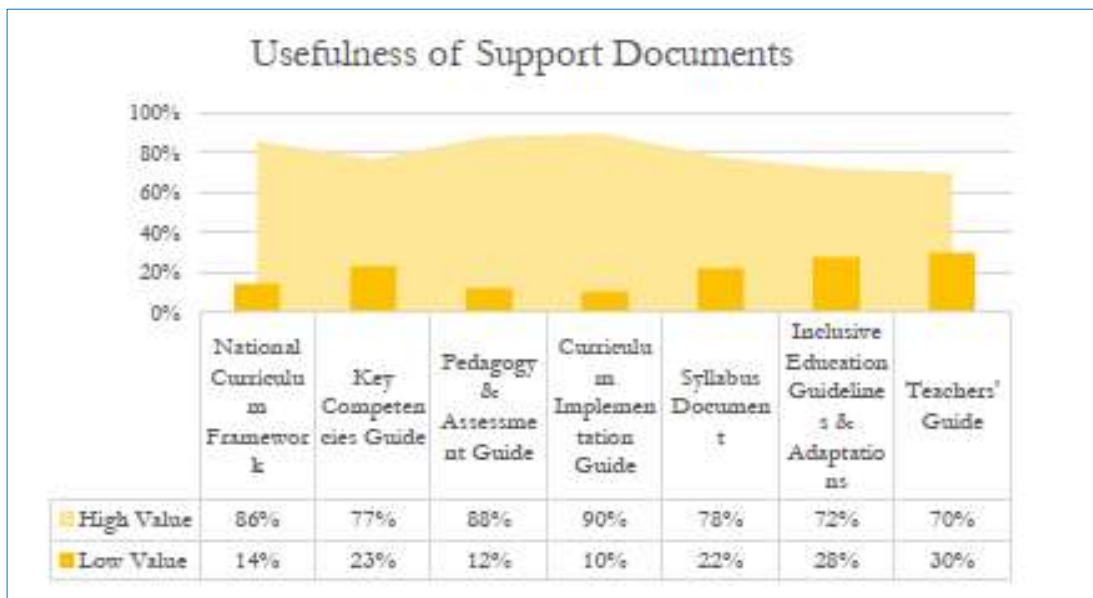
As the table shows, a total of 172 books were produced from 2015 to 2017 across KS-1 to KS-3, which are Grades 1 to 8, delivered for free to schools. Each child receives the recommended textbooks and the teachers the prescribed teacher’s guides. In most cases, schools receive the books by the end of the previous year, with a few cases where they may receive at the beginning of the new academic year.

The teacher’s guides show how to plan and carry out the lessons and provide answers to the questions in the student’s books, as there are many teachers who do not have enough expertise in certain subject areas and therefore, require additional support. Students and teachers rely heavily on textbooks and teaching/learning is heavily textbook-driven.

According to NIE, since curriculum developers work on the design, writing and finalizing of the teaching and learning materials, there is a close alignment between the outcomes of the syllabi and the topics and areas covered in the textbooks. The NIE confirmed that by 2018, all materials to facilitate curricula implementation are available for teachers and students.

A brief study (2016) has highlighted useful initial findings, such as how teachers view the usefulness of various resources including teacher’s guides (Figure 4-22).

Figure 4.22: Usefulness of various resources



Source: Data from Brief Study into the implementation of the National Curriculum, 2016

According to the NIE, Secondary textbooks are already endorsed by the examination boards. As for the Primary textbooks, only specific themes are evaluated such as issues related to human rights, disaster and risk reduction, gender sensitivity, life skills, and reproduction and health. By 2018, there is no available study assessing the quality of textbooks and teacher’s guides, including their use by teachers and students to support

learning. Thus, assessment of the teaching and learning materials at the pedagogical level and level of use in the classroom is yet to be done.

Teacher training and support to implement the curricula: Teacher training and support, together with the production of the teaching materials are 2 key components of a successful implementation of the National Curriculum Framework.

By 2016, teachers reported that the training was the main support component; in 80 percent of cases, this training was given primarily by leading teachers. 89 percent of interviewed teachers received support from the leading teachers more than 3 times. 27% of teachers and 37% of teachers received support from Curriculum Ambassadors and NIE Curriculum Developers respectively (Brief study 2016).

By 2018, the NIE presents a more complete picture regarding the training of the Curriculum Ambassadors. Training were offered to teachers using a cascade model. Curriculum Ambassadors (a type of teacher coaches) were assigned to provide assistance to schools regarding the implementation of the new curriculum. The number of trained Curriculum Ambassadors during the period 2015-17 is presented in Table 4.29.

Table 4.11: Number of Curriculum Ambassadors by Key Stages

Year	Key Stages	Number of Curriculum Ambassadors
2015	Key Stage 1 (Grades 1, 2 & 3)	204
2016	Key Stage 2 (Grades 4, 5 & 6)	187
2017	Key Stage 3 (Grades 7 & 8)	432

The NIE, following the cascade model and through the Curricula Ambassadors network, provides the training support to leading teachers and to all teachers.

Teaching and learning practices: Curriculum implementation in the classroom is one of the key factors to improve learning. This is particularly relevant for the Maldives, as the National Assessments in 2015, 2016 and 2017 show mixed results in terms of learning outcomes. The National Assessments, the compiled information from the brief study in 2016, and the synthesis (QAD 2018) of the external school reviews of 2016 and 2017 show

challenges on how the new curriculum impact teaching and learning in the classrooms in the Maldives.

A key challenge is a class-based assessment: it was reported (Brief study 2016; QAD 2018; and focus groups 2018) that teachers while implementing the new curricula, face challenges on how to apply the monitoring and learning assessment in the classroom. This may be due to the amalgamation of standardized and non-standardized/moderated marks, to the quality of teacher training based on practical, hands-on model (Brief Study 2016).

By 2018, it is reported that there has been an improvement on how to use classroom-based assessment more effectively. However, despite introducing a short online course for all the teachers, there is still a lack of understanding of classroom-based assessment practices (QAD Report on external reviews 2018). Parents also need more clarifications and understanding regarding the class-based assessments.

Teaching and learning practices under the National Curriculum: By 2016, the brief study highlighted salient progress and some issues and weaknesses during the implementation of the curriculum reform such as teachers' difficulty of understanding of the pedagogical and conceptual principles, and preparation of lesson plans and inadequate parental engagement in the education process. By 2017, the external evaluation (QAD February 2018) based on the self-evaluation reports of schools, underlines some improvement of the learning environment, and still highlights key pedagogical issues regarding classroom monitoring and assessment, and teaching for higher level cognitive skills. Finally, during the first period of curricula implementation, the results on learning outcomes are mixed, especially on improving high-level cognitive skills, or on reducing the geographic and gender gaps regarding learning.

Teaching and Learning Practices (Report on external reviews, QAD 2018): In general, the external review reports say little about the range of teaching skills employed by teachers in the classroom. It is highlighted:

- The difficulty of most teachers to formulate higher order questions to help deepen students' learning and understanding (in over 80% of external reviews). Instead, they express lower-order, recall-type questions. This type of questions hampers efforts to promote deeper, higher-order, critical thinking in students which in turn adversely affect the quality of their learning. It is important to examine the

possible factors behind this teaching practice. The QAD report advances the hypothesis of multiple factors: low quality of initial teacher training, limitation of teacher/student fluency in the language of instruction; cultural factors for specific groups of teachers.

- Difficulty to use ICT to support teaching and learning: In some cases, there is a poor use of audio-visual aids and ICT-based teaching aids including technology-based teaching/learning aids, and poor integration of library work with lessons where libraries exist, are also noted.
- Work in small groups: While considered important, the use of group work with the teacher serving as a skilled facilitator and the ability to create a friendly classroom atmosphere, it is not clear from the reports to what extent this practice is implemented.
- Preparing lesson plans: the external reviewers in many cases underline the issue of preparing good quality lesson plans in many schools.
- Competence-based teaching: Field observations and focus groups discussions found that teachers need additional training to understand how to carry out competency-based teaching.

4.9 Key findings

1. Implementation of the National Curriculum Framework in the Maldives is advanced with a production of an impressive number of teaching and learning materials, the installation of technology in schools/classrooms, as well as teacher and principals training and parents' awareness and a monitoring mechanism. The implementation of the curricula is a major milestone for the Education system in the Maldives. By 2018, 3 years later, there is a need to assess their quality using a specific quality assessment framework.
2. Information on curricula implementation in the classroom is provided through the NIE mechanisms of monitoring that includes classroom observations and through the External Schools Reviews 2016-18 undertaken by QAD. There is not yet an impact evaluation study to examine to what extent the curricula reform contributes to the improvement of learning.
3. Despite the innovative teaching and learning practices promoted in the NCF, some teaching practices continue the promotion of memorization rather than comprehension and higher order cognitive thinking skills. Classroom-based assessment remains an issue as well as the use of new practices with high-level cognitive thinking and questioning.

4. Some parents, especially in the atolls, express difficulties to understand the new curriculum, the new textbooks and the assessment modalities.

4.10 Recommendations

1. **Monitor the impact of the national curricula on learning outcomes:** In the mid-phase of the curricula implementation, it is recommended to study to verify the extent curricula reform contributes to the improvement of learning.
2. **Curricula monitoring and evaluation plan:** works on a mechanism to build externally validated assessment data which could be used by all agencies for support and intervention programs. For that, there is a need to operationalize a fully functioning comprehensive curriculum monitoring mechanism and prepare the next 5 years' curriculum implementation plan. Although the curriculum roll-out is expected to be completed by 2020, it requires careful analysis to understand how various components of the curriculum are implemented in the classroom. Studies need to be conducted on (i) understanding how the intended curriculum meets with the taught curriculum in schools; (ii) how key competencies are incorporated into teaching/learning and school programs, (iii) what pedagogical approaches are used, and (iv) identify the practised assessment approach and techniques, including Assessment for Learning (AFL).
3. **System-level capacity enhanced for teacher training and support:** Establish a decentralized system to build professional learning. It is important to work towards strengthening zone and atoll level curriculum implementation and monitoring. Proper intervention programs need to be geared at these levels. Professional development work at the national and school level need to be reviewed. Comprehensive subject-based programs need to be available at a more regular and systematic manner. For effective implementation of the curriculum, the preservice teacher training institutions need to advocate and incorporate many of the aspects of the National Curriculum in a more explicit manner. In addition, student-teacher ratios, especially in schools at both ends of enrolment sizes, need to be further reviewed for effectiveness, with respect to effective curriculum implementation.
4. **Technical capacity on curricula enhanced:** The technical expertise of staff at NIE, school principals and leading teachers at the school level, teacher trainers, and Teacher Resource Centre (TRC) Coordinators should be enhanced.

4.11 The Multi-grade learning in the Maldives: learning groups for excellence

The pressing requirements for education on new knowledge, skills and competencies for the 21st century (SDGs, UNESCO 2016), the for accessing information and knowledge through the new technologies, demographic and socio-economic changes, are some factors that compel the education systems to adapt the traditional age-group classrooms to emerging needs. Internationally there is an abundance of literature on how to manage and organize teaching and learning, beyond the traditional age-group classes.

While Multi-grade teaching is a known model to address teacher shortages, especially in the rural areas of low-income countries, more innovative modes focusing on how to personalize learning and tailor to the needs of students is widely spread in more advanced educational systems like in Canada, the USA, Australia, Finland among the group of top achievers in the world (PISA, 2016, OECD). An example of a good model of the multilevel classroom is implemented in Manitoba, Canada (see box below).

Box 4.2: Example of the multilevel classroom (Manitoba, Canada)

“The term multilevel classrooms refer to student-centred classrooms in which students learn across two or more grades and are taught by the same teacher for two or more years. In Manitoba, these classrooms are generally referred to as multi-age, Multi-grade, and combined classes. Some schools/divisions/districts also use the term alternative programming or flex programs when one teacher has a broad age-range of students for two or more years (...).”

“Decisions to create multilevel classrooms are based on pedagogical and/or demographic considerations: In communities with low student populations, all Early Years students, all Middle Years students, or all students from Kindergarten to Grade 8 may be taught in the same classroom. These classes, like the deliberately formed multilevel classrooms, may also emphasize a continuum of learning. Other schools may have two or more grades assigned to the same teacher to manage shifting enrolment. These classrooms are often viewed as a temporary measure within a school.”

Regardless of whether multilevel classrooms are created for pedagogical or demographic reasons, they can be seen as assets that promote quality learning”.²⁰

4.11.1. The Maldivian model of Multi-grade teaching (multi-level learning groups)

With the declining enrolment in some of the outer island schools, due to rapid migration to Malé region, and the resulting reduction in the number of students in the outer island schools, the Ministry of Education endorsed in 2014 a policy on Multi-Grade teaching. The aim of this policy was to strengthen the quality of teaching and learning in the small schools of the outer islands for equitable education service delivery. With the support of the World Bank, the model started in 2015 in Vaavu Atoll Education Centre (V. AEC), Vaavu Felidhoo, and by 2017 there were 43 schools with MGT in the most remote schools of the country (see Table 4.7). In reality these 43 schools, when placed on a continuum of low to high implementation of MGT pedagogy, would be spread out with around 5-6 schools that could be placed at the high end of the continuum. Most are likely to be placed around the centre and lower end of the continuum.

Table 4.12: Multi-grade Projection across the Years

	2015	2016	2017	2018
# of schools	19	38 (19 + 19)	43 (38 + 5)	43 (introduced K3 for already established 17 schools)
# of classes	20	46 (20 + 26)	55 (46 + 9)	93 (55 + 38) introduced Key Stage 3
# of students in all Multi-grade	239	560 (239 + 321)	695 (560 + 135)	1853 (695 + 1158)
# of teachers trained for Multi-grade class	172	454 (172 + 282)	544 (454 + 90)	834 (544 + 290)
days of training face to face per teacher	20 days	20 days	20 days	7 days

²⁰ Retrieved on March 18, 2018 from:

<https://www.edu.gov.mb.ca/k12/docs/support/multilevel/chap1.pdf>

Multi-grade classes visited by a facilitator	6	6	3	1
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Source: MoE, Policy Planning & Research Division, Multi-grade Profiles, 2018

The Maldivian innovative model of a typical Multi-grade Class: In a typical Maldivian Multi-grade class, there is a maximum of 20 students per class, combining two grades. Multi-grade classrooms receive adequate furniture and pedagogical materials (tables, chairs, home theatre systems, TVs, computers, lockers, shoe and bag racks, teacher tables, chairs etc.). Additional teaching materials are prepared by the teachers themselves. Library materials are still inadequate and very few schools have separate libraries. All schools with MGT were provided with internet facilities (although weak), and teachers do use the technology in their classroom teaching when necessary. Teachers are supported in their pedagogical duties by facilitators (usually the leading teachers). The teaching and learning process in the class is monitored by school principals and leading teachers on a monthly basis. At the Ministry level, evaluations are also carried out every year by the NIE teams.



Box 4.3: Multi-grade classroom settings

A case study from Baa Atoll, the Maldives

The ESA team visited a number of schools in Baa Atoll in the data gathering exercise for the analysis. It was observed that the four Multi-grade classrooms that were visited in two schools were taught by two teachers in each of the classrooms. The two teachers continue their instructions simultaneously, and the students appear to be engaged in the lessons.

Follow-up discussions with teachers as well as the school management revealed that teachers find Multi-grade teaching challenging. It was felt that there are more dialogue and engagement required to convince teachers and the management that Multi-grade classrooms are common even in the developed country contexts and that it is not inferior to monograde classroom settings. (Field Visit Report, February 2018)

Teacher's support: They are usually qualified primary teachers with 2-3 years of experience in the field. In addition, the teachers receive a short basic training on Multi-grade teaching. In-service teacher training was provided in two different phases and follow-up sessions are carried out on a continuous basis to cater for the difficulty and challenges faced by teachers to carry out the model. In addition, awareness sessions on the Multi-grade Teaching (MGT) model was provided for the parents, island councils, and principals.

Schools that lack qualified primary teachers hire teachers on a contract basis, who are not qualified teachers or Secondary teachers who lack basic primary teaching certificates. The general phenomenon of the unwillingness of qualified teachers to work in these remote islands also impacts the MGT. There are no additional incentives provided to teach in the MGT classes.



A snapshot of the implementation of Multi-grade teaching: the case of Vaavu Atoll

An in-depth case study was carried out from the year 2015-2017 at Vaavu Atoll Education Centre to better understand the modalities of the implementation. Methodology: data analysis from sampling technique through non-participant observation and interviews from teachers, parents and students in the case study school.

The Island named Felidhoo, with 638 inhabitants is located in Vaavu Atoll, the smallest administrative atoll in the country in terms of population. The school comprises 107 students and 32 staffs; and out of the total 17 teachers in the school, 6 are fully engaged in Multi-grade teaching.

The Multi-grade class in Vaavu AEC had started with the implementation of the newly reformed curriculum that has a cross-subject approach to make it more meaningful to the students.

Based on the analysis of collected data, the findings are discussed regarding instructional classroom environment, the perception of teachers, students and parents, teaching and learning practices, impact upon students and the teachers.

Pedagogical approach: The findings from observations revealed that the teachers utilized a variety of teaching strategies such as group work, demonstration, observation, project approach, peer teaching, presentation and quiz. In all the three lessons observed, it was evident that students were very lively and fully engaged in the activities assigned to them.

Teaching and learning in the MGT schools: According to the literature reviewed, despite the shortcoming of Multi-grade teaching, a number of positive impacts were visible upon students. Students were found to be more confident and enthusiastic. Whenever the teacher posed questions, everyone wanted to respond. Students became enthusiastic to talk more. When they had to present any task to the whole class, they enjoyed doing so

and everyone wanted the opportunity. During the activity time, while working in groups, they were found to be carefully listening to their peers who talk and assist each other in the completion of their work. Students had changed from passive recipients to active participants. Different teachers expressed similar views of the learning opportunities offered by Multi-grade teaching as those identified by Berry (cited in Little, 2006), reduced direct instruction, learn to learn, effects of peer instructions and impact on small group instruction.

The Multi-grade teaching process not only brought positive changes to students but also helped the teachers to enhance and upgrade their current knowledge. Through the process they were able to learn different teaching strategies, design interactive activities, adapt powerful classroom management techniques, apply methods to curb noises, and identify individual learner needs. In addition, unlike the conventional monograde classes, the teachers learned to dodge the sense of competition among students by understanding the individual differences. They had explored ways to strengthen the students' social relationships. The teachers reckoned that through the in-service Multi-grade teaching program, they have developed a great deal of knowledge in this useful pedagogy even though most of these teachers did not complete the official teacher training program.

The new QAD report (2018) on the external reviews 2016 and 2017 depicts some issues regarding the implementation of Multi-grade teaching: in a number of such schools, teachers faced difficulties to work in small groups, to apply classroom-based assessments, lesson plans preparation, inquiry-based teaching by formulating inquiry questions for high-level cognitive skills development. A factor influencing the teaching and learning practice in the classroom is that often untrained, contract teachers are employed for the Multi-grade classes who are not competent to effectively utilize the Multi-grade teaching approach. Highly practical training of teachers in the above areas and classroom support together with appropriate use of technology in the Multi-grade teaching classes may help to improve the quality of teaching and learning in the Multi-grade classes.

4.12 Findings on Multi-grade Teaching

1. **A “Multi-level learning classroom”:** It is found that the Multi-grade teaching promoted by MoE in some schools is different from the Multi-grade teaching generally found in low-income countries. The pedagogical model used in these schools is akin to “Multi-level learning classroom” implemented in some high-

income countries. Depending on a closer analysis of MGT practice in more schools a re-conceptualisation of the Multi-grade teaching to ‘Multi-level learning classroom’ is an option to be considered by MoE. Bearing in mind the experience and lessons learnt from MoE efforts in the recent past to expand MGT model more widely across the country, the sustainability of such a model will need to be an important consideration.

2. **Sustain the model for improving learning in remote schools:** The MGT model is trying to address the ways to develop a more mainstream and sustainable approach for these small schools with limited human resource capacity. Consequently, sustainability should continue to encompass availability of qualified, trained and supported teachers through collaboration with qualified resource teachers located elsewhere; incentives for teachers working in MGT; quality infrastructure, pedagogical materials and internet connectivity; continuous monitoring for support of teachers and schools with MGT and a greater awareness and involvement of parents to help them gain a better understanding of the MGT approach.
3. **Strengthen MGT to improve learning outcomes:** As of now, there is no information on how the MGT model impacts learning in the participating classes.

4.13 Recommendations on Multi-grade Teaching

1. A baseline should be established for the performance of students attending multi-grade classes.
2. A mechanism should be developed to monitor the impact of the MGT model on learning, if appropriate, using the NALO.
3. Video documentary of case studies of schools within the Maldives where MGT practices have been successful, need to be produced and made available to all schools through MoE website or other appropriate platforms accessible to schools.

4.14 Technology in education

Owing to the significantly dominant role of technology as well as educational priorities (inclusive education and education for all), changes are giving rise to new expectations on the nature and quality of teachers, curricula and learning environments.

As identified by OECD (2010) there are several “key drivers pushing technology as a key component for education system change, and these serve as central reasons that educators and education stakeholders should consider the growing relevance and implications of technology and technology-based school innovation”:

- Technology can perform several key functions in the change process, including opening up new opportunities that improve teaching and learning — particularly with the affordance of customization of learning to individual learner needs, which is highly supported by the learning sciences.
- The skills for an adult life include technological literacy, and people who do not acquire and master these competencies may suffer from a new form of the digital divide, which will impact their capacity to effectively operate and thrive in the new knowledge economy;
- Technology is an integral part of accessing the higher-order competencies often referred to as 21st-century skills, which are also necessary to be productive in today’s society.

4.14.1 The situation internationally

According to OECD (2010), students’ ICT use at home is often not paralleled by use at school, with more than 80% of 15 year-olds in OECD countries using computers frequently at home while the majority do not use them much in school. Comparatively, the use of ICT at home by low-income countries are lower. As in 2014, more than 30% of households in low and middle-income countries had internet access. In the same timeframe, the situation in the Maldives was more promising with 54.7% of households having internet access at home, and 72.7 mobile broadband subscriptions per 100 people (NBS, 2016). The internet penetration level is continuously increasing and the most recent figures (Table 4.8) show the Maldives has achieved 76.5% by the end of 2017. Nonetheless, the ease of access and the reliability of connectivity varies across parts of the Maldives.

Table 4.13: Connectivity in South Asian countries

Country	Internet users in Dec 2017 ²¹ (% of the population)
Afghanistan	15.7%
Bangladesh	48.4%
Bhutan	45.3%
India	34.1%
Maldives	76.5%
Nepal	54.7%
Pakistan	22.2%
Sri Lanka	32.0%

Digital disparity: Without incorporating technology into the classrooms, the disparity between the groups who are exposed to ICT use at home and those who are not, is bound to widen thereby limiting the number of students who have ICT competencies. An investigation by PISA (Program of International Student Assessment) discovered that, apart from the digital disparity, the ‘at-home computer use’ is mostly geared towards entertainment “suggesting there is an increasing role of schools to help learners engage with and leverage new technologies for learning” (OECD, 2010a). Accordingly, to counteract the situation and promote inclusivity, many schools worldwide engage in 1-to-1 technology initiatives such as providing individual laptops or tablets to the students. Some of these initiatives are summarized in Table 4.9

Table 4.14: Examples of ICT integration in Schools (adapted from Groff, 2013)

Examples of 1-to-1 technology initiatives	Insights from these initiatives
<ul style="list-style-type: none"> ➤ Saltash.net Community School (UK) ➤ St. Paul’s Bay Primary (Malta) 	<ul style="list-style-type: none"> • Success depends on the rigidity/flexibility of the school curriculum • Need for educators to expand their visions of pedagogy and learning

²¹ <https://www.internetworldstats.com/stats3.htm>

<ul style="list-style-type: none"> ➤ Crescent Girls’ School (Singapore) ➤ US state of Main’s Learning Technology Initiative ➤ Console-gaming at Scottish Schools ➤ Intermediate School 339 (USA) 	<ul style="list-style-type: none"> • Powerful technology with a strong pedagogy is essential for quality learning outcomes • Through the use of gadgets, there is potential for increased engagement and motivation amongst students
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The findings from these 1-to-1 technology projects highlight that while these technological advantages lead to increased technology skills and a demonstrated increase in the level of student engagement, there could be other factors that contribute to the changes. In addition to the provision of the gadgets, the positive outcomes can be linked to the pedagogical adaptations as well as additional support, such as additional training provided to the educators and the extra attention on the initiative, because of the high investment.

As highlighted by UNESCO (2014b), capacity is needed to harness the potential of technology for a range of learners at all levels and in various contexts; sustainable infrastructure, funding, content and quality assurance are key challenges, as are the means of developing and implementing multilevel policies on e-safety and e-ethics.

In the past decades, South Asian countries have invested heavily on inputs, such as technological infrastructure and proportion of teachers to students in their quest for education for all. Dundar et al. (2014) highlight that South Asian countries are now at a stage in educational reform where quality requires more focus than access, and for meaningful quality enhancements the focus needs to be learning outcomes.

4.14.2 The situation in the Maldives

To attain equitable quality education for all, technology is indispensable as a means of reaching the dispersed islands. It is also recognized that the requirements of the 21st-century knowledge and skills demand a technology friendly and robust populace. Accordingly, the Ministry of Education, Maldives, has demonstrated a keen interest in taking the necessary progressive steps to achieve the UNESCO Sustainable Development Goal 4, Quality of Education.

While there is no direct legal framework on education in the Maldives, an Education Act was drafted in 2010, which, when ratified, would ensure the establishment of a learning environment which provides quality education, training, and skill development from Pre-school to Higher Education (Hassan, 2015). Some of the overarching aims of this act in relation to technology in education aspects are the holistic development of the child, the development and expansion of capacity in ICT, and expansion of the capabilities in analytical and research skills necessary for skills in the job market.

As widely identified and acknowledged, one of the main constraints of achieving the goal of equitable quality education in the Maldives has been the remoteness of individual island communities. This geographic dispersion prevents achieving economies of scale, and therefore, the country faces high unit costs of infrastructure and other public service provision. Consequently, “up to 80% of staff training costs in the Maldives are transport-related, and qualified trainers, especially those with expertise in child-friendly teaching and learning, have previously been only available in Malé” (UNICEF, 2007).

4.14.3 National priorities and policies with relevance to ICTs

ICT is seen as a facilitator in bridging the geographic dispersion and skill shortage. The government of the Maldives strategized the implementation of ICT infrastructure in education early on.

- “ICT courses were introduced in Secondary schools as early as 1986 though limited to a small number of students” (MOE, [2015]). Further to this, the **Maldives Science and Technology Master Plan** (MCST, 2001) addressed many of the disparities of the time. Consequently, by 2004 every Secondary school was mandated to ensure all school graduates were computer literate.

The national educational priorities from 2005 onwards have been derived from the Seventh National Development Plan (SNDP) 2006-2010 (MPND, 2007 cited in Hassan, 2015).

- Policy 11 of the Plan, “Develop infrastructural support in line with the expansion of services provided by the sector” addresses ICTs broadly and not explicitly.

Subsequently, “the policies in the SNDP was endorsed as the Educational Master Plan for 2007-2008 with minor changes” (Hassan, 2014, p. 12), and with the addition of three

more policies. Of these new policies, one was explicit to technology in education, which was to:

- “Enhance and optimize teaching, learning and management through the use of Information and Communication Technology”.

Teacher Resource Centres: The establishment of Teacher Resource Centres was a major initiative towards equitable service provision in terms of teacher training throughout the country by enabling virtual learning environments. The Ministry of Education, in collaboration with UNICEF, inaugurated 20 Teacher Resource Centres (TRCs) in 2007. By 2018 there are 23 TRCs that are strategically located throughout the country. The TRC functions as the central resource hub for the islands in the Atoll and is connected with the National Institute of Education (NIE) as the oversight body.

The national priorities identified in the Strategic Action Plan 2009-2013 (President’s Office, 2009), highlighted the commitment to sustain the progress made in education until then. The notable ICT related policies listed in the Strategic Action Plan 2009-2013 include:

- Policy 12: Ensure that all Maldivians are educated to cater to the basic needs of life in literacy, skills and knowledge through opportunities for lifelong learning (p. 321); and
- Policy 13: “Enhance and optimize teaching, learning and management through the use of Information and Communication Technology Sector policy” (p. 232).
The Education Strategic Plan 2013-17, while none of the specified goals directly addresses technology in education, it can be captured in Policy 4:
- Policy 4: “To ensure that every school in the country is happy, enabling environment conducive to learning, with professional teachers, facilities, and is financially stable.” One of the enabling strategies under this Policy highlights the importance of books and digital media.

The Second National Curriculum (SNC) introduced in April 2014 is aligned with the policies in the PPM manifesto. Among other things, the SNC aims to provide the students with the tools for problem-solving and analytical skills in dealing effectively for the present and future challenges faced in the globalized world and at the domestic front (NIE, 2014).

4.14.4 ICT in Education Master Plan

Building on the aforementioned policies, the MoE developed the **ICT in Education Master Plan of Maldives 2015-2018** “that envisions the schools to become innovative in delivering quality education” (MOE, [2015]).

The Master Plan (MOE, [2015]) identifies 10 deliverables to be achieved by 2018. These are:

1. A national study on the state of ICT in education in the Maldives;
2. All teachers trained in ICT literacy and ICT pedagogy-integration;
3. All schools met the MOE standard on ICT equipment;
4. A national education portal providing all schools access to quality teaching and learning materials;
5. All schools have their own ICT in education development plans;
6. All Teacher Resource Centre (TRCs) upgraded;
7. School curriculum and student assessment updated to integrate ICT;
8. Distance education courses accredited for the continuing professional development of in-service and pre-service teachers;
9. An online educational management information system (EMIS); and
10. An ICT in education conference organized annually.

Following the endorsement of this Master Plan in 2015, there were review meetings in 2016 that eventuated in revisions to the Plan. It is not clear whether these revisions were endorsed.

Deliverable 1 aims to gather data on the capacity of ICT infrastructure/equipment in the schools (including the number of computers, projectors, and internet connectivity); the extent of teaching and learning resources available in the schools; the type of ICT training the teachers have been exposed to; and, the ICT initiatives happening in the schools. As part of the Education Sector Analysis, a baseline survey that addresses Deliverable 1 was carried out because this information was not readily available through the MOE. The findings from this survey are presented later in this document.

Deliverable 2 aims to: develop ICT competency standards for teachers, identify training modules on ICT literacy and ICT pedagogy-integration, select training providers, and schedule and implement training.

Deliverable 3 aims to: define ICT equipment standards for schools, identify various schemes to meet standards, and set implementation targets. Execution of Deliverable 3 is dependent on the data that is to be collected from the completion of Deliverable 1.

Deliverable 4 aims to: design and develop a national education portal; collect, review and identify quality material to be shared; develop guidelines on portal use and maintenance; train TRC Coordinators who in turn will train teachers in the schools. Based on discussions with IT officials from MOE, it is understood that as of February 2018, G-Suite²² is used across all schools for sectoral e-mail management as well as to share curriculum material.

Deliverable 5 aims to: develop a planning template to simplify and standardize the development of ICT plans at the individual school level. A significant component of this includes training school principals to develop their ICT in Education Development Plan.

Deliverable 6 aims to: review the role of TRCs with respect to the Master Plan; develop TRC services for schools and communities; upgrade ICT equipment in the TRCs; and staff training.

Deliverable 7 aims to: develop ICT competency standards for students; update the curriculum; and update student assessments. Through discussions with NIE staff, it is understood that the new curriculum of 2015[?] incorporates ICT into learning. However, given the lack of any impact assessments and reporting on these deliverables, it is too early to comment on this.

Deliverable 8 aims to: make an inventory and review the quality of distance education courses that can help upgrade teacher qualifications; endorse a list of recommended distance education courses to MOE; and facilitate access to these courses through scholarship and/or incentives.

Deliverable 9 aims to: review the existing educational management information system (EMIS) and determine improvements on it, or the design of a new one; and the development of a training module for the users. Through discussions with MoE Policy Planning and Research Division, it is understood that the deliverable 9 has been implemented and rolled out through the establishment of the Maldives Educational Management Information System (MEMIS). As at March 2018, the MEMIS collects

²² <https://gsuite.google.com/>

general enrolment data and critical data on student attendance. Further data is to be mandated shortly.

Deliverable 10 aims to: organize an annual ICT in education conference targeted for teachers, school principals, and TRC staff.

Further research/analysis is required to identify further details on the status of these deliverables.

4.14.5 Virtual Classrooms to connect

The most recent initiative of the Education sector with the World Bank project support is the establishment of virtual classrooms in the least populated schools where the student population is less than 50. By the end of 2018, there were 9 schools from the outer islands/atolls that were connected to Iskandhar School in Malé, whereby the students are assigned to quality teachers without having to travel to other islands, where a fully functional classroom can be found.

4.14.6 Digital Education Program

The Government of Maldives aims to “revolutionise”²³ the education sector of the country with the introduction of a digital education program (also referred to as School Digital project) worth MVR 154 million. The program was to be rolled out in 2018, whereby all schools will be networked to offer Wi-Fi connectivity to its community. Furthermore, students and teachers were to be provided with a tablet each by mid-2018, with digital access to their textbooks and other resources, thereby eliminating the need for printed books. However, the project did not go as planned. By the end of 2018, tablets had reached only some students and some teachers. So far only the first few chapters of Grade 9 textbooks are shared through Google Drive. Interactive copies of textbooks are expected to reach students and teachers by around May 2019.

²³ <file:///C:/Users/13572709/Downloads/BudgetSpeech2018.pdf>

Box 4.4: Use of ICT in schools, an example from selective comparable countries

One laptop per child initiative, Costa Rica

Costa Rica introduced its first One Laptop Per Child (OLPC) program in February 2012. Baseline and post-intervention data from the program indicate that the program led to an increase in students' computer use outside of the school of about 5 hours per week. The research also provides evidence that the students used the computer specifically to browse the internet, do homework, read and play. The research also demonstrates that the program led to a decline in the time that students spent on homework and outdoor activities. The research does not provide evidence to suggest that the program had an effect on students' school performance. Source: Meza-Cordeno (2016)

One laptop per child initiative, Marshall Islands

A digital education program was implemented in the Marshall Islands in 2014, providing internet connectivity for all public schools in Majuro [city], with the provision of 1,000 computers under the one laptop per child (OLPC) initiative to test their impact (UNESCO, 2015). This initiative went through prior pilot testing. An assessment overview of OLPC projects highlights that OPLC efforts have: positively impacted childhood education overall with computers being used both at home and in school; led to increased student achievement particularly in reading and mathematics; resulted in increased student engagement in learning; led to increased access to reading material; led to improvements in student school attendance; built student's confidence and senses of personal empowerment; increased parent and community involvement in schooling; provided the opportunity for teachers to develop and share localized materials and resources; been most successful where teachers and students have adequate training to fully take advantage of the potential/opportunities of the laptops; and the greatest impact happens when "regular" internet access is available. (MOE, 2010).

One laptop per child program, Uruguay

The evidence from Uruguay on the impact of a nation-wide one laptop per child program on learning suggests that in the first two years of its implementation, the program had no effects on math and reading scores. The impact assessment team

hypothesises that this zero effect could be because the program did not involve compulsory teacher training and that the laptops were mainly used to search for information on the internet. Source: De Melo, Machado, and Miranda (2014).

E-learning pilot programme using tablets, Lukulu, Zambia²⁴

Five selected schools in Lukulu was provided with 348 pupil tablets and 49 teacher tablets through a collaborative programme by UNICEF and Ministry of Education, Science, Vocational Training and Early Education, Zambia. 43 teachers from the 5 pilot schools were trained in interactive teaching methodologies. A baseline and an end-line study were conducted to assess the impact of this intervention on the students from Grades 1 to 7. Results from the end-line survey conducted after the first year of implementation, show that the performance of pupils, who were taught using the e-learning content through the tablets in these 5 schools, improved more than those in 3 other schools that did not undergo the intervention.

4.14.7 Implementation of ICT policies: Analysis

As identified by UNESCO (2015), for effective implementation and also for efficient learning outcomes, education technology initiatives require proper monitoring, ensure sustainability, and it is necessary to adequately guide teachers and students during the rollout process.

In-depth analysis of ICT use and integration into teaching and learning outcomes in the Maldives Education sector are sparse. A study conducted by Shibana (Shibana, 2013) to identify predictors for the successful adaptation of Open Educational Resources (OER) in the Maldives shows that when teachers get access to the technology, they are willing to use OER and do use it in their teaching and learning. This, in turn, can positively impact teaching and learning, and provide quality material to use with students. The study sample includes five schools assessed to have reached at least the basic level of

²⁴ <https://mwabu.com/media/1093/unicef-and-mestvee-report-mwabu.pdf>

technology penetration²⁵ overall. Of the 209 teachers from these 5 schools, 106 teachers participated in the study.

The data (Table 4.15) shows that the selected schools generally have an acceptable technology infrastructure with more work required in human capacity development as well as the integration of ICTs in learning outcomes.

Table 4.15: Analysis of technology penetration in 5 selected schools

School	Number of Teachers	Technology infrastructure &	Application	Human Capital	Utilization
School A	57	TI (1): Advanced	A (1): Medium	HC (1): Advanced	U (1): Advanced
		TI (2): Basic		HC (2): Medium	U (2): Medium
		TI (3): Basic			
		TI (4): Advanced+			
School B	30	TI (1): Advanced	A (1): Basic	HC (1): Advanced	U (1): Advanced
		TI (2): Advanced		HC (2): Medium	U (2): Medium
		TI (3): Medium			
		TI (4): Advanced+			
School C	34	TI (1): Advanced	A (1): Basic	HC (1): Advanced	U (1): Advanced
		TI (2): Advanced+		HC (2): Advanced	U (2): Medium
		TI (3): Advanced+			
		TI (4): Advanced+			
School D	52	TI (1): Advanced	A (1): Medium	HC (1): Advanced	U (1): Advanced
		TI (2): Advanced		HC (2): Advanced	U (2): Medium
		TI (3): Advanced			
		TI (4): Advanced+			
School E	36	TI (1): Advanced	A (1): Advanced	HC (1): Advanced+	U (1): Advanced

²⁵ The four indicators used to analyse the technology penetration in schools were: technology and infrastructure, type of applications used, human capital, and utilization.

		TI (2): Advanced+		HC (2): Advanced	U (2): Medium
		TI (3): Advanced			
		TI (4): Advanced+			

Source: Shibana, 2013, p. 50

Note: The four indicators used to analyse the technology penetration in schools were: technology and infrastructure (**TI**), including computers/internet/other audio-visual facilities; type of applications—information dissemination (e.g. school website, blogs, learning management systems) (**A**); human capital—staff competencies (**HC**); and utilization—integration of ICT into teaching and learning (**U**).

TI has 4 strands: (1) number of operational labs, (2) PC/laptops/teachers, (3) internet accessibility, and (4) audio-visual rooms.

A has only one strand: dissemination of information.

HC has two strands: (1) Staff ICT competency, and (2) training opportunities

U contains two strands: (1) ICT based learning content, (2) and interactive learning content.

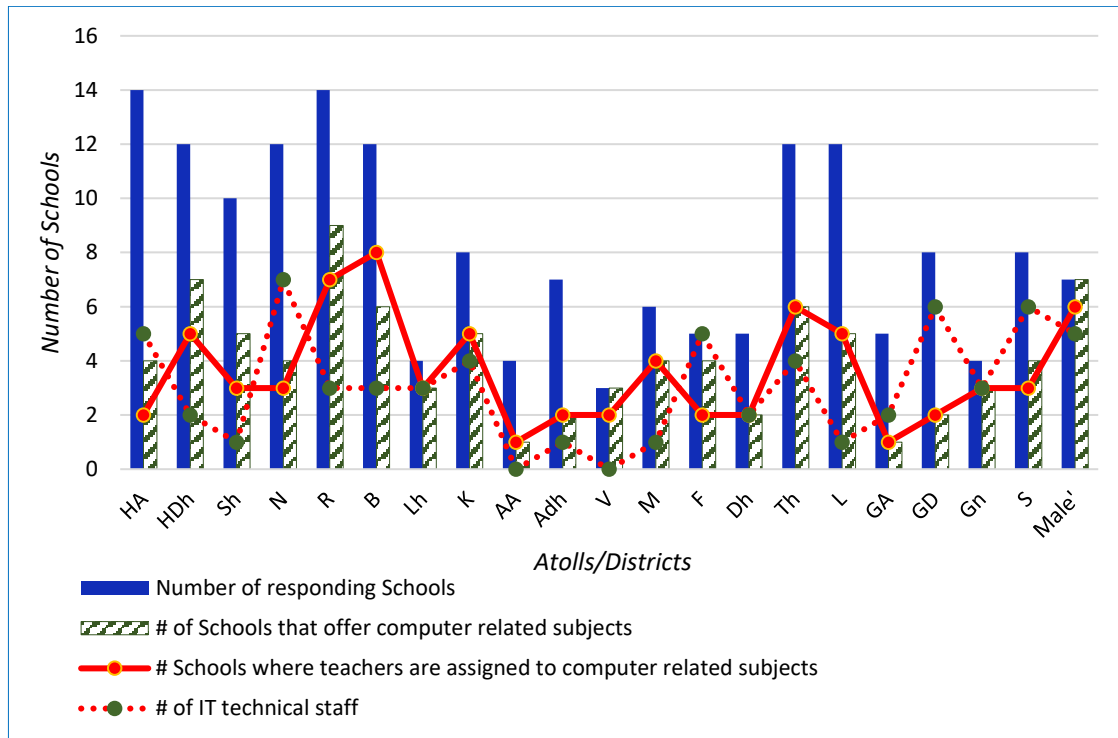
4.14.8 Review of ICT infrastructure in public schools

To complement Secondary data, mostly from policy documentation, a rapid baseline review of technology infrastructure and ICT integration was conducted in February 2018. This includes a 6-day survey, across all government/public schools of the Maldives, and further insights collected through a field visit to Baa Atoll where focus group interviews were held with the school management, teachers and parents, to understand the situation.

- i. A total of **172** schools (out of 212) responded to the short survey. The survey was sent to all public schools.
- ii. The number of **students** in the responding schools: **52,104**
- iii. The number of **teachers** in the responding schools: **5,932**
- iv. Of these, 87 (**50.6%**) schools stated that they offer computer related subjects
- v. The listed subjects include: Computer Science for Grade 8-10; Business Studies Grade 7-10
BTEC/Dhasvaaru; ICT foundation to Key Stage 1-3; and Coding Club²⁶
- vi. Of the 172 responding schools, 75 (**43.6%**) stated they have teachers assigned to computer related subjects
These are illustrated in Figure 4.20.

²⁶ The question was set as an open-ended question with free text entry

Figure 4.23: Schools that offer computer-related subjects, and schools with designated computer-related teachers

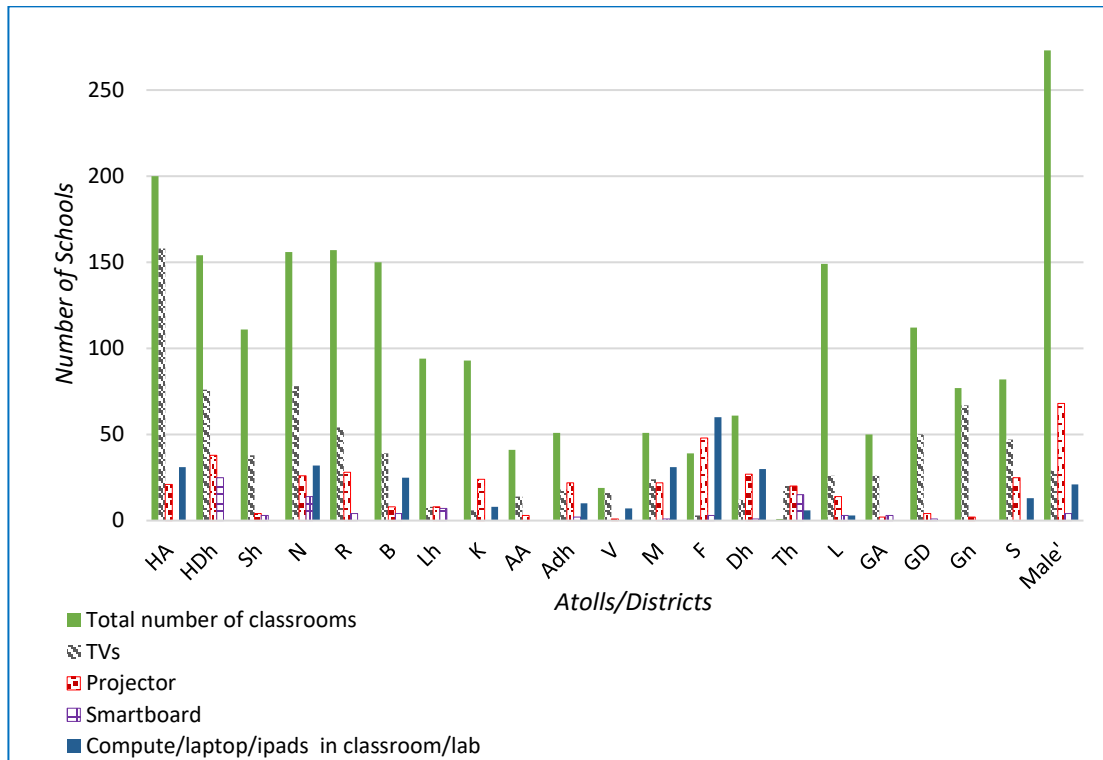


- vii. These 75 schools listed 131 teachers assigned to computer-related subjects.
91% of them are expatriates
64% of all ICT related teachers are male

- viii. Information Technology (IT) technical staff are employed only in 57 (**47%**) of the responding schools. This is made up of 64 staff in total.
 Most of the other schools stated that the principal/teachers with the know-how take the responsibility of technical troubleshooting. A few schools stated that the technical support services are outsourced.

- ix. There are a total of **2,121** classrooms in the 172 responding schools.
 The ICT related gadgets used **in the classrooms** include a total of
 809 smart TVs
 415 Projectors
 90 smartboards
 277 computer/laptops/iPads

Figure 4.24: Number of classrooms in the responding Schools and the number of ICT equipment assigned to these classrooms



- x. 156 (90.7%) of the responding schools stated they provide access to computers to their teachers
- xi. There are a total of **1,018** computers for the 5,932 teachers
- xii. 160 (**93.0%**) of the schools stated they provide internet access to their teachers
- xiii. 133 (**71.5%**) of the schools stated they provide computer access to students
- xiv. There are a total of **1,497** computers for the 52,104 students in the responding schools
- xv. 87 (**50.6%**) of the schools stated they provide internet access to students. Most of these were very limited access
- xvi. 129 (**75%**) of the schools stated they have a library collection. 28 schools did not have exact figures for the library collection but provided estimates. The estimated average size of these collections is 6442 books.
- xvii. 2 (**1.7%**) of the libraries identified having some digital library content.
- xviii. The open-ended question on how ICT is integrated into learning activities was responded to by 154 schools. Most responses identify the use of digital equipment in the delivery of lessons. Some responses are listed below:

- “with available resources such as TV, projector, teachers are encouraged to use IT in teaching”
- “with available resources such as TV, teachers are encouraged to use IT in teaching”
- “Use of smart-board, PowerPoint presentation, use of Audiovisual materials in teaching, use of laptops in teaching”
- “Teachers integrate ICT in some of their lessons. They are carried out in their classes by using TV and teachers'/school's laptop”
- “Teachers download necessary materials from the internet and use projectors for teaching”

The data shows that the majority of the schools have access to basic technical facilities ranging from internet, Smart TV, Smart-Boards or projector for digital presentations. The general pattern is for the MoE to provide the internet and basic infrastructure, while equipment like Smart TV and computers for student labs/library are funded through parent initiatives.

Schools located through the Maldives have an internet connection with variable speeds. In general, very slow connections were available at the time of completion of this ESA. The bandwidth is based on school population. Of the 213 schools connected via Digital School Network the bandwidth is as follows:

- 4 Mbps in 74 schools
- 8 Mbps in 75 schools
- 12 Mbps in 24 schools
- 16 Mbps in 15 schools
- 20 Mbps in 6 schools
- 24 Mbps in 12 schools
- 28 Mbps in 6 schools
- (a total of 2 Gbps)

Speed between 2-4 Mbps was available in the outer islands and generally higher Mbps in the schools in Malé with some schools utilizing fibre optic connection. These bandwidths are shared by the students and as well as the school office and teachers. Current minimum of 4 Mbps is not enough even for 2 classes to connect concurrently.

All costs are borne by the Ministry of Education @ MVR 2.91 million per month. It would seem sensible to increase total bandwidth to 6 Gbps (approximately 3 times the current speed to each school, with the cost of MVR 8.73 million per month.

According to the staff in the Digital School project, 6 Gbps total would barely suffice, but costs would be prohibitive for higher bandwidths since internet prices are very high in the Maldives. The network is designed in such a way that the service provider cannot be changed from Dhiraagu to another. With such high internet prices, sustainability of the project is questionable.

As of February 2018, all schools technically had access to the internet. The survey data, as well as insights from the field visit, highlight that internet connectivity is intermittent in some of the outer islands. Especially, with voltage fluctuations, a lot of Ethernet switches had to be replaced because their Power over Ethernet (PoE) components get damaged and WiFi Access Points have been left unpowered causing disconnections.

The speed is affected owing to the increasing number of users as well as the network infrastructure.

Box 4.5: Challenges in the sustainability of ICT infrastructure

A case study from an island in Baa Atoll, Maldives

Computers for the computer lab/library and smart TVs for each classroom are provided through funds raised by the Parent Teacher Association (PTA). The School, through the Ministry of Education funding, subscribes to an internet connection for staff use but does not have the capacity to provide internet for the students. Currently, 6 out of the 10 computers in the library is unusable and needs to be upgraded or replaced. PTA is facing challenges in this endeavour as there is a shortage of specialized technicians or service providers in the island community made up of a population of less than 500.

4.14.9 Level of ICT integration in the Maldives

As seen in the earlier section, the survey data shows that ICT is mostly used as a tool for classroom lesson delivery. Using the Morel’s Matrix, a model that proposes an educational system moves between four distinct phases: (a) emerging, (b) applying, (c) integrating, and (d) transforming. The Maldives ICT integration in Education can be categorized at the emerging-applying phase (shown in Table 4.11). This is based on the insights gathered from the schools during the data collected in the project execution phase in February 2018.

Table 4.16: Level of ICT integration in the Maldives Education Sector (based on Morel’s matrix)

Criteria/Phase	Emerging	Applying	Integrating	Transforming
Vision	Limited, pragmatic, dominated by interested individuals	Driven by ICTs specialists	Driven by subject specialists	Entire learning community involved
Learning Pedagogy	Teacher-centred	Teacher-centred. ICTs are a separate subject	Learner-centred; collaborative	Critical thinking; preferred learning styles; collaborative, experiential
Development plan and policies	Accidental; Restrictive, no planned funding	Limited; Centralised policies	Individual subject plans for ICTs; Permissive policies	ICTs are integral to overall school development plan (budget, professional development, etc.)
Facilities and resources	Limited and non-current digital resources; Restricted access	Diverse and varying in the model, platform; aligned with specific content and pedagogies	Diffused access to various digital resources; Supports to implement these in various ways	Whole school learning and diverse learning environments; Web-based learning spaces, distance education, student self-management software
Understanding of curriculum	ICT literacy; Responsibility of	Use of software and	Integrated; resource-based	Virtual and real-time contexts,

	individual teachers	applications in discrete subjects (isolated)	learning. Problem-solving project methodology.	modelling; Integrated curriculum delivery via the Web
Professional Development	Individual interest	Training on ICT applications; Unplanned	Subject-specific; Evolving	Integrated learning community; Innovative; Self-managed, personal vision and plan
Community	Accidental	Some parental and community involvement	Subject-based community, providing occasional assistance; Global and local networked communities	Broad-based learning community involving families, business, industry, organisations, universities, etc.; School as a learning resource for the community
Assessment	The responsibility of individual teacher; Didactic; paper-and-pencil based	Teacher-centred; Subject-focused	Learner-centred; Subject-oriented; Integrated; Multiple media to demonstrate attainment	Continuous, holistic, open-ended, project-based; Learning community involvement

It is imperative that necessary plans be set in place to embrace the transformative phase where ICT is truly integrated into the education system so as to improve learning.

The effective and sustainable use of ICT in education is not an easy endeavour. For effective ICT integration in learning outcomes, in addition to the technical infrastructure, teachers need to have the necessary education and experience. While there is no in-depth study into this, Shibana (2013) highlights that 9% of teachers surveyed identified their computer usage as “not very friendly” with 25% indicating they were “advanced users”. This study was limited to 5 schools that were selected to have attained a basic level of technology penetration.

Apart from training teachers to make effective use of ICT, the high cost of internet access and required infrastructure, including the maintenance and repair facilities, are often cited as challenges. “Specialist ICT teachers and technicians are particularly scarce, and those trained in these skills are difficult to retain within the education system” (UNESCO, 2015). According to the 2012 training statistics from the Centre for Continuing Education, Maldives, there has been 54 ICT and digital content developing workshops in the preceding three years with more than 1036 teachers trained and more than 1000 lessons developed. However, as highlighted by Shibana (2013, p.3-4), owing to the dispersion of the islands, and consequently the teacher community, as well as limitations in the infrastructure, there is difficulty in sharing these materials with one another. The main point highlighted in this analysis was the importance of leveraging the technology so that more time can be spent focusing on students and learning outcomes than on developing material. The current platform can be utilised using Google Drive to share content now. However, that would be just content with no interaction with trainers and trainees.

The Digital School Team needs to be motivated to serve for an extended duration and not changed annually. Frequent staff turnover has high costs especially with knowledge transfer and setup in use. Retention of the current two staff is important and one is very knowledgeable in the device configurations and the other in network and connectivity issues. Both staff appear to need better information on the platform. An additional staff to handle phone queries would help current two technical staff to actually tackle the tasks and provide a faster solution.

The salary provided to the existing staff is way too low for the demanding work. The staff are on-call 24/7 as schools operate on odd hours. Already the other platform handlers have a way better salary than the Digital School Team, and the other platform handlers have much less work and less commitment time.

The Digital School Team needs to be given training, exposure on how ICT is used in other countries, and explore cost-effective platform to design a feasible solution for the Maldives.

4.15 Key Findings

6. As of February 2018, all schools technically had access to the internet. However, internet connectivity is intermittent in some of the outer islands.
7. ICT is mostly used as a tool for classroom lesson delivery.

8. The Maldives ICT integration in education can be categorized at the 'emerging-applying' phase.
9. For effective ICT integration in learning outcomes, in addition to the technical infrastructure, teachers need to have the necessary education and experience.
10. It is good facilitation skills that allow learning to happen, and the rest are only tools. The effectiveness of technology in the classroom depends on the teacher's ability to use it appropriately in the teaching and learning process.

4.16 Recommendations

A number of strategic recommendations for ICT enhancement and integration to learning in the Maldives that arise from this review are:

1. Adopting a proper evaluation process, especially for costly infrastructure projects is recommended. There is sparse systematic follow-up/assessment on new initiatives, or there are inefficiencies in the management of records. As such, UNICEF's approach to innovations in education is a good place to start with. This approach can be summarized in five steps:
 - **Scan** – identify promising innovations in education
 - **Assess** – select projects that build on experience, and work in a sustainable, cost-effective way
 - **Incubate** – offer technical assistance, financing and support
 - **Evaluate** – the results and impact
 - **Share learning** – from failures and successes alike
2. Conduct an analysis of current practice on ICT integration in teaching and learning. This can be followed up with an impact evaluation regarding the use of ICT to improve learning and decrease the learning gap in the country.
3. Train all teachers in ICT literacy and ICT pedagogy-integration. Teachers play an important role to achieve effective technology integration in education. It is good facilitation skills that allow learning to happen, and the rest are only tools. The effectiveness of technology in the classroom depends on the teacher's ability to use it appropriately in the teaching and learning process.
4. Develop a national education portal. As identified in the review, those teachers who use Open Educational Resources (OER), adapting it to their needs, find OER as a useful resource that enhanced their teaching by saving time spent on developing material and diverting that time to focus on student learning instead.

- A central education portal for the education sector will attract more contributions throughout the Maldives, thereby increasing the resource base.
5. Establish MOE standards on ICT infrastructure for teaching and learning. At present different schools adopt different technological tools, mostly funded and supported through community participation. A standard will ensure all students have equal opportunity to use technology in education. Furthermore, a standardized structure can enable efficient maintenance and replacement of equipment and streamlining across the country.
 6. Conduct a national study and survey (extending the baseline survey carried out for this review) on the state of technical equipment used in schools. Maintaining an inventory at the central level at the MoE will be useful in decision making and strategizing actions. This can be achieved by enhancing the data collected through MEMIS. The current phase of data collection of MEMIS is limited to demographic data and other basic information. Extending the data collection to the school infrastructure can ensure timely access to data.
 7. Assist all schools to develop their own ICT in education development plans. The ICT in Education Master Plan 2015-2018 was endorsed in 2015, and further work is required to decentralize the implementation of the Master Plan.
 8. Currently, SEN is not accounted for in the Digital School. Curriculum developers could come up with smart ways to incorporate tablet devices to SEN students so that their learning experience could be improved.
 9. Since the TRCs can ensure decentralized and close access to resources, enhance the ICT related resources at these centres. A good support system ensures the sustainability of technology initiative in schools.

4.17 Inclusive Education - The Special Educational Needs (SEN) programme

4.17.1. Importance

Inclusive education has become an important area of focus of the education system in the Maldives. After the country became a signatory to UNCRP, there has been a strong legal framework for children with various disabilities. Inclusive education aims to change structures, modify curricula content, adapt teaching and assessment methods to reflect changes in curricular content so that students with SEN can be taught in age-appropriate classes with adequate resources and additional support in their neighbourhood schools. While inclusion responds to the needs of all students, it is widely associated with persons

with disabilities. The scenario in the Maldives is similar to this (GEM, 2017). According to the Sustainable Developmental Goals, inclusive and equitable quality education and promotion of lifelong learning opportunities for all are one of the key priorities. Similarly, inclusion and equity in and through education is the cornerstone of a transformative education agenda for 2030 (SDG 4).

4.17.2 The situation internationally

Inclusion is found to be a very ambiguous term globally (GEM, 2017). Only a few countries, according to the GEM report, have included definitions related to disability in education which is important for programme development and for country compliance with Article 33 of the UNCRPD. Out of the 56, only 23 countries have disaggregated data on students with disabilities by disability type and severity (GEM, 2017).

In some parts of the world, disability may bring shame to an individual or household, with particular disabilities being especially stigmatized. In Southern Asia, disability is often viewed as punishment for sins, vices or faults (Hussain et al., 2002). A household survey in nine districts in Pakistan, for example, allayed stigmatization concerns by asking people to assess their level of difficulty with various aspects of functioning. The survey found a much higher prevalence of disability than official censuses and household surveys did (Singal et al., 2011).

4.17.3 The situation in the Maldives

Under the Inclusive Education Policy implemented since 2013, children with Special Educational Needs (SEN) have received greater attention. Multiple programmes and interventions including the introduction of a competency-based curriculum within which inclusivity is well addressed, provision of training to SEN teachers, SEN target setting, the establishment of a Unit within NIE to support the schools have advanced the implementation of this policy. Despite these efforts, there is a necessity to identify emerging needs with a view to establishing a more holistic inclusive education system in the country addressing the crucial elements that are currently lacking. This includes the identification of children with SEN, based on the functional domains used for learning. Furthermore, early intervention programs are implemented at the Foundation Stage (LKG and UKG) so as to identify and accommodate the educational needs of the children with SEN from an early age.

After the change of government in November 2018, SEN Unit has been upgraded into a new department in the name of Department of Inclusive Education (DIE) under the Ministry of Education. This new development has a greater potential to support the schools and advance the implementation of this policy.

Children with disabilities continue to have inadequate access to educational opportunities, despite a dramatic increase of the number of schools across the country providing some form of education for children with special needs: from 52 out of the 219 schools in 2014 to 185 schools out of 212 schools in 2017. In addition, some schools in the capital, Malé, and some outer islands have made considerable progress in addressing the special needs of students

To date, in the Maldives, precise data of children with various special needs are not available. However, there are 622 children between the age of 6 and 15 who are not studying, and of those, the majority are children with special needs (UNICEF, 2014). According to GEM (2017), in the Maldives, the primary attendance rate was 85% for those with disabilities and 94% for those without. In addition to this, DHS surveys showed estimated disability rate as 9.7% in the Maldives (GEM, 2017).

The inclusive education program of the Maldives is focused on 16 types of students from 3 distinct categories, collectively defined as ‘children requiring an Individual Education Plan (IEP)’. Even though there is lack of comprehensive data on the exact number of children with disabilities, by 2018, in the 212 Government schools, there were a total of 3,215 students requiring an IEP based on the diagnosis or on suspicion of needing support through an IEP. By early 2019, this figure requiring an IEP was identified as 3,796 for the whole country; with 1,038 students from Malé and 2,758 from all the other islands combined.

In order to implement the SEN program of the Ministry of Education, a special unit with 3 professionals and support staff has been established at the National Institute of Education (NIE) under the Ministry of Education. In addition, a technical committee to support this unit also has been formed at NIE. Moreover, an IEP committee and an ***inclusive education ambassador*** has been appointed at each school of the Maldives to support the implementation of the SEN program in the schools.

4.17.4 Achievements, strengths and opportunities

Despite the fact that inclusion in the Maldives is just 3 decades old, remarkable milestones have been achieved. First, Maldives has become a signatory to the UNCRPD in the year 2010 and a Disability Act, which stipulates key rights of people with disabilities, came into effect in the same year. Second, a comprehensive Inclusive Education Policy was implemented in the year 2013, with the Minister of Education directly supervising the inclusive education program. Third, there is a strong pre-service as well as an in-service teacher training program in the Maldives to train special education teachers. Fourth, the focus of the SEN program of the Ministry of Education is “*all the schools and every child*”. Finally, NIE has a strong but small professional team in the unit established to implement the inclusive education program along with a technical committee to guide the implementation of the program.

There were key factors that were instrumental in the success of the inclusive education program of the Maldives: strong political commitment of the leadership of the Ministry. The inclusive education policy and the subsequent procedures and guidelines to plan and implement the program in the schools have given professional as well as administrative guidance to the schools in the planning and implementing of the program at various school levels. The teachers, especially SEN teachers, throughout the Maldives have shown great interest and innovation in teaching the children with SEN even with very limited training. Support from the community has always been instrumental towards the SEN program at the national level as well as at school level. Finally, the parents of children with SEN have always been partners with schools and the Ministry of Education.

As the focus of SEN program has shifted from selected schools to *all the schools and every child*, this has created new challenges and opportunities in terms of (a) the quality of education provided for the children with SEN and (b) the educational interventions for the children with SEN. The following are key areas of challenges and opportunities to further strengthen the SEN program.

Teacher capacity building: Continuous teacher training both pre-service and in-service is crucial to sustaining the system to support children with SEN. Therefore, there is a need for teacher capacity building, both, teacher training in SEN and training on providing psychosocial support for the family. Consideration may be given to all teachers to be trained in basics in a 4-year B.Ed. the programme, while some teachers could be trained

as specialists in more prevalent problem areas, and fewer teachers in super specialisation for less prevalent problems.

Consideration may also be given to training quality primary teachers in a 4-year B.Ed. programme. After this, they can become specialised in areas such as autism, hearing impairment, dyslexia.

Team building at the national level: At NIE, there are only 3 professionals to support the schools in the inclusive education program. There is a need to build the capacity at the national level, including the professional staff at NIE and focused SEN teachers at schools in the capital city Malé.

Strengthening capacity at the regional level: Considering the geographic challenges, it is important to have a mechanism to support schools in the outer islands. Already a decentralized education system is in place. Example, the *Teacher Resource Centres (TRC's)* in each atoll that can also play a role in supporting schools in the implementation of the SEN program, as it is important for strengthening the already existing decentralized system in the outer islands.

Strengthening the support mechanisms: There are various support mechanisms in place to help schools to minimize their challenges in teaching children with SEN. NIE develops procedures and guidelines, professional as well as administrative, to teach children with SEN. Also, NIE conducts short term workshops to train pre-service teachers and school management. However, this practice of pre-service teacher training at NIE is in need of review. Recently, NIE has started using social media for community awareness and teacher capacity building using short videos. However, there is great potential to increase the type of support that is currently in place. Most importantly, innovative ways to support schools and teachers using technology is an area of importance.

4.17.5 Key issues, challenges and constraints in the area

Identification and diagnosis system in the Maldives is still emerging. Hence, it is extremely challenging to plan interventions for target groups in advance. This hinders the opportunity for even very mild to moderate children with SEN to reach their maximum potential. Currently, the students with SEN are assessed generally using functional domains for learning by general teachers or SEN teachers in schools. Hence, there is a need for developing capacity at the school level to assess children with SEN using an educational lens based on the curriculum needs of the child.

Sectors coordination: Educating a child with SEN sometimes requires additional special services (speech and language therapy, behaviour modification, occupational therapists, physical therapists, psychologists) which are almost nil in the health sector. Even the few services available are not reaching the school systems.

Special schools: The education system of the Maldives does not have special schools. As far as possible, children with SEN are taught in the mainstream setting. This requires having expert teachers at school level or in the system. The SEN teachers in the school system have limitations to cater to children with mixed SEN and who are very severe as per their SEN. Hence, the education system of the Maldives needs to train expert teachers in various categories of SEN. In addition, home-schooling opportunities for those appropriate have also been created.

Resource allocation to schools under inclusive education policy is mostly per head but not based on the severity of the child or based on the educational need of the child. Adults also need to be trained as teaching assistants who can undergo short training courses. Therefore, a resource allocation system based on the functional level of the child is extremely important.

4.18 Actions that are currently undertaken

Since the Maldivian community is small and everyone knows each other, the diagnosis has created many social issues in terms of labelling the child. The education sector has tried to deviate from the diagnosis system by planning educational interventions based on the functional ability of the child and not based on the clinical diagnosis. For this, the current point scale²⁷ in use is found to be very effective in planning interventions under five specific programs. In order to increase the capacity of teachers, for expert teacher knowledge to cater for children with high support needs, focused training programs for selected teachers are conducted. This has allowed them to plan educational interventions to target skills of the child without wearing a therapist's hat. The current resource allocations to schools are based on the number of children with SEN, not on the severity or educational needs of the child. However, the point scale that is in use has given a platform for schools to rate the functional level of the child, based on the learning

²⁷ A "rating scale" used to give a score for the functional level of the child.

domains. The accumulated score for each program (homeschooling, school readiness, special education, mainstream and early intervention) from the point scale has allowed NIE to start allocating resources based on the need of the child rather than for the child.

4.19 Key findings related to inclusive education

1. Inclusive Education Policy implemented since 2013, and children with Special Educational Needs (SEN) have received greater attention.
2. Establishment of a Unit within NIE to support the schools have advanced the implementation of this policy. The unit has a small but professional team.
3. After the change of government in November 2018, SEN Unit has been upgraded into a new department in the name of Department of Inclusive Education (DIE) under the Ministry of Education. This new development has a greater potential to support the schools and further advance the implementation of this policy.
4. The inclusive education program of the Maldives is focused on 16 types of students from 3 distinct categories, collectively defined as 'children requiring an Individual Education Plan (IEP)'.
5. By 2018, in the 212 Government schools there were a total of 3,215 students requiring an IEP based on the diagnosis or on suspicion of needing support through an IEP. The focus of SEN programme has shifted from selected schools to all the schools and every child.
6. Continuous teacher training both pre-service and in-service is crucial to sustaining the system to support children with SEN.

4.20 Recommendations for inclusive education

In order to strengthen the inclusive education system of the Maldives, the following interventions are crucial:

1. **Specialised teacher training for focused categories:** As per the current teaching capacity of teachers, there are categories of children with SEN, that teachers have limited knowledge and skills to plan interventions. For example, children with Learning Disability (LD), Autism Spectrum Disorder, the especially very severe type with sensory and behaviour issues. Children who have severe behaviour issues and children who show characteristics of ADHD. These are a few categories that teachers have limited knowledge and expertise. Hence, if we can train expert

teachers in these categories, the children in the focused groups are likely to be benefiting more from their schooling. All teachers need the basics, some need more than that, while few need still more.

2. ***Train teachers to do the functional assessment of children with SEN:*** Currently, there is no focal point at schools or at the regional level to do the functional assessment, using an educational lens, of children with SEN. Hence, a team of teachers need to be trained to do an educational assessment of children based on their learning domains. These teachers will either be working at a regional level or at the school level. An adequate number of these professionals should be available whenever a child needs to be assessed.
3. ***Develop a mechanism to track student progress:*** An Individual Education Plan (IEP) is prepared for every child with SEN. However, there is no mechanism at the central or regional level to monitor the progress of this plan. Hence, there is a need for developing such a mechanism to monitor student progress. Such a system would enable NIE to realign its support mechanism to each, based on the progress of the child. This mechanism could be integrated into the School Improvement and Quality Assurance and Accountability.
4. ***Increase the capacity at NIE:*** Since the Inclusive Education Unit at NIE, which has recently become a Department, plays a vital role in the implementation of the Inclusive Education Policy, it is essential to increase the capacity of the team at this Department. There is a need to develop teaching guidelines and professional standards to measure the quality of education provided for children with SEN. Students with SEN do not need a different curriculum, but an adapted mainstream curriculum. The mainstream curriculum is critical to inclusive education. In addition to this, there is a need to train professionals to support focused areas that teachers have limited professional knowledge and skills like LD, autism and behaviour issues. There is a need to raise awareness about inclusive education as a human right, at all levels of the school system. School managements especially, need to accept this and work towards more effective policy implementation.

4.21 Early Childhood Care and Education for Readiness to Learn for All

Previous chapters have already included key aspects of Early Childhood Education (ECE): Chapter 1 on children demographics, Chapter 2 on the financing of the education sector

including the 2 years of Pre-Primary, and Chapter 3 on access, enrolments, equity and out-of-school children that also includes the 2 years of Pre-Primary. Here, the focus will be on the quality of Early Childhood Education services in the Maldives²⁸, highlighting innovative practices and the milestones that have been achieved for access to quality universal, free Pre-Primary education for all young children, boys and girls, and to prepare them for Primary education. The other sectors, health and social protection impacting Early Childhood Development will not be addressed extensively.

4.21.1 Advancing ECCE towards the SDG 4 Education

The importance of investing on quality ECCE programs in an equitable way is well reflected in the SDG 4.2 and the two indicators: By 2030, ensure that all girls and boys have access to quality early childhood development, care and Pre-Primary education so that they are ready for Primary education.

Indicator 4.2.1: Proportion of children under 5 years of age who are developmentally on track in health, learning and psychosocial well-being, by gender.

Indicator 4.2.2: Participation rate in organized learning (one year before the official primary entry age), by gender (UNESCO, 2016).

It is expected that countries will be guided by the SDG 4.2. Targets and indicators to achieve holistic Early Childhood Development for all children through quality and equitable ECCE services.

4.21.2 Definition

Early Childhood Care and Education (ECCE) refers to a range of processes and mechanisms that withstand and support development during the early years of life which covers the aspect of education, physical, social and emotional care, intellectual stimulation, health care and nutrition, including the support that a family and community need to promote children's healthy development (UNICEF, 2012). It covers the period between birth - 8 years of life.

²⁸ Pre-Primary education in the Maldives includes the 2 years of Pre-Primary for the 4 and 5 years old, also called lower kindergarten and upper kindergarten.

4.21.3 The importance of investing in Early Childhood Care and Education

Growing scientific evidence shows that quality ECCE national programmes have a measurable impact on early, holistic child development, including education, social and economic benefits: With “a caregiving environment that supports cognitive and social-emotional development, children experience healthy brain development that enables them to reach toward their developmental potential. With this strong foundation, they build lifespan developmental trajectories that enable them to benefit from the family, community and educational opportunities²⁹. A recent meta-analysis of almost 60 years of research on early childhood education found that participating in ECE programs significantly reduced special education placement and grade retention, and lead to increased school completion rates³⁰. Other studies highlighted that skills typically targeted by ECCE programming - including cognitive skills in language, literacy, and math as well as socio-emotional capacities in self-regulation, motivation/engagement, and persistence - are likely precursors of children’s ability to maintain a positive academic trajectory (Heckman, Pinto and Seyvelyev, 2013). Early childhood Education helps to reduce the cost of special education, increase the grade retention, and reduce high school dropout at large³¹. Thus, the benefits of investing in ECCE are taken into account in the process of policymaking in the education sector.

4.21.4 The importance of a multi-sectoral approach

Health, social protection, early stimulation and early learning are fundamental interventions for holistic child development from birth, as it is evidenced by scientific findings “Children's early development requires nurturing care — defined as health, nutrition, security and safety, responsive caregiving, and early learning — provided by parent and family interactions, and supported by an environment that enables these interactions (Lancet 2011).

4.21.5 ECCE international trends

Early Childhood Care and Education international trends and improvements on access and enrolments since 2000 are well illustrated in the UNESCO’s Global Monitoring Report (GEM 2018: “one-third of countries worldwide legally stipulate at least one year of free provision, 21% one year of compulsory provision, and 17% one year both free and

²⁹ Retrieved March 10, from: [www.thelancet.com/journals/lancet/article/PIIS0140-6736\(16\)31389-7/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(16)31389-7/fulltext)

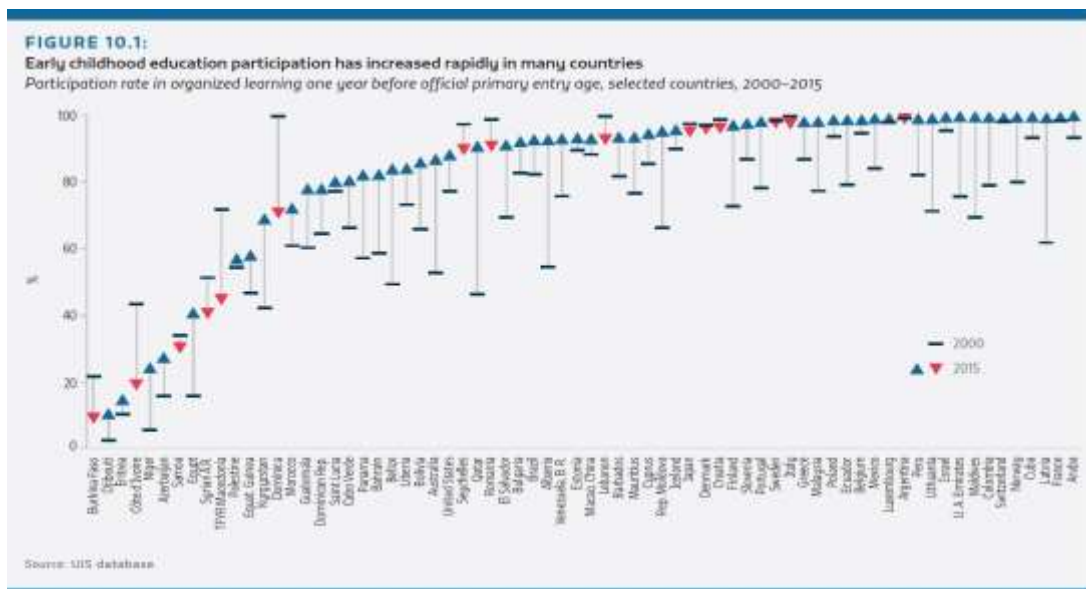
³⁰ *Dana Charles McCoy, Hirokazu Yoshikawa, Kathleen M. Ziol-Guest, (2017).*

³¹ *Levin, Belfield, Muenniq, & Rouse, (2007)*

compulsory,” and “By 2015, 69% of children one year younger than the Primary education entrance age participated in organized learning, which is the first global indicator for target 4.2. Regional shares ranged from 95% in Europe and Northern America, in Latin America and the Caribbean, to 42% in sub-Saharan Africa.

Figure 4.25 also illustrates the remarkable progress on ECCE participation in the Maldives.

Figure 4.25: Early Childhood Education Participation in Various Countries



4.21.6 Equity and Quality of ECCE services

While considerable gains on access and enrolments are observed internationally, although not in the same level across countries, equity and quality of ECCE services remains a key issue (GEM, UNESCO 2017).

The equitable access to quality ECCE services examines socio-economic indicators, gender, children with Special Educational Needs, and young children coming from vulnerable families. The quality of ECCE services refers to the teacher quality, the quality of facilities, of and adequate curricula, teaching and learning materials and, including teaching and learning process for cognitive and socio-emotional development, the level of the holistic approach, as well as to the impact of ECCE interventions on child development and early learning and quality assurance mechanisms.

4.21.7 ECCE in South Asia: trends

During the past 10 years, significant progress has been made in Asia and Pacific countries in improving the well-being of young children and expanding the provision of ECCE services, as shown by the gross enrolment ratio. However, improving equitable access, quality, governance, financing and monitoring progress are areas that need much more policy attention and improvement (UNESCO Bangkok, 2017). At the level of policies, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka each have ECCE policy or policy initiatives, guidelines and frameworks in place. Increasingly data on ECCE services and on children aged 3-5 years old are becoming available. For the ages of birth to 3 years old, there are still limited quantitative data available.

4.21.8 Early Childhood Education in the Maldives: the situation and the trends

In the context of global and regional trends, the Maldives shows dynamism and policy focus to improve the ECCE indicators. Policy makers are optimistic that the country will reach the Target SDG 4.2 much earlier than 2030. This optimistic scenario stems from the recent decision of the MoE (2015) to integrate the 2 years of Pre-Primary education into the formal education system (public schools), officially recognised as the Foundation Stage. The integration of the 2 years of Pre-Primary education into public schools refers to Pre-school education in the outer islands. The Pre-Primary education in Malé continues to be operated as independent schools. For younger children from two and a half to four years old, play schools and day care centres are organized by the communities and the private sector. The integration of the 2 years of Pre-Primary education into the formal system, as free service for all young children in the country, is a major milestone for ECCE in the country.

4.21.9 Historic background

The Government of Maldives started to provide Preschool education in the sixties with the first Montessori Preschool in Malé, applying early the worldwide recognized innovative Montessori pedagogy. In 1976, two private Preschools were opened. In 1984, the division of Preschools to Ward schools was carried out in Malé and Pre-Primary settings were introduced with support from the MoE. In some islands, Preschool was a class within the Primary school whereas in other islands separate schools were

established when the formal Primary Atoll Education Centres or Atoll Schools were established. These Preschools in the islands were administered by community groups, and the government provided some training for teachers and support for teacher salaries. There was a quality disparity among Preschools between Malé and the Islands³².

By 1999, 173 Preschools settings provided education in Lower and Upper kindergartens for 4-5 years old children. During the period of 2003-07, significant improvements were made in the accessibility and quality of the Preschool services, through the government's support and the implementation of various Early Childhood Development (ECD) projects, funded by UNICEF and UNICEF Community-based Early Childhood Development Centres – 5 centres³³. By 2006, the MoE expanded the ECD centres in all communities. Communities were supported with an awareness campaign on ECD, provision of buildings, and to establish child-friendly learning environments. This change empowered the communities, provided local ownership and involvement. By 2010, 234 Preschools were established in the country, mostly community-based with child-friendly learning settings and focused on play-based learning.

4.21.10 ECCE legal framework

The Maldives ratified and harmonized the Convention on the Rights of the Child with the national law on the Protection of the Rights of Children. Chapter 1, Article 2 of the law outlines state obligation to provide medical facilities and guidance to protect and promote the health of children and maternal health.

4.21.11 Children and Family Health System and Legal Framework

According to the most recent situation analysis (UNICEF 2015), the Maldives has the highest total health expenditure rate and social sector budget allocation in South Asia. Since the tsunami in 2004, health expenditure has seen annual average growth of almost 20%, while the 2011 National Health Insurance Act instituted a fully state-funded universal health insurance program covering all Maldivians, managed in a public-private partnership, effective by 2012. Data show a clear, rapid expansion of medical services since 2005³⁴. The health system is organized into four levels of service delivery. At every

³² UNICEF, MoE, NIE, 2017. Early Childhood Education in the Maldives. Male, the Maldives

³³ UNICEF, MoE, NIE, 2017.

³⁴ UNICEF 2015. Situation Analysis.

level, there is a department of Health Protection Agency: central services, regional services, atoll services and island services. The hospital in Malé with referral services has a department responsible for child growth monitoring services. Hospitals are also functioning in the regions, and in outer islands. There are 13 hospitals in the outer islands that include obstetric services. In the islands or villages, 176 primary health centres are established that include family health units³⁵.

Parallel to the public health system, a sophisticated private health system provides services through a private hospital in Malé.

The government is implementing a Health Master Plan (2015-25) that is aligned with the National Reproductive Health Strategy (2014-18) focusing on new-born feeding, maternal nutrition, and the Public Health Act 2012. An Integrated National Nutrition Strategic Plan (INNSP), (2013-17) is also under implementation.

4.21.12 Child protection legal framework

The main legal framework for child protection is given by the Law on the Protection of Children's Rights (Law 9/91). Other legislation addresses all forms of physical violence in all settings (home, education settings, care and justice institutions, the workplace and online) in line with international standards. However, policies and legislation are not fully implemented or reinforced because there is a need for further regulations, institutional protocols and tools. A comprehensive law (Child Rights, Child Care and Protection Bill) to address the gaps was initiated in 2008, and Juvenile Justice Bill is being finalized.³⁶

4.21.13 Pre-Primary education legal framework

The introduction of the Decentralization Act (2010) mandated the City and Island Councils to provide Preschool education and the MOE transferred the overall oversight of pre-schools under the city councils. Teachers were paid by the councils that have little experience in running Preschool education services in a formal way, and their implementation and quality were unequal across island Councils.

With the Preschool Administrative Act (2012), young children of 4 and 5 years have access to 2 years of free Pre-Primary education integrated into the public system. This change reduced the importance of MoE support to community schools. The 2012 Preschool

³⁵ UNICEF, 2015. Situation Analysis.

³⁶ UNICEF, 2015, Situation Analysis.

Administrative Act was reviewed, and Preschool guidelines were adopted in 2013 forming the Preschool Policy. The implementation of the Preschool Act in 2015 establishing 2 years of Pre-Primary level in the Primary schools in the islands (except Malé) brought a rapid development on the quality of Preschool education with more systemic management and quality support from the MoE.

The passage of the Disability Act (2010) increased awareness and the importance of providing basic education on an equal basis. The challenge, however, is on providing education for these students in both mainstream classrooms and in special classes. The provision of learning facilities such as Braille for the blind, alternative scripts and training teachers and professionals with the capability to cater to these individuals in both government-run schools and private schools is also problematic and easier said than done (EFA country report 2015)

Curricula: In the formulation process of the National Curriculum, the Foundation Stage became a part of the National Curriculum. The Foundation Stage of the curriculum is a comprehensive study course that promotes a holistic approach in learning and development of the children between the ages of four to six. Teacher training is provided to upgrade Pre-Primary teachers' qualifications.

4.21.14 Sector coordination: Health, nutrition, social protection, education

Sector coordination is crucial for supporting adequate Early Childhood Development and is part of the SDG 4.2 suggested modes of intervention.

The World Bank³⁷ illustrates well, the multi-sectorial contribution on ECD, and identifies five periods during the early years for which the delivery of a basic package of services is essential. These packages of intervention span the education, health, nutrition and social protection sectors (see Table 4.17)

³⁷ The World Bank, 2014. "Stepping up ECD: Investing in Young Children for High Returns, Washington DC.

Table 4.17: Interventions in Early Childhood

Stage	Intervention
1. Family support package (conception to 6 years)	Maternal education
	Planning for family size and spacing
	Education about early stimulation, growth, and development
	Social assistance transfer programs
	Prevention and treatment of parental depression
	Parental leave and adequate childcare
	Child protection services
	Access to health care
	Micronutrient supplementation and fortification
	Access to safe water
	Adequate sanitation
	Hand washing
2. Pregnancy package (conception to birth)	Antenatal care
	Iron and folic acid supplements for pregnant mothers
	Counseling on adequate diet for pregnant mothers
3. Birth package (birth to 6 months)	Skilled attendance at delivery
	Birth registration
	Exclusive breastfeeding
4. Child health and development package (birth to 5–6 years)	Immunizations
	Adequate, nutritious and safe diet
	Therapeutic zinc supplements for diarrhea
	Prevention and treatment of acute malnutrition
	Deworming
5. Preschool package (3 to 6 years)	Preprimary education
	Continuity to primary

Source: D. A. Debissa, R. Sayre, Q. Wodon, L. Elder, L. Rawlings, & J. Lombardi., *Stepping Up Early Childhood Development: Investing in Young Children for High Returns* (Washington: World Bank, 2014).

The above interventions are adapted to specific country needs. In the Maldives, (UNICEF 2015) most of the above interventions are effective and are monitored by the related sectors. The next step would be strengthening the sector coordination – health, social protection and education that will lead to quality service delivery for ECCE, as recommended by UNICEF (UNICEF 2015) and the EFA report for Maldives (MoE 2015).

4.21.15 Funding sources

The financing of the 2 years of Pre-Primary education is part of the MoE budget allocation for all sub-sectors of Education (see chapter 2). According to the analysis on cost and financing the biggest budget lines allocation are for teacher salaries, in-service training and the funding for the implementation of the National Curriculum Framework for the 2 years of the Pre-Primary education.

In addition, the key external funder for ECCE is UNICEF, with a special focus on supporting ECD community centres in the islands, campaigns of parental awareness on ECCE and other capacity development activities and analytical work on ECCE. In recent years, UNICEF has mostly been funding the health sector for Early Childhood Development (ECD).

More analysis is needed to better map the sources of financing for the education and care services for young children below 4 years old (namely the childcare services for ages 0 to 4 years old).

4.21.16 Monitoring and quality assurance mechanisms at the national level

In a rapidly expanded Pre-Primary education, covering a difficult to access geographic area as it is the case of the Maldives, monitoring the quality of Pre-Primary education services matters. Effective monitoring and quality assurance mechanisms make sure that quality services are delivered in an equitable way, supporting children's development across language/literacy, numeracy, physical, socio-emotional and cognitive development.

Since the 2 years of Pre-Primary are part of the public system, the monitoring and quality assurance of the 2 years Pre-Primary education follows the same mechanisms as for basic and Secondary education.

The whole school supervision including the 2 years of Pre-Primary comes under the Quality Assurance Department (QAD) of the Ministry of Education through standardized measuring tools and follow guidelines of the School Improvement Quality Assurance Accountability Framework (see 4.9 Quality Assurance Mechanism).

The National Institute of Education (NIE) is responsible for monitoring the Curriculum implementation with a specific focus on monitoring the implementation of the content, the pedagogy and the learning environment.

To ensure standardized quality Pre-primary programmes, the NIE provides a Pre-Primary programme approval based on specific guidelines. This process applies also to the private sector.

The quality assurance mechanism for the 0-4-year-old children services need to be further examined.

4.21.17 The status of young children and their families

Demographic indicators

The population of 341,256 (Population and Housing Census 2014) in the Maldives, children (0-17 years of age) represent almost 40%. Because of the demographic division (Chapter 1), the percentage of population aged 0-14 has declined from around 41% in 2000 to 31% in 2014. Children are unevenly distributed among the geographic regions with the biggest number concentrated in the capital Malé, and the smallest number in the Central region.

Health indicators

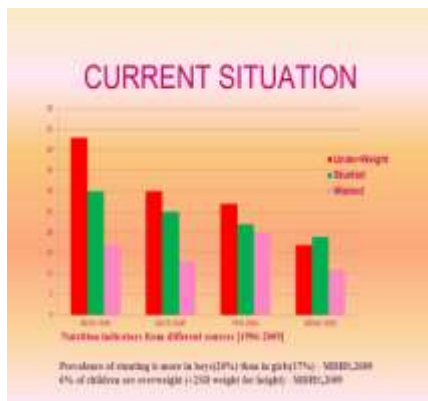
Despite the achievement of health-related MDGs and the significant resources allocated to the health sector, malnutrition among children, particularly in the North and South-central regions, presents the most critical public health concern. As it is reported by UNICEF (UNICEF, 2015) *“among children under five years of age, 18.9% are stunted, 17.3% are underweight, and 10.6% are wasted. Gaps related to chronic malnutrition and stunting includes inappropriate feeding and eating practices, as well as access to and affordability of nutritious food, limited access to quality, user-friendly services for mothers, and, long distances to adequately equipped health facilities”*³⁸.

Past studies done on public health in the Maldives showed the following indicators:

- Low infant and child mortality rates (low at 10-14 per 1000 live births, but still neonatal mortality within that is 66% (2012 data reported by UNICEF 2015)³⁹
- Percentage of children under 5 years who are underweight has gradually declined from 43% in 1996 to 17.3% in 2009.
- Stunting declined from 30% in 1996 to 18.9 % in 2009;
- Wasting declined from 17% in 1996 to 10.6 % in 2009 (MDHS, 2009).
- Although the percentage of malnutrition has been reported to be on the decline, malnutrition among children is to be an area of public health concern.
- DHS (2009) found that 93 per cent of children aged between 12 and 23 months have received all the recommended immunizations.

³⁸ UNICEF, 2015. Situation of Women and Children in the Republic of Maldives. Male, the Maldives.

³⁹ UNICEF, 2015. Situation of Women and Children in the Republic of Maldives. Male, the Maldives.



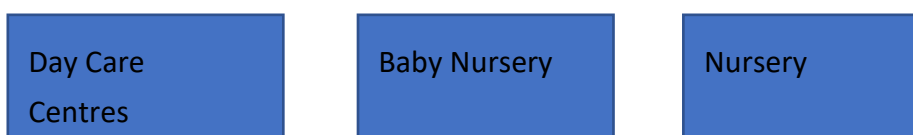
4.21.18 The Health Screening programme

The Health Screening Program (2014) started among selected schools of Grade 1 by the Maldives National Security Force in collaboration with the Ministry of Education. Screening of the pre-schoolers has not been conducted under the School Health Screening and no statistics of this age group is recorded to promote health and management. One reason is that Pre-Primary education was not yet fully integrated into the public system. As early detection is the most cost-effective approach, the MoE envisions including the 2 years of the Pre-Primary level into the next round of health screening.

4.21.19 The ECCE services

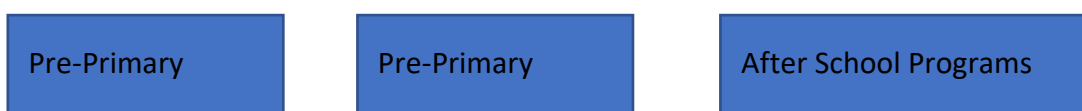
Mapping the Early Childhood Care and Education (ECCE) services

For the 0 to 3 years the ECCE available services are:



The above services are provided by private companies, individual private providers and community organizations. Very few Day Care Services are available in the country. Some nursery schools are run by the local councils in the islands.

For the 4 - 6 years, Pre-Primary classes are available free of charge and are integrated into the formal school system. A growing number of Pre-Primary schools are provided by the private sector.



Very few services exist as after-school programs (restricted data, MoE). In addition, the Kudakudhinge Hiya (Orphanage) provides social protection for 0 - 6 years (restricted data, MoE)

Early Childhood Care and Education Enrolments

Chapter 3 presents the latest available data on enrolment in Early Childhood Care and Education Services (School Statistics, Ministry of Education, 2017). 20,593 students fall under the category of the Pre-Primary (NUR-UKG): Age 3-5 years. This includes 10,377 boys and 10,216 girls, where the net enrolment ratio is 103.8 for males and 97.9 for females.

Disparities in access to and use of ECCE services

Disparities are identified based on geographic and socio-economic indicators. More analytical work is needed to better understand access and enrolment according to children's and families' socioeconomic characteristics (area of residence, income, gender, vulnerability status and so on).

Gender disparity

The GER and NET above 100 percent observed disparity for both, girls and boys is due to foreign students enrolled, and due to lower age-based projected population compared to the enrolled population. In addition, the lower female NER of 97.9% can be due to various factors: some female students being home-schooled (informal) for different reasons. A recent World Bank study provides analysis for a better understanding of the gender issue in the Maldives including the education of young girls⁴⁰. The issue of lower NER for young girls in Pre-Primary education services needs to be further studied in order to address it with the appropriate policies.

⁴⁰ El-Horr, Jana, and Rohini Prabha Pande. 2016. Understanding Gender in Maldives: Toward Inclusive Development. Directions in Development. Washington, DC: World Bank.

Input quality variables

Teacher-child ratios

The student ratio for the age group 2.5 to 6 years is 25 students per teacher but some of the schools have less than 25 students where the NIE guide them to provide Multi-grade teaching. Even though the ratio is 1:25, two teachers will be working in a classroom where one acts as the assistant teacher and the other as the class-leading teacher which is applicable from Baby Nursery to Upper Kindergarten.

Physical environment and availability of equipment and pedagogical materials

Pre-Primary classes of some of the public schools provide with a physical environment that has adequate outdoor materials which provide sand play, water play and free play with guided activities. The curriculum gives special focus on at least 30 minutes of physical play every day. However, some schools do not provide access to physical play every day. The curriculum follows play-based teaching and learning for the Foundation Stage. The curriculum is generally found to be good while its implementation is weak. The teachers use a thematic approach where they select a specific theme for two to three weeks.

Teacher quality Initial education

Initial teacher education in early childhood education is provided by public and private universities and colleges. The training that range from Certificate III level to Masters level in Early Childhood Education is available throughout the country and is delivered through face-to-face and distance education modes.

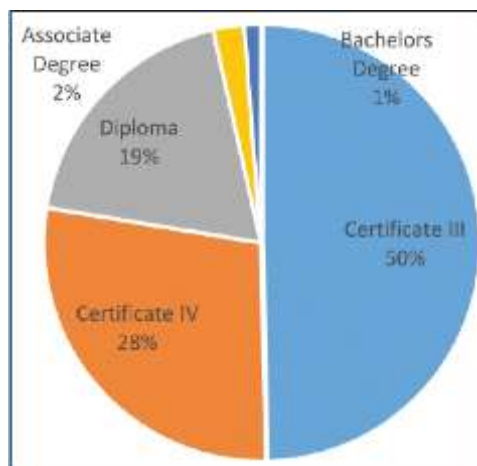
In-service training qualifications

In-service training for Pre-Primary teachers is provided by the School of Early Childhood Development of the National Institute of Education (NIE). Training take the form of workshops, professional development sessions, parent awareness sessions and school development programs. Special programs to upgrade the content of the in-service teachers and orientation on Pre-Primary for leading teachers and principals are also carried out.

Through the decentralization policy, more opportunities have been created for teachers' professional development in the domain of Pre-Primary. A special one-year Advanced Certificate training course in ECCD began in two major regions in 2009 and continued till 2015. In 2010, a total of 832 Pre-Primary teachers, 75% are untrained teachers (EDC, 2010). By the end of 2014, a total of 405 teachers were trained on Certificate IV (C4) level and 672 teachers were trained in Certificate III (C3).

Professional development of Pre-Primary teachers is an area that needs attention. The figure below illustrates the qualifications of teachers for Pre-Primary education.

Figure 4.26: Pre-Primary teacher qualifications in the Maldives



Source: NIE, 2017

Constraints and challenges: The above data indicate the massive training conducted for the teachers at the Pre-Primary level was delivered that helped half of the teachers to upgrade their qualifications. The training should continue to reach all the teachers at the Pre-Primary level.

4.21.20 Program and curricula variables

Teaching and Learning process

The 2017 School Review Reports (SRR) provide an encouraging picture of Pre-Primary education in the schools in the outer islands. The review reports well-planned and timely incorporation of many Pre-Primary classes into government schools.

The external reviews indicate that, in general, the teaching-learning process observed in the classrooms is emphasized play-based learning, hands-on activities, field visits based

on learning themes, display of children's work, identifying and providing additional support to children who experience learning difficulties to prevent them from falling behind.

Identified challenges: Some schools did not provide a regular daily opportunity for children to play outdoors, others did not have learning corners or did not organize field visits based on learning themes, or did not display children's work in the classroom. Teachers, according to reports, indicate that it was too hot to take children outdoors to play every school day. Only a few schools, according to SRRs, failed to demonstrate that any of the opportunities mentioned above were offered to the children.

The above findings indicate that further research based on classroom systematic observations will help to understand the level of the implementation of the curricula in the Pre-Primary classes and linkages with the expected learning skills and competencies defined in the SDG 4.2 indicators on child development (UIS, 2017).

4.21.21 Parent involvement and community awareness

A crucial aspect of Early Childhood Education (ECE) is parent and community awareness on the importance of child development and parenting. In 1989, parent and community awareness activities were started by the Non-Formal Education Centre under the Ministry of Education. Leaflets were developed in 1999 for parent awareness. Workshops and training on ECE were conducted in several atolls. Special radio programmes with ECE segments such as "Ilmee Holhuashi" were broadcasted for parents. A nationwide campaign titled "First Steps...The Maldives" supported by UNICEF was started by the Education Development Centre, (under the Ministry of Education) in collaboration with the Ministry of Information and Culture and other relevant stakeholders to mobilize public in 2001.

4.21.22 Strengths and challenges of the Pre-Primary integration policy

The implementation of the Pre-Primary integration policy is a major undertaking at scale. The integration policy addresses access equity and quality issues since the purpose is to offer quality Pre-Primary education in the outer islands, by providing more systematic management under the responsibility of the school principal. Regarding teacher qualification, the MoE implements a major teacher upgrading professional development program, and teachers were given a period of two years to upgrade the level of education at least to the diploma level. On the issue of Pre-Primary teachers' turnover rate, the MoE

considers that by bringing the Preschool teachers under the Civil Service Commission of the Maldives, retention of the Preschool teachers will be improved.

The challenge ahead: Following the integration policy, the new challenge for the Maldives is twofold; (i) to make sure that all young children of 4 to 6 years old, including all young girls, and other special groups such as children with disabilities and children of emigrants and expatriates, have access to the 2 years Pre-Primary education, in Malé and the outer islands; and (ii) to make sure that the Pre-Primary program supports holistic early childhood development and early learning that will help young children to develop adequately and thrive through play, interactions and hands-on educative programs and achieve early learning. During the period of the new Education Sector Planning 2018-22, the Maldives will have the opportunity to address the challenge of equitable access to quality Pre-Primary education for all young children.

4.22 Key findings regarding ECCE

1. **Regulation of nursery and daycare centres:** Quality assurance and regulation for nursery and daycare centres remain unclear.
2. **Gender disparity:** Gender disparity continues to exist in terms of access to Pre-Primary services with a deficit for young girls.
3. **Daily Pre-Primary education hours of attendance:** The daily hours of Pre-Primary need to be clarified, in both Malé and the outer islands. Internationally, minimum hours of attendance are accepted to provide opportunities for child development, and early learning.
4. **Quality for Pre-Primary education services:** In order to make sure that the Pre-Primary program supports holistic early childhood development and early learning that will help young children to develop adequately and thrive through play, interactions and hands-on the educative program are needed to ensure early learning. During the period of the new Education Sector Planning 2018-22, the Maldives will have the opportunity to address the challenge of equitable access to quality Pre-Primary education for all young children.
5. **School health screening program.** The early detection of health issues is one of the most effective ways to address them by developing appropriate responses.
6. **System strengthening at central and decentralized levels:** Recently major and rapid changes occurred in the Pre-Primary education at system and curricula level. It is expected that Pre-Primary education will receive more focus to improve quality in an equitable way and to strengthen the multi-sector approach. The

National Institute of Education, as well as the decentralization structure of Teacher Resource Centres, need reinforcement at the system and technical levels in order to support the availability of quality services in the atolls.

4.23 Recommendations regarding ECCE

1. A policy to be developed for 0-8 years with the initiation of MoE and MoH that will help to harmonize the curricula for Nursery, develop a curriculum for daycare centres and monitoring mechanism to review, Pre-Primary services, tuition classes and daycare centres.
2. Further qualitative analysis is required to find out the reasons for lower enrolment of girls in Pre-Primary.
3. Lengthening the school hours for Pre-Primary through a phased approach should be considered. Under the development of curricula standards, it is recommended that school hours be extended by at least up to 4 hours a week in order to implement the Foundation Stage effectively.
4. Assess the curricula for Pre-Primary classes; design and implement measurement of child development by selecting a proxy indicator. Assess teacher pedagogical practices; upgrading of Pre-Primary teachers to the level of a diploma should be continued by improving the quality of the training linked to the curricula and learning and development standards.
5. **n:** Expand the School Health Screening to the Pre-Primary students, in Malé and the outer islands.
6. Strengthen expertise in Preschool education programming, curricula, and monitoring and evaluation are needed in order to deliver ECCE to all children in the Maldives and meet the SDG 4.2 Target.

4.24 Teacher quality

Improving teacher quality at global level implies fulfilling of the 4.2 targets of the SDG 4 “substantial increase of qualified teachers, including international cooperation for teacher training in developing countries and small islands developing states”.

However, beyond teacher qualification, a whole range of policies should be in place to address the teacher quality issue that impacts progress towards the SDG 4.

The World Bank and UNESCO have been working on defining the key dimensions of teacher policies. Many of these policies are interrelated and rooted in a country’s

historical, political, cultural or economic context. Similar analytical and policy dimensions are also considered by the World Bank with the SABER tool for teachers (SABER Teachers, The World Bank). Presented below are the Nine (9) key dimensions that are considered crucial to any comprehensive teacher policy as proposed by UNESCO.

Box 4.6: The nine dimensions on Teacher Policy (UNESCO 2016)

<ul style="list-style-type: none"> ➤ Teacher Recruitment and retention ➤ Teacher Education Initial and continuing ➤ Deployment ➤ Careers structures/paths ➤ Teacher Employment and working conditions 	<ul style="list-style-type: none"> ➤ Teacher Reward and remuneration ➤ Teacher Standards ➤ Teacher Accountability ➤ School Governance
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At this phase of Education Sector Analysis, while recognizing the importance of a holistic analysis of the 9 topics defined by UNESCO, the focus will be on selected initiatives regarding teacher qualifications, training and professional development. A more comprehensive analysis should be part of the ESP activities as a prerequisite to developing the right policies that will improve teacher quality and teaching and learning in the classrooms. A similar recommendation is also made by the Report on School Reviews 2016- and 2017, (QAD, 2018): the Ministry of Education needs to undertake a teacher demand and supply study to fully comprehend the situation of teachers, teacher distribution and allocation, training and continued professional development needs of teachers. Both the World Bank and the UNESCO policy framework could guide this analytical work in the Maldives.

4.24.1 Teacher Qualifications and Teacher Training challenges

In the Maldives, progress has been made in recent years in the provision of various types of teacher training to increase the number of qualified teachers or to implement specific policies and initiatives such as: National Curriculum Framework implementation, Multi-grade teaching, subject-focused training, Special Educational Needs Teacher training, Training on ICT Literacy and ICT pedagogy, and school management and school auto-evaluation trainings, among others). Information on teacher training on curricula, Multi-

grade teaching, Pre-Primary education, and training for special educational needs are included in previous parts of the Education Sector Analysis.

Table 4.18 shows the number of trained and untrained teachers in Malé and in the outer islands who are either locals or expatriates. As shown in the table 4.18, student-teacher ratio in Malé is 12:1 while in the outer islands, it is 8:1 indicating that there are fewer numbers of students in the outer islands that are being catered to by a teacher. However, proportionally, the number of expatriate teachers and untrained teachers are higher in the outer islands.

Table 4.18: Teachers serving at different levels, by sex and job category

ދިވެހިސަރުކާރުގެ ގެޒެޓް ގައި ބަޔާންކޮށްފައިވާ ގޮތުގައި																							
TEACHERS SERVING AT DIFFERENT LEVELS, BY SEX AND JOB CATEGORIES																							
(MARCH 2018)																							
	Trained				Trained Total	Untrained				Untrained Total	Total	Temporary		Temporary Untrained Total	Local			Expat			Total No. of Teachers	Total No. of Students	Student Teacher Ratio
	Local		Expat			Local		Expat				Local			M	F	Both Sex	M	F	Both Sex			
	M	F	M	F		M	F	M	F			M	F										
Republic																							
Pre-Primary	-	1,158	27	3	1,188	-	151	-	-	151	1,339	-	434	434	-	1,309	1,309	27	3	30	1,339	20,411	15
Primary (Grades 1 - 7)	830	2,670	312	407	4,219	109	254	-	-	363	4,582	207	325	532	939	2,924	3,863	312	407	719	4,582	47,236	10
Lower Secondary (Grades 8 - 10)	547	1,154	787	442	2,930	2	52	-	-	54	2,984	161	197	358	549	1,206	1,755	787	442	1,229	2,984	16,289	5
Higher Secondary (Grades 11 - 12)	134	216	184	140	674	1	6	-	-	7	681	24	39	63	135	222	357	184	140	324	681	3,977	6
Subtotals by Sex	1,511	5,198	1,310	992	9,011	112	463	-	-	575	9,586	392	995	1,387	1,623	5,661	7,284	1,310	992	2,302	9,586	87,913	9
Atoll																							
Pre-Primary	-	590	-	3	593	-	151	-	-	151	744	-	399	399	-	741	741	-	3	3	744	12,515	17
Primary (Grades 1 - 7)	755	1,775	255	249	3,034	100	224	-	-	324	3,358	196	295	491	855	1,999	2,854	155	260	415	3,269	31,018	9
Lower Secondary (Grades 8 - 10)	473	793	725	264	2,255	2	51	-	-	53	2,308	155	194	349	475	844	1,319	815	283	1,098	2,417	10,790	4
Higher Secondary (Grades 11 - 12)	91	146	151	90	478	1	5	-	-	6	484	20	37	57	92	151	243	161	60	221	464	1,532	3
Subtotals by Sex	1,319	3,304	1,131	606	6,360	103	431	-	-	534	6,894	371	925	1,296	1,422	3,735	5,157	1,131	606	1,737	6,894	55,855	8
Male'																							
Pre-Primary	-	568	27	-	595	-	-	-	-	-	595	-	35	35	-	568	568	25	-	25	593	7,896	13
Primary (Grades 1 - 7)	75	895	57	158	1,185	9	30	-	-	39	1,224	11	30	41	84	925	1,009	78	187	265	1,274	16,218	13
Lower Secondary (Grades 8 - 10)	74	361	62	178	675	-	1	-	-	1	676	6	3	9	74	362	436	42	158	200	636	5,499	9
Higher Secondary (Grades 11 - 12)	43	70	33	50	196	-	1	-	-	1	197	4	2	6	43	71	114	34	41	75	189	2,445	13
Subtotals by Sex	192	1,894	179	386	2,651	9	32	-	-	41	2,692	21	70	91	201	1,926	2,127	179	386	565	2,692	32,058	12
Total	1,511	5,198	1,310	992	9,011	112	463	-	-	575	9,586	392	995	1,387	1,623	5,661	7,284	1,310	992	2,302	9,586	87,913	9.2

Note : 1. This table does not include supervisors, assistant headmasters, headmasters, assistant principals and principals who may teach in addition to their administrative duties.
 2. Schools overlap in levels. Overlapping teachers have been enumerated in the level the teacher takes most periods.
 3. Trained : Have MAB (Maldives Accreditation Board) accredited advanced certificate or higher teaching qualification.
 4. Total number of students in this table does not include children with special needs

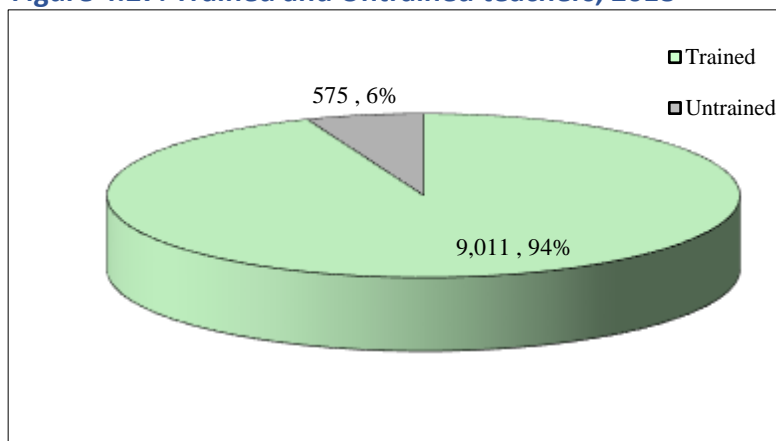
4.24.2 Teacher upgrade

The quality of teaching and learning in Maldivian schools can be depicted through the NALO assessments (2105, 2016, 2017, QAD 2018) and the external reviews schools (QAD, 2018). The findings of both studies show that a lot has been done to renew and innovate the teaching and learning to improve learning outcomes. But the reports contain evidence that much more has to be done to improve the way teachers are teaching in the classroom to promote content knowledge together with a higher level of cognitive skills, creative thinking. At the same time, the MoE implemented programs to upgrade teachers' professional skills and their effects on improving teachers' practices in the classroom should be analysed.

Teacher training at diploma level (1 to 2 years after Grade 12) and graduate levels (4 years after Grade 12), began during the early 2000s, as a large number of teachers in the Maldivian schools were with qualifications below diploma level. By the end of 2015 the current teachers' framework, was implemented requiring every teacher to have a minimum of a diploma in order to be a teacher. According to School Statistics of 2018, the percentage of untrained teachers working in primary schools has dropped to approximately 6% from 23% in the year 2010. However, with over 500 untrained teachers still working in the system can cause serious learning gaps in the students' education.

Despite the challenges of geographical dispersion, the current government has upgraded the qualifications of all school teachers to a minimum of diploma level. In addition, there is an ongoing partnership with the MNU and the MoE to train 3000 in-service teachers to bachelor's degree level. It is presumed that by the completion of this 5-year project, more than 80% of school teachers will have a minimum qualification of a bachelor's degree.

Figure 4.27: Trained and Untrained teachers, 2018



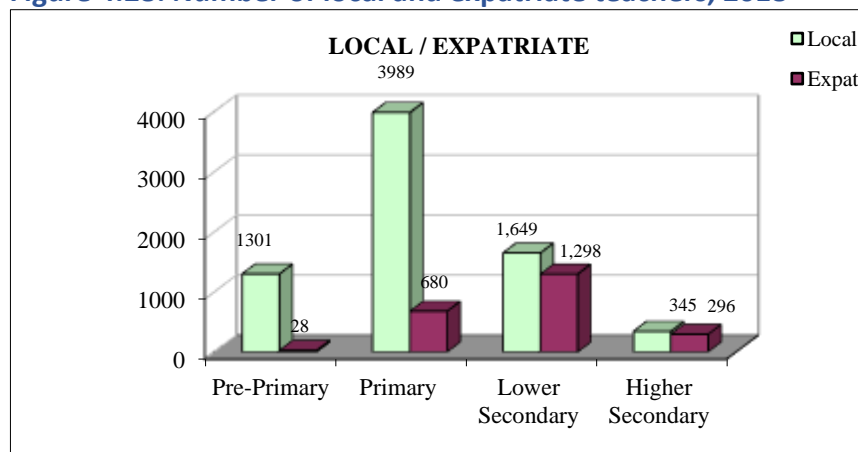
Source: Ministry of Education, Statistics, 2018

Challenge: Although there is a lot of effort in teacher upgrading and capacity building, the findings on the review of the curriculum implementation done in 2016 revealed that a large number of teachers exist in the system who need to upgrade their content and pedagogical knowledge in order to deliver a competency-based curriculum.

Expatriate teachers: The Maldives has been recruiting a large number of expatriate teachers especially for Secondary education over the past 4 decades. According to World Bank (2012), approximately 60% of teachers at Lower Secondary and 67% of Higher Secondary teachers are expatriate teachers and are deployed in the outer islands, mainly due to the reluctance of qualified Maldivians to take up these positions in the remote islands.

Although the trend is changing from the expatriate teacher-dominance in Secondary education, to more local teachers taking over, there are still more than 1200 expatriates working in the schools, which is approximately 41% of Secondary teachers (Figure 4.28). According to World Bank (2011), such high dependence on expatriate teachers is controversial as these teachers can be very much unaware of the Maldivian cultural values and have low commitments to schools, which may lead to a rapid turnover and low-quality education. Also, since employing expatriate teachers include several financial obligations from their visas to their food and accommodation in the country, in addition to their salaries, it is a huge financial burden to the state. However, in a situation where there are no sufficiently qualified locals willing to become teachers and to serve the schools in remote islands, the education system in the country has been functioning for the past 4 decades with no option but employ expatriates despite the cultural differences.

Figure 4.28: Number of local and expatriate teachers, 2018



Source: Ministry of Education, Statistics, 2018

Much effort has been made during the past few decades to change the situation in terms of training locals for teaching jobs.

Upgrading teacher qualification to diploma level: One of the significant developments of the efforts made to train locals is the upgrading of school teachers to a minimum of a diploma. At present, although some remote schools still have to depend on a few untrained teachers, now all school teachers have the minimum required qualification to be a teacher. This change has taken place with the introduction of the newly developed framework and improved salary scale for teacher qualifications in the year 2015.

Teacher salary scale to attract and retain teachers: Teaching profession has now become more attractive with the new salary scale, providing avenues for more allowances with higher qualifications. Also working as teachers in remote schools are becoming more attractive with new policy initiatives such as Multi-grade Teaching Policy and Inclusive Education Policy where teachers get additional incentives for teaching in these schools. Despite these incentives, consultations with key stakeholders indicate that the system is not attracting high quality candidates into pre-service teacher education.

The 3000 Bachelor's degree project: Along with new policy initiatives for strengthening the system, there is also an ongoing partnership with the Maldives National University and the Ministry of Education from 2016 to train 3000 in-service teachers to bachelor's degree level. It is presumed that by the completion of this 5-year project, more than 80% of school teachers will have a minimum qualification of a bachelor's degree, which will also minimize the dependency for expatriate teachers in the Secondary school education.

Challenges to recruit for the new curricula: The implementation of the new National Curriculum began in 2015. However, since teacher training and preparation has not been aligned with the new curriculum implementation, there are several gaps in teacher allocations for teaching different subject areas, especially from Key Stage 3 and up. There is a misalignment of training to subject teacher requirements. According to the Australian Institute for Teaching and School Leadership (2011), it is a teacher's professional standard that specifies and benchmarks the necessary knowledge, practice and professional engagement required to be a teacher. Hence, with the existence of such a policy, teacher training institutes will need to ensure that the teachers they prepare for the field have the minimum required standards.

4.24.3 Professional development policy

With the introduction of the Professional Development (PD) Policy of the education sector in 2009, every teacher is required to complete a minimum of 15 hours of professional development every year. For the purpose of facilitating the implementation of this policy and to reinforce the establishment of learning cultures within schools, 3 days are identified in the Academic Calendar dedicated to teachers' professional development. Along with the PD Policy, School-Based Professional Development (SBPD) Policy was also implemented, which guides the schools on step-by-step procedures of establishing SBPD. According to the SBPD policy, it is the school principal who must take the key responsibility of establishing learning cultures within the school. However, according to Rizwan & Shifaza (2015) in a study conducted on principals' perceptions of SBPD, though principals believe that SBPD is important in a school 75% of them believed that principal's role in SBPD is only to oversee the activity. Principals think that it is the responsibility of the PD coordinator to plan and implement PD activities. Therefore, there is an urgent need to reorient principals in public schools regarding their role in teachers' PD. Another concerning issue found in Rizwan & Shifaza's study (2015) is the tendency to fulfil the PD activities regardless of teachers' needs. This indicates the possibility that the PD practices in this 30 % of schools focus only on completing the mandatory 15 hours regardless of the needs teachers may have. Therefore, although schools ensure that they facilitate the 15 hours of mandatory PD for all teachers, it is essential to refocus the school leadership as well as the teachers in upgrading their competencies as needed through identified gaps in student learning outcomes.

4.24.4 Teacher Resource Centres

One of the aims of the education system in the Maldives is improving the quality of teaching and learning. However, the geographical makeup of widely dispersed small island communities and schools in these communities continue to be one of the main challenges for the provision of improved quality education. Amongst numerous endeavours, in addressing this challenge is the development of Teacher Resource Centres (TRCs). When the TRCs were established in every atoll in the country in 2007, each with state-of-the-art technology, the aim was to improve the quality of education at a decentralized level (UNICEF, 2007).

Experiences gained over the years have provided with good reasons that TRCs are the answer to the professional development of teachers with the principle of decentralised community-based approach for collaborative learning. It is expected that TRCs will

facilitate the identification of the problems and will provide solutions through training and exchange of ideas to bring greater impact on children's learning in the schools at the atoll level.

At present, the TRCs are playing a vital role in the professional development of teachers for atoll schools, in particular in the implementation of the new curriculum through training and monitoring activities. They also play a key role in disseminating training that need to be delivered to schools from the central level.

4.25 Key findings related to teacher quality

1. One of the significant developments of the efforts made to train locals is the upgrading of school teachers to a minimum of a diploma.
2. There is an ongoing partnership with the MNU and the MoE to train 3000 in-service teachers to bachelor's degree level. It is presumed that by the completion of this 5-year project, more than 80% of school teachers will have a minimum qualification of a bachelor's degree.
3. According to School Statistics of 2018, the percentage of untrained teachers working in primary schools has dropped to approximately 6% from 23% in the year 2010. However, with over 500 untrained teachers still working in the system can cause serious learning gaps in the students' education.
4. There are still more than 1200 expatriate teachers working in the schools, which is approximately 41% of Secondary teachers.
5. Since teacher training and preparation has not been aligned with the new curriculum implementation, there are several gaps in teacher allocations for teaching different subject areas, especially from Key Stage 3 and up.
6. There is an urgent need to reorient principals in public schools regarding their role in teachers' PD.
7. The TRCs are playing a vital role in the professional development of teachers for atoll schools, in particular in the implementation of the new curriculum through training and monitoring activities

4.26 Recommendations related to teacher quality

1. Continue the implementations of the training to eliminate the need for untrained teachers and upgrade to the level of bachelor's degree and reduce the need for the expatriate teachers.

2. Continue the training of teachers on new curricula on targeted teaching methods (lesson plans, formative evaluation, and high-level cognitive skills through inquiry approaches among others).
3. Facilitate atoll level training programmes and allocate the required budget accordingly.
4. Undertake a teacher demand and supply study to fully comprehend the situation of teachers, teacher distribution and allocation, motivation and incentives, training and continued professional development needs of teachers.

4.27 The Quality of Education Facilities and Learning Environment

4.27.1 The global indicator in the SDG

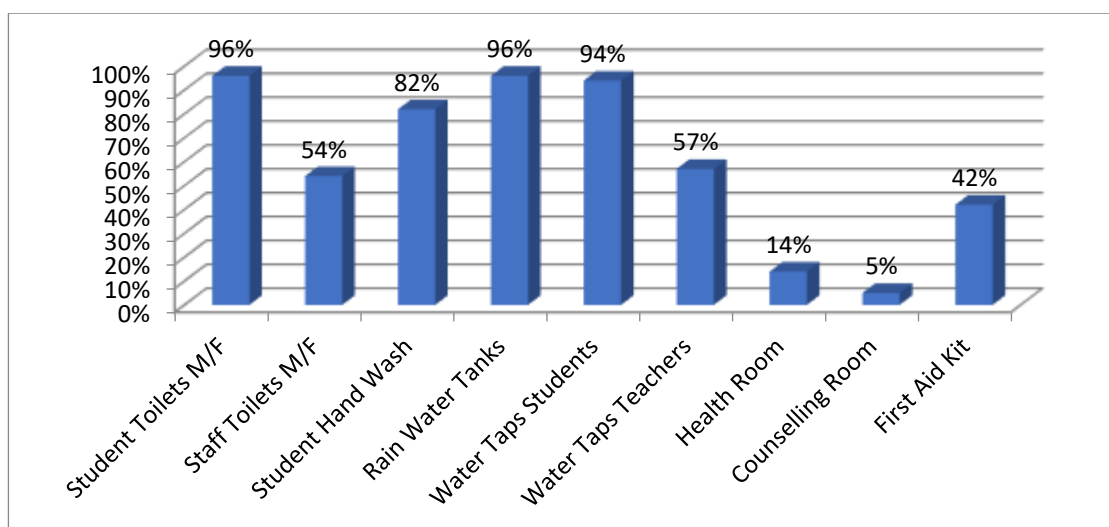
SDG 4.a.1 Proportion of schools with access to (a) electricity; (b) Internet for pedagogical purposes; (c) computers for pedagogical purposes (d) adapted infrastructure and materials for students with disabilities (e) basic drinking water; (f) single-sex basic sanitation facilities; and (g) basic handwashing facilities (as per the WASH indicator definitions)

This global indicator for Target 4.a spans several dimensions, making it difficult to give a quick snapshot of a country's school infrastructure situation (GEM UNESCO 2017).

4.27.2 The situation in the Maldives

The Maldives has been investing heavily on school infrastructure and facilities improvement in the recent past. Chapter 2 which focuses on "Cost and Financing" shows the scale of public investment on infrastructure for education. Various reports, both internal (School Review reports 2016 and 2017) and external (international partners) provide information on the quality of education facilities. In addition, for the purpose of the Education Sector Analysis, a quick baseline survey carried out for this review on the state of technical equipment used in schools (see the previous part on Technology and Education).

Figure 4.29: Facilities available at Schools in the Atolls



Source: MoE Report, 2018

When looking at the facilities that have been provided for the schools among atolls of Maldives, it is seen that 96% of the schools have separate toilets for boys and girls with the ratio of 40:50 for girls and boys respectively. However, except for 54% of schools, the rest do not have separate staff toilets for the males and females yet. 82% of the schools have hand washing facilities set up for boys and girls. Drinking water taps have been provided for students in 94% of the schools. Health Rooms and Counselling Rooms have not been provided except for a few schools. Also, proper first-aid kits are present in only 42% of the schools. (Information provided by School Health Section of MoE).

Findings of School Reviews (2018): Apart from the above source of data collected, a recent analysis carried out by the Quality Assurance Department (QAD) shows that the schools in the atolls experience notable amount of varied difficulties pertinent to facilities such as relatively inadequate space for library, meeting rooms, AV rooms, Listening Rooms, office space, safe open play area, or proper places for storing chemicals.

4.28 Key findings regarding school facilities

1. The Maldives has been investing heavily on school infrastructure and facilities improvement in the recent past.
2. Schools in the atolls experience notable amount of varied difficulties related to facilities such as relatively inadequate space for library, meeting rooms, AV rooms, Listening Rooms, office space, safe open play area, or proper places for storing chemicals.

4.29 Recommendations regarding school facilities

1. Undertake an audit of school facilities to ascertain the reasons why many schools are in need of additional classrooms /other spaces. (The number of school session per day, number of subject streams, as well as introduction of new programmes requiring additional rooms and facilities should be considered in such an audit).
2. Develop school standards necessary for effective implementation of curriculum.
3. Prepare a medium term (3-5 years) facilities development plan for the school system.

4.30 Quality assurance mechanism - the role of the QAD

The Quality Assurance Department (QAD) was established within the Ministry of Education in 2015 with a mandate to undertake studies to assess the quality of education at the systemic level and to advise on ways to improve quality. The program is supported through the World Bank-supported project. QAD has two key mandates:

1. The programme of quality assessment through “whole school” reviews and as part of the Quality Assurance Accountability (SIQAA) Framework. Findings of QAD school reviews are shared and discussed with stakeholders to help bring about improvement in school quality.
2. The National Assessment of Learning Outcomes (NALO). This policy focusses on systemic quality improvement that began with the launch by QAD, in 2015, of a 5-year project supported by the World Bank, the findings of which were presented earlier.

4.30.1 The quality Assurance Accountability Framework (SIQAAF)

SIQAAF and School Review

The School Improvement Quality Assurance Accountability Framework (SIQAAF) is aimed at supporting schools and their communities to identify and implement a shared vision for school improvement to create succeeding schools. The MoE/QAD encourages schools

to use this framework to improve their performance by engaging the school community and their peers (principal and teachers from other schools) in a cycle of performance feedback that includes performance planning, self-evaluation, review, and performance reporting. Each element of the SIQAAF was linked to provide a coherent and streamlined means for schools to achieve the following:

1. Understand their performance (self-evaluation and review).
2. Identify their vision and purpose and set goals and targets for improvement (school improvement plan).
3. Put into operation their improvement plans and manage resources (annual implementation plan).
4. Report on their performance (annual report to the school community).

The framework brought into focus the crucial roles of curriculum, assessment, pedagogy and reporting in raising students' learning outcomes, engagement and wellbeing outcomes.

School Review

School Review refers to a planned systematic monitoring procedure to determine the overall "health" of the school system in the Maldives. School review is undertaken using a special tool kit, based on 'Baraabar' (perfect) School Indicators, prepared for this particular purpose. This tool kit was prepared by the Quality Assurance Department of Ministry of Education in such a way that it would enable effective monitoring of the teaching and learning process, the management procedures and effective utilization of the resources in teaching. In addition, this tool kit also helps to find out the rapport established between the school and stakeholders.

School Review was started in 2016 across the country by the Quality Assurance Department with a target of covering all the schools in a three-year cycle. The schools to be reviewed are decided by QAD at the beginning of each academic year based on the annual targets with emphasis on covering a proportionate representation of schools in each atoll. In terms of prior external school monitoring coverage in the Maldives, a remarkably high number of schools (145 schools) have been visited and reviewed by QAD's external school review teams each ranging from 5 to 10 members in 2016 and 2017. The rest of the schools are scheduled to be reviewed by September 2018.

The geographical spread of the schools in the country poses various challenges for the large-scale activity of this scope covering all the islands. Challenges for School Reviews are multiplied with additional difficulties of finding team members with appropriate technical knowledge, logistical difficulties and covering high cost of travel involved in serving schools that are dispersed and spread over 800kms of the ocean. Moreover, the time constrains in covering the targeted number of schools in each trip was identified as a major challenge for the external School Review teams. However, the target of completing the review of all the schools is attainable with current planning and available resources.

4.31 Key Findings and Recommendations from external school reviews

Findings of school review report 2016 and 2017 were analysed recently with the financial support of UNICEF, with most recent large-scale data from the schools, highlighting the key issues for school improvement.

The findings of the reports must be viewed through the following dynamic matrix:

1. The findings of each report were true at the time of the review.
2. The findings of each report were shared immediately with stakeholders.
3. The findings of the reports immediately direct remediation efforts of the various organs of the sector.

The key findings and recommendations from the analytical report are stated below. They are categorized into teaching-learning, physical resources and staffing. Some of these recommendations have already been implemented.

Teaching and Learning

1. Provide additional training, including training at the school level on ways of improving the practice of learner-centered pedagogy with a special focus on effective use of group work, greater participation of learners and on how to be an effective facilitator of learning as well as on the creation of a friendly learning environment and contextualization of content/specific topics. This training must be linked to strengthening the ability to implement the new curriculum.
2. Identify the main reasons for the lack of detailed lesson preparations at some schools and provide necessary support/mentoring if needed.

3. Conduct a rapid review of the status of SEN classes in the school system with a view to identifying key issues and addressing them.
4. Share effective practice in conducting SEN classes.

Leadership and Management

1. Ensuring that principals in all schools are trained in all aspects of school self-assessment as well as in school development planning for improvement.
2. Management should analyse the results of both internal and external examinations to identify subjects for improvement. It is important to diagnose factors behind persistent low pass rates in key subjects with a view to improving the situation.

Physical resources

1. Review use of non-classroom space in schools to ascertain their needs. The number of school sessions per day, the number of subject streams offered in the school as well as the introduction of new programmes requiring additional rooms will need to be included among the aspects to be reviewed.
2. Provide library and laboratory facilities for schools that need them to enhance and support teaching and learning.
3. Ensure continued availability of clean drinking water and clean usable toilets in all schools with due attention to regular maintenance and proper use.
4. Provide health and counselling services as is appropriate with factors such as the size of enrolment and age group of students.
5. MoE may consider preparing a list of basic resources for schools that could be used as a minimum standard in terms of provision of resources to all schools. This adequacy level should be reviewed periodically, and appropriate adjustments made. In this regard, the Ministry of Education may give consideration to the development of a special project targeting the most under-served 10 percent of schools in the country which aims to uplift them along the main quality indicators over a period of 2-3 years. Such a project addressing disparity reduction would align with the priorities of the current United Nations Development Assistance Framework agreed by the Government of the Maldives and the UN system in the country.

Staffing

1. Ministry of Education needs to give consideration to undertake a teacher demand and supply study to fully comprehend the situation of teachers, teacher distribution and allocation, training and continued professional development needs of teachers.
2. MoE needs to review the disparities arising from the imbalance in the distribution of trained teachers and the qualified Leading Teachers. Such disparities, when examined from the point of view of students in affected schools, are often linked to issues of inequity including inequity in learning outcomes.

Quality Assurance mechanisms

1. Use the QAD to support improving learning by performing an analysis of SIQAAF and NALO to help better implementation of the curricula reform, the MGT and the education special needs students as well as the training (initial and in-service) of the teaching personnel and of principals.

4.32 Synthesis: Towards a theory of change to reduce the learning gap

The starting situation: The policy focus on inclusion helped to maintain focus on improving access to quality education for all children in the Maldives showing progress in terms of equitable access from Pre-Primary to Grade 12. The ongoing work is on promoting equitable learning outcomes and skills for all as NALO results continue to be mixed showing that learning gaps remain across locations and gender. Work on and expanding TVET within the schools and out of schools will help to contribute to the goal of achieving skills for all.

In this chapter an analysis is done on the set policies the Maldives introduced, in the Framework of the Education Strategic plan 2013-17, to improve learning outcomes and skills from K1 to 12th Grade. Curricula is at the centre of these policies, including teaching and learning materials and new teaching and learning approaches and assessments. The curricula reform goes together with the teacher training and teacher upgrade programs; the Multi-grade teaching program; the policies on students with Special Education Needs; the integration of the 2 years Pre-Primary education into the public schools in the Atolls;

the strengthening of school-based management and the establishment of the quality assurance mechanisms, including self-evaluation and school-based professional development. In terms of results, the findings (NALO 2015, 2016 and 2017) show modest or mixed results on learning, (4th and 7th Grades) with pronounced regional disparities, and student performances at national examinations (end of Lower Secondary and end of Higher Secondary), show improvement. Geographical disparities that are revealed from an analysis of these results need to be addressed.

The new challenge to improve equitable quality of learning outcomes and skills including socio-emotional skills from K1 to 12th Grade by reducing the gap between the least performing and the best performing students, considering geographic, gender and vulnerability (students at risk) indicators and by increasing participation and certification for O' levels and A' levels.

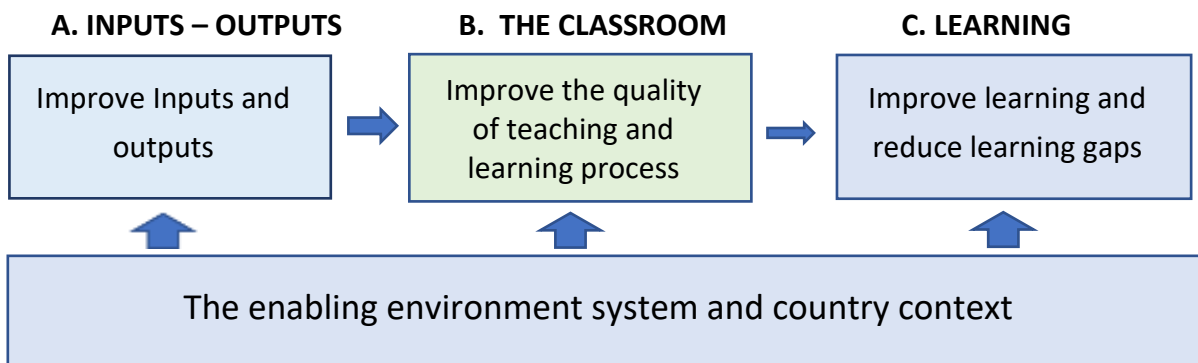
Thus, improving learning outcomes and skills, including socio-emotional skills at all levels emerges as one of the main objectives for the next ESP.

Steps to change and strands of action: what we are going to do about it? Considering the theories on how teachers change their practices , on how students learn and go to higher levels of cognitive thinking (Reif F 2010⁴¹; PISA 2015, OECD42; World Development Report, the World Bank 2018), a theory of change emerges to guide policies and actions to improve learning and skills including socio-emotional skills for all students and reduce the learning gap. The framework with all factors impacting learning, presented in the beginning of this chapter is used for analysis of policies a comprehensive approach that includes the key factors to improve learning outcomes in terms of inputs, process (in the classroom) outcomes (learning), enabling environment and system. (See Figure 4.30 below).

⁴¹ Reif F (2010) Applying Cognitive Science to Education. Thinking and Learning in Scientific and Other Complex Domains. Cambridge, MA: The MIT Press.

⁴² Retrieved on May 14, 2018, from <http://www.oecd.org/pisa/publications/>

Figure 4.30: Factors that impact learning



In the case of the Maldivian Education System the key Factors impacting learning are the following:

Figure 4.31: Key factors that impact learning in the Maldives

Improve the Quality of Inputs and outputs	Improve the Quality of Teaching and Learning Process	Improve Learning and reduce learning gaps
<ul style="list-style-type: none"> -Infrastructure facilities -Curricula reform- Teaching and learning materials -Teacher quality and support initial and in-service and SBPD -Technology for Education in all schools 	<ul style="list-style-type: none"> -Teaching and learning process for high-level cognitive thinking and socio-emotional skills -Teaching and Learning for the inclusion of children with SENs -Curricula implementation to reduce the learning gap (and Multi-grade teaching) -Technology to improve teaching and learning 	<ul style="list-style-type: none"> -Learning Outcomes measurement and learning benchmarks (NALO) - International benchmarks

System strengthening (School based management, TRCs, MEMIS, School Improvement, Quality Assurance and Accountability Framework (SIQAAF))

The desired and intended outcomes. The theory of change emerging from the analysis has the following assumptions: Use of information and findings from NALO and Quality Assurance Accountability Framework to better implement the key policies described above. Given the fact that in the Maldives the policies and other interventions touched

all factors impacting learning, focusing policy implementing more sharply on teaching and learning will help improve learning, skills including socio-emotional skills and reduce the learning gap within the timeframe of the ESP 2019-23.

Chapter 5: Technical Vocational Education and Training, in and out of School

5.1 Introduction

This chapter analyses the state of Technical and Vocational Education and Training (TVET) in the Maldives, both in the formal school system and outside of it. It will (1) define TVET in relation to Target 4.4 of Sustainable Development Goal (SDG) 4; (2) examine the TVET provider system in the Maldives, including providers, programs, pathways and quality assurance; (3) discuss access, equity and external efficiency of the TVET system in the Maldives; (4) discuss the cost of financing TVET programs in the Maldives, including public and private funding sources and the structure of the TVET expenditure; (5) discuss the quality of the TVET provision in the Maldives, including internal efficiency, the quality of training delivery and quality assurance and management. The chapter concludes with identification of key findings and recommendations.

5.2 Definition of skills within the Target 4.4 of SDG 4

The Target 4.4 of the SDG 4 is dedicated to all forms of TVET, as a response to the rapidly changing labour markets, unemployment, especially youth unemployment, migration and technological advancement the countries are facing: “by 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills for employment, decent work and entrepreneurship”.

Countries are pressed to develop policies to address the needs of youth and adults to improve their skills and competencies and acquire new ones in order to be better integrated into economic life.

Multiple modalities of equitable quality education and training for skills development:

In order to approach the target by 2030, countries need to increase learning opportunities using multiple modalities of education and training, inside the school system, outside, formal, non-formal and informal education and trainings, in order to offer to youth and adults pathways between different education streams and enable the transition between school and work (UNESCO, 2016).

Skills for life and work-specific skills: Countries are encouraged to expand the focus of TVET to work-specific skills because the present narrow focus does not help adaptation to the fast-changing demands of the labour market (UNESCO, 2016). Therefore, skills should include;

1. Work specific skills
2. High level cognitive and non-cognitive transferable skills such as problem-solving, critical thinking, creativity, teamwork, communication skills and conflict resolution, which can be used across a range of occupational fields, in a perspective of updating through lifelong learning.

Impact and outcomes of TVET: The Framework for Action by UNESCO (2016) suggested evaluating the impacts and outcomes of TVET policies and programs. It is important to collect data on the transition from learning to the labour market and on the employability of trainees by paying special attention to various types of disparities.

Definition of TVET globally

According to UNESCO, TVET comprises education, training and skills development on a wide range of occupational fields, production, services and livelihoods. TVET, as part of lifelong learning, can take place at secondary, post-secondary and tertiary levels and includes work-based learning and continuing training and professional development which may lead to qualifications. TVET also includes a wide range of skills development opportunities attuned to national and local contexts and needs. Learning to learn, the development of literacy and numeracy skills, transversal skills and citizenship skills are integral components of TVET (UNESCO, 2015).

It is worth to note that the new strategy of UNESCO on TVET 2016-21 in line with the Education 2030 Framework for Action aims to support the efforts of Member States to enhance the relevance of their TVET systems and to equip all youth and adults with the skills required for employment, decent work, entrepreneurship and lifelong learning, and contribute to the implementation of the 2030 Agenda for Sustainable Development as a whole.

The analysis of TVET done by UNESCO (2016) recommends that, over the next decade 2016-26, over 475 million new jobs need to be created to absorb 73 million youth currently unemployed and the 40 million new annual entrants to the labour market. Thus, evidence shows that attaining decent work is a significant challenge for youth. The global unemployment rate for female is 6.4% and 5.7% for male while the global labour force participation rate is 48.9% for female and 81.7% for male. For all countries, climate change represents an urgent and potentially irreversible threat. It is estimated that 15-60 million new jobs could be generated globally over the next two decades through the transition to a green economy.

UNESCO has set up three pillars of priority areas for TVET; (i) Fostering employment and entrepreneurship, (ii) Promoting equity and gender equality, and (iii) Facilitating the transition to green economies and sustainable societies.

Within the context of Target 4.4 of the SDG 4, TVET is required to be responsive to the rapidly changing labour markets, unemployment, especially youth unemployment, migration and technological advancement that countries are facing by substantially increasing the number of youth and adults who have relevant skills by 2030. Relevant skills simply mean that those skills needed for employment, decent work and entrepreneurship. In this regard, TVET education and training can be seen as an approach that provides skill sets that are highly relevant for employment, migration and technological advancement.

It is, thus, a method of improving people's skills, especially the skills of youth by means of improving their lives, employability and employment outcomes. In addition, TVET education and training is seen as a means to obtaining opportunities for decent work which the International Labour Organization (2018) defines as "productive work for women and men in conditions of freedom, equity, security and human dignity." This encompasses such factors as work that gives a fair income, security in the workplace and social protection for workers and their families.

Decent work also offers opportunities for personal development and social integration. It gives people the freedom to express their concerns and organize and participate in decisions that affect their lives. It guarantees equal opportunities and treatment for all.

Earnings generated in the labour market as gainful employment in decent work also contribute a large share of family income and the livelihood of individuals, thereby improving the effective distribution of economic development and increasing a country's productivity and growth.

5.3 TVET provider system in the Maldives

5.3.1 Historical determinants of TVET development in the Maldives

Historically, technical and vocational education existed in the Maldives in many forms, teaching the arts and skills necessary for economic production. 'Edhuruge' is the earliest known arrangement that imparted literacy. They were small informal schools in a person's home where children would go to learn to read Thaana and Arabic.

Skills were learned through informal apprenticeships and community activities. For example, young men would learn fishing and sailing by being apprentices on fishing boats. Young men and women would learn the skills to farm and harvest mullet during the rainy season through cooperative community groups.

Skills such as boat building, coir rope making, weaving cloth and mats, metalwork and jewellery making were learned through informal apprenticeships and usually passed down from parents to children within a family.

On-the-job training is also another widespread method of TVET education for acquiring skills. Such training can enable people to perform tasks and functions that are considered to be professional, technical, administrative or executive in nature. This mode of training still plays a major role in training employees in the government and private sectors.

However, traditional ways of acquiring skills and on-the-job training alone are clearly insufficient to provide the specific technical and administrative skills required by modern sectors of the economy, and more specifically to the sectors of fisheries and agriculture. A modern system of technical and vocational education is thus required not only to address the outdated skillset of the current labour force and the dearth of skilled workers, but also as a solution to rising youth problems such as crime, and as a means to providing employment opportunities to young people.

For a better understanding of TVET sector development in the Maldives, it is also important to highlight the contextual issues. At present, O' level or A' level, with no technical or vocational content is deemed satisfactory to fill junior level administrative and service jobs. While a good general education helps in the trainability of a student, general education alone is insufficient to perform all tasks required for discharging duties in such positions. Similarly, Bachelor's degrees and Master's degrees are deemed sufficient to fill higher level jobs. This tradition has been maintained, regardless of the changes in the labour market, which has now resulted in credentialism and a context where many seem unfit to work.

At present, there are no regular labour market surveys to feed the data into the Learning and Information Management Systems, which can then be used for planning and implementing TVET programmes. The current TVET system is too narrow in scope and does not acknowledge a variety of skills required for the labour market.

5.3.2 TVET provider systems in the Maldives

Systematic provision of Technical and Vocational Education by the government started with the establishment of the Allied Health Services Training Centre by the Ministry of Health in 1973. Two years later in 1975, the Vocational Training Centre (VTC) was established in Malé to train apprentices of the Malé Powerhouse. VTC began with electrical, engine repair and maintenance, welding, and machining courses. Refrigeration and Air-conditioning were introduced during the early '80s. Building Construction and Electronics courses were introduced in 1985.

Similar centres were established in the atolls under the name of Rural Youth Vocational Training Centers (RYVTC). Later they were renamed Regional Youth Vocational Training Centre (RYVTC). They were set up in H.Dh. Kulhudhuffushi, R. Alifushi, K. Thulusdhoo and S. Hithadhoo. The Kulhudhuffushi centre was specialised to conduct Engine Repair and Maintenance programs; the Alifushi centre was specialised to conduct Boatbuilding; the Thulusdhoo centre was established to conduct Carpentry and Handicraft programs.

TVET system began with the formation of a TVET section within the Ministry of Higher Education, Employment and Social Security (MHEESS) in 2006. It started with the Employment Skills Training Project (ESTP) funded by the Asian Development Bank. It was designed with the objective of increasing the number of Maldivians actively participating in the labour force and gainfully employed (ADB, 2012). Its objective was to be achieved through the implementation of the following three components:

- a. Training design, development, and delivery.
- b. Career guidance, employment information, and social marketing.
- c. Capacity strengthening of the then Ministry of Human Resources, Employment, and Labour (MHREL).

Training under the project was delivered in three regions (Malé and adjacent atolls, Northern Development Region, and Southern Development Region) and focused on five key sectors: Tourism, Fisheries and Agriculture, Transport, Social Sectors (Education and Health), and Construction.

It established seven Employment Sector Councils (ESCs) in the prioritized sectors to serve as a representative body of policymakers and senior managers or owners of enterprises in the prioritized sectors. The ESCs were tasked with prioritizing those occupations with a high demand for workers. Subsequently, 58 ESC members were provided with introductory training on Occupational Skills Analysis and Competency Standards Development. During the project, National Competency Standards were developed for 15 occupations and endorsed by the Maldives Qualifications Authority. Once the curricula for a particular course or qualification were made, they would be submitted to the relevant sector councils for endorsement. The sector councils have been inactive for the past five years.

Four methods were used to deliver training. They are:

- a. Community-applied training, 17% of which was based on competency standards,
- b. Employer and institution-based training, the majority of which followed the CBST (Community Based Skills Training) method of training delivery,
- c. Fendaa (introductory) training, and
- d. Training in youth centres.

Much of the training thus provided were based on the National Competency Standards and curricula that were developed. This project was time-bound. Some of the lessons from the implementation completion report state that timely commencement and execution is necessary while continued stakeholder support needs to be encouraged. Furthermore, the report also highlighted that interagency coordination and cooperation is also required, while regional networking and database management systems need to be in place. However, like many such projects carried out in the Maldives, it lacked continuity after the project implementation phase.

While there are several methods of delivering TVET practised in the Maldives, it still lacks decentralization and a need to address local needs. A few learning centres and outreach centres are offering ad-hoc courses. It is important to develop a decentralized TVET model, thereby addressing the need for accessibility and inclusiveness, while also catering to the local needs and requirements. This localization will develop employment skills, thereby establishing a stronger partnership with local industries and nearby business communities. Such a system should revolve around the purpose of serving the economic and social needs of their communities, while also being open to the world to learn new opportunities and adapt to internationalisation.

The Maldives Polytechnic

The VTC, mentioned earlier, was re-named as the Maldives Institute of Technical Education (MITE) in 1996 with a new building and training facilities built with grant aid from the Indian Government. In 2000, all government training institutions under various ministries were brought under one roof after establishing the Maldives College of Higher Education (MCHE), and MITE became the Faculty of Engineering Technology (FET) of MCHE. In a separate development in the vocational education sector in 2009, the Maldives Institute for Vocational Education and Training (MIVET) was opened as a new step in this area. Later in 2010, all facilities and resources of MIVET and FET were merged to create a separate entity in the name of Maldives Polytechnic with the mandate of providing skills training programmes under the Ministry of Education. The Maldives Polytechnic was created by a Presidential Decree under Article 116 of the Constitution of the Maldives on April 12, 2010, as the national government institution to develop, manage and provide training facilities for technical and vocational education and training.



Main campus of MP in Male'

The Maldives Polytechnic was established to offer programmes within the Maldives National Qualifications Framework (MNQF) aligned with the principles and practices of partnership with the industry and community to provide demand-driven skills

development for economic growth and the needs of the people for employment. By 2012, it was the largest provider of competency-based skills training in the country (ADB, 2012).

Vision and structure

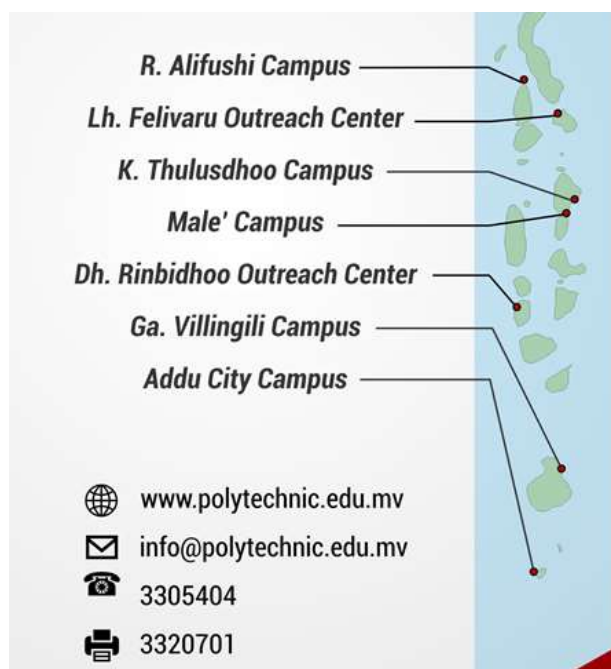
The Maldives Polytechnic is guided by its vision to become “the leading national centre for excellence in vocational and technical education”. Its mission is “to create opportunities for school leavers and adult learners to acquire skills, knowledge and values for employability and lifelong learning in a global economy”.

The Maldives Polytechnic is a formal educational institute offering on-campus and online delivery of MQA approved vocational education courses. It is a public institution that operated and reported to the Ministry of Education until it was transferred to the newly established Ministry of Higher Education in late 2018.

The courses at Maldives Polytechnic are conducted free of charge and are available for any person regardless of age, sex and social status who applies and are willing to complete the course.

The academic structure of the Maldives Polytechnic comprises of 5 major schools and 4 campuses to offer programmes in different atolls. The Schools are School of Mechanical Engineering, School of Electric and Electronic and Infocom Technology, School of Applied Arts and Services, Center of foundation studies, School of Built Environment. The 4 campuses include R. Alifushi Campus, S. Hithadhoo Campus, Ga. Villingili Campus and K. Thulusdhoo Campus as shown in the figure below. In addition, there are two Outreach Centers in two atolls.

Figure 5.1: Location of Campuses and Outreach Centres of MP



Source: Maldives Polytechnic, 2019

The MP is currently using an internal database donated and set up by Ooredoo. The enrolment of students, managing the learner IDs and maintaining an updated log takes place via a Microsoft Access Database. The internal network hosts all other details through which the institute functions, such as academic files, budget and finance, human resources and most importantly, attendance.

None of MP's data was put on MEMIS while it operated under the MoE. Previous discussions on adjusting operational procedures to make an effective move to MEMIS is no longer practical and valid. The discussion is currently underway within MoHE to set up a job-skill match management system.

Facilities

The facilities available at the MP include the following.

1. Youth Hub

This is a safe space on the ground floor of the MP established to serve a number of youth-related purposes, namely;



Youth Hub at MP

- To act as a drop-in centre for young people to seek guidance in employment opportunities and further education,
 - To act as a youth-friendly safe space for young people to hang out and to be used as study space,
 - To be used as a space to have mini expo on career opportunities liaising with companies and resorts,
 - To be used as a space to have mini workshops (1 day) on different courses carried out by MP (for example, electrician workshop for women),
 - To be used as a space to have mini sports activities such as carom boards, dart boards, TT table etc.
 - Space should have light snacks and coffee available for young people who use the facility.
2. 11 Classrooms
 3. Four Workshops including Refrigeration & Air Conditioning, Welding, Engineering and Electrician's workshop
 4. Library, Computer Lab, Lecturer's Room, Auditorium, IT Room
 5. Conference Room, Common Room, SPE Room
 6. 3 Store Rooms, Pantry
 7. Art Lab and 2 Beauty Therapy Rooms
 8. Digital Control Room and Five Online Virtual Rooms
 9. Two Multi-purpose Rooms (Electrician's Workshop)
 10. Twelve Toilets
 11. Mosque
 12. Architecture Studio
 13. Archive Setup
 14. Administrative Office

Issues and challenges faced by the Maldives Polytechnic

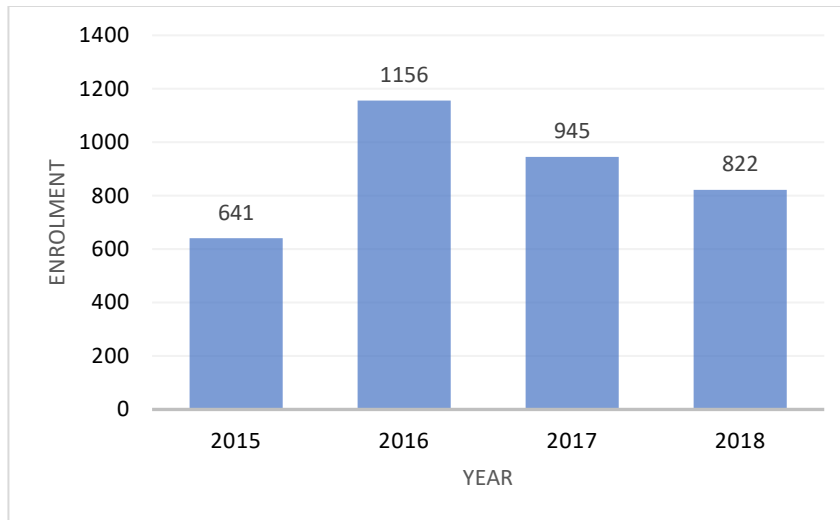
The following have been identified as the main issues and challenges faced by the MP.

- Lack of survey-based statistical information regarding the industry and economic needs.
- Lack of human resources required for skill development courses.
- Lack of awareness about Maldives Polytechnics and our courses to school level students and the general public.
- The technical and skilled job market is mostly occupied by foreigners.

Access

Figure 5.2 shows the growth of the enrolment at the MP during the period 2015-2018. The enrolment rose from 641 to 1,156 in 2016. However, in the past two years, it has declined to 822 in 2018.

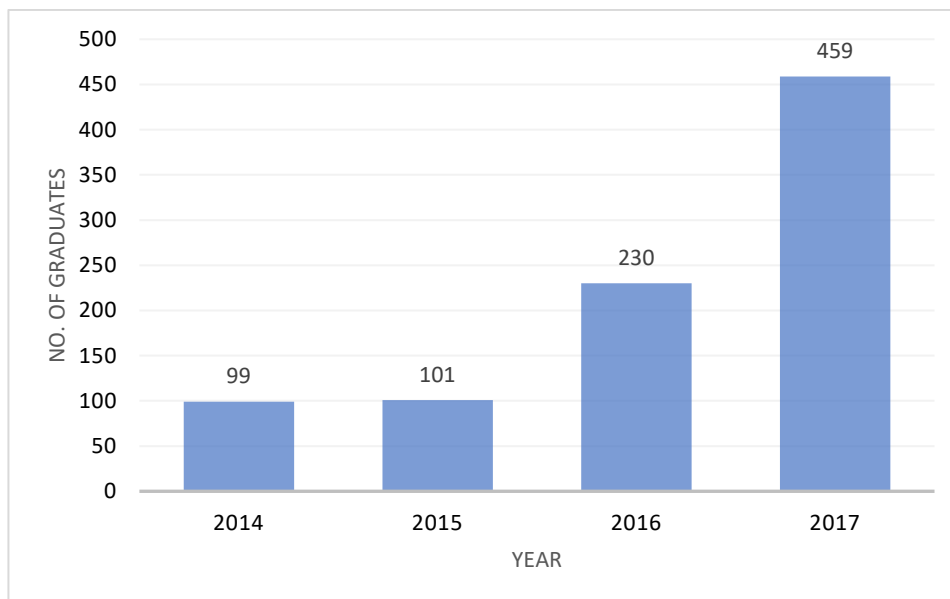
Figure 5.2: Growth of Maldives Polytechnic, 2015 - 2018



Source: Maldives Polytechnic, 2019

Figure 5.3 shows the number of graduates from 2014 to 2017. The number of graduates coming out of the MP has certainly increased between these years.

Figure 5.3: Graduates of MP, 2014-2017



Source: Maldives Polytechnic, 2019

The following issues and challenges on enrolment and completion have been noted in the past.

- Lack of proper monitoring
- Inability to adequately attend to student needs
- Limited methods of assessment especially for assessing the differently abled learners
- Lack of learner engagement
- Lack of standard operating procedures and policies for assessment
- Lack of external verification and quality assurance
- Lack of valuing a 'free course'.

Since January 2018, under new management, the MP planned to address the above issues. The following steps were initiated:

- Strengthened attendance monitoring, making follow up calls when students have been absent for 3 days,
- Having course Viber groups to check with students where they can express any issues or any feelings so that it can be attended in a timelier manner,
- The offering of more varied assessment methods, including oral assessment or presentations, demonstrations and projects,
- Inauguration of the first student elected Student Association body to keep the students more engaged,
- Standard operational procedures are being written and policies are being renewed.
- Collecting data on the transition from learning to the labour market and on the employability of trainees,
- Revising pay structure for technical and vocational jobs in both the private and public sector,
- Building a linkage between the graduates and the employees for a healthy discussion of how to develop the sector.

With these new procedures, the MP started experiencing some degree of success in higher enrolment and retention rates.

Equity

While the enrolment of girls is low, the drop-out rate of girls is also high. Some of the reasons that have been cited for girls dropping out include:

- Course times conflicting with work schedules
- Course timings are too long, and they cannot spend that many hours per week at Maldives Polytechnic
- Lack of interest in technical and vocational courses
- Technical and Vocational courses, especially Engineering field courses, are viewed as male based fields
- Less female lecturers
- Female students are more occupied in educational, health and administrative fields in the Maldives
- Risk and safety associated with technical and vocational courses
- Child care for siblings when parents are away or at work
- Preference of gender-biased subject choices.

There has been no significant work done to attract more female students or to create programmes particularly targeted towards females except for Hairdressing and Beauty courses, and the very recent addition of a Nursing programme which was offered online. There has always been a minority female presence in Polytechnic courses including Electronics, IT and Architecture.

Enrolment of females increased when the MP began offering Hairdressing and Beauty courses. Although this was not advertised as a women-only course, all currently enrolled students are female. There are two lecturers for the course, one female and one male.

The share of female instructors is extremely low, as demonstrated in Table 5.1 below. Only 4 out of 38 currently active lecturers are female.

Table 5.1: Number of instructors in the Maldives Polytechnic

Type of Lecturer	Total No.	Female	Male
Permanent Lecturers	18	1	17
Resource Lecturers	20	3	17
Online Lecturers	11	4	7
Total	49	8	41

As the courses of the MP are free of charge, the institute does not conduct financial background checks of the students and therefore they do not have data on equity by social status. At the moment, the institute can assure that they abide by their non-discrimination policy, which includes social status.

Relevance of training delivery

Every course at the MP requires obligatory industrial training. This lasts for one month after the completion of the remaining course requirements. Industrial training must amount to at least 120 hours and must be fulfilled at a workplace doing work relating to the course completed. When an official signed a letter of employment or internship is submitted to the MP, students will receive a logbook where they must log the hours and work done, verified by their workplace supervisor. This is a requirement for all programmes offered at the MP.

Analysis of polytechnic expenditure

The MP budget is allocated through public funds. Outside donations received are usually as a good or a service, and rarely in the form of funds. In certain instances, the MP has received financial donations towards curriculum development from the UNDP and the World Bank in the past.

Until the separation of MP from MoE, it was believed that a complete analysis of expenditure on the MP required a holistic approach, in combination with data from other divisions of the MoE. However, now this would require a new approach.

The student-teacher ratio at the MP is 16:1, while the average class size is 16-18 students, with 2 as a minimum and 37 as a maximum. All instructors are qualified in their relevant field. However, attracting qualified and competent instructors have been a challenge to the polytechnic.

Programmes offered through the MP

Over 30 programmes are offered through the MP. These programmes range from Certificate 1 to Diploma level. Table 5.2 provides a breakdown of a number of programmes from the respective Schools.

Table 5.2: Number of programmes from respective Schools of MP

#	School	No of Programmes
1	School of Built Environment	3
2	School of Applied Arts	9
3	School of Electrical, Electronics & Info. Comm Technology	3
4	School of Mechanical Engineering	10
5	Centre for Foundation Studies	7

5.3.3 From TVET to TVET Authority

In 2011, the TVET division became the Technical and Vocational Education and Training Authority (TVET Authority) within the Ministry of Education. Established by the President's Office, TVETA has the overall responsibility for the development and management of a comprehensive, demand-oriented and partnership-based TVET system.

TVET is important for life-long learning. TVET prepares learners for employment and then helps them to continue their education part-time. Formal education aims to fill the first 22 years of life with learning designed around growth and maturation. TVET is based on young people mastering skills and the concepts behind those skills, over a working lifetime to get the first job and then remain employable as technology and social change. However, it should be noted that the contemporary context has changed where students are seeking 'work' rather than 'jobs'.

During the early stages of the implementation of TVET, any organization, public or private, that wanted to become part of the TVET system, were required to register with the former Department of Higher Education. However, many private organizations such as resorts and companies had no intention of becoming educational institutions or establishing their own educational institutions because doing so was beyond the scope of their business operations. Private businesses, resorts and community organizations had training projects in their annual plans and wanted simply to conduct the training and give students a nationally recognized qualification. In the Maldives, the distinction between pre-service training and in-service training is very much blurred. Hence, it impacts learning and delivery by the very diversified and distributed institutions which are currently in operation, resulting in a more challenging environment to assure quality.

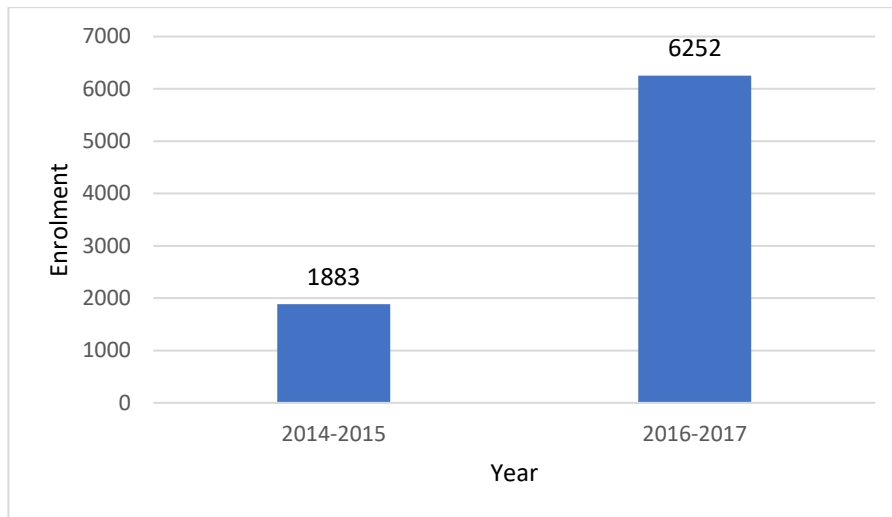
Thus, to make TVET education accessible to more prospective trainees and reduce the burden on organizations wanting to conduct such education programs, the registration process was simplified. The TVET Authority also became the Registrar of vocational training providers who do not wish to become educational institutions. This resulted in further negligence of the sector.

The key functions of the TVET Authority are to assist training providers to understand the standards, curricula and competency sets for a course so that it becomes easier for the training providers to design and deliver instruction that will impart knowledge and skills that are being assessed. However, it should also be noted that many of the in-house service providers in the tourism sector conduct 'branded-trainings' which have distinct competencies to that of the TVET guidelines. Therefore, it is important to encourage industry partnership while setting competencies and benchmarks which are nationally and internationally recognized.

Validation of skills, competency acquisition: In terms of validation of skills, competency acquisition, the TVET assessments are expected to be criterion-referenced and each student is required to meet the criteria set for each unit in a course. These criteria are based on the National Competency standards. When revising the mandate of the TVET Authority, it is expected that the assessments of students would be administered not by the training providers, but by the Authority itself, using its pool of accredited assessors. However, there are many challenges in implementing the mandate of the TVET Authority, particularly the lack of human resources and finances. Therefore, validation of skills and competency acquisition is not fully addressed. It should also be noted that, at present, there is no national repository of industry-approved guidelines for many sectors across TVET and higher education.

It is to be highlighted that evidence of public and private sector involvement in designing and delivery of the courses are found. The training subjects are set out with little or no consideration for the needs of the labour market. The inability of the government and private sector to supply qualified human resources as per the labour market requirement has resulted in some private companies, mostly in the tourism sector, to develop their own training institutes (as discussed earlier).

Figure 5.4: Growth of TVET enrolment



5.3.4 BTEC qualifications in schools

BTEC is a set of vocational qualifications approved by the QAA of the United Kingdom and offered in the UK and worldwide by Pearson. BTEC is offered at different levels in a diverse range of areas. In the Maldives, BTEC programmes of study are offered in schools as an alternative stream to the more academically oriented IGCSE and GCE Ordinary Level, and GCE Advanced Level qualifications.

The BTEC qualifications offered in schools in the Maldives include Pearson BTEC Level 2 Diploma (equivalent to MNQF Level 3 and 4 GCE O/Ls); and Pearson BTEC Level 3 Diploma (equivalent to MNQF Level 3 and 2 GCE A/Ls), or Extended Diploma (equivalent to MNQF Level 4 and 3 GCE A/Ls).

BTEC qualifications are offered on a national scale in the Maldives with the goals of providing free, equitable and quality education for all types of learners and cater to the many different needs of the students. In 2018, there were a large number of students studying for BTEC qualifications successfully. This has contributed to increasing the proportion of students achieving a minimum proficiency level at the end of lower secondary school. Two main BTEC projects were introduced in 2014 to inspire and attract young people into vocational skill courses. Namely, BTEC project and Dhasvaaru project.

1. BTEC: Business and Technology Education Council (BTEC) is an international qualification offered by EDEXCEL. It offers alternative learning and assessment methods designed to cater to every type of learner. BTEC is offered as a stream subject when students join Grade 9 after completing Key Stage 3. Along with 4 compulsory subjects, students study one BTEC course and receive a Level 2 Diploma certificate when they successfully complete their course, which is equivalent to an MQA Level 3 certificate. The BTEC project was piloted in 2014 with 376 students from 12 schools. 84% of the first batch of BTEC students in the country graduated at the end of 2016, with 93% of these graduates currently engaged in either employment or further studies. By 2018 that there were 178 schools out of 190 lower secondary schools offering BTEC O' Level and 44 schools offering BTEC A' Level courses. Over the last five years, there has been a 186% increase in BTEC enrolment, with one in nine students and one in 16 students currently enrolled in BTEC O' Level and A' Level respectively. In 2019, there are 179 schools offering BTEC O' Level and 44 schools offering BTEC A' Level programmes.
2. Dhasvaaru: It was recognized in 2013 that some students were failing in the mainstream academic program in their O' level exam, and therefore, having lesser opportunities to go forward in higher studies or attaining employment. The aim of the 'Dhasvaaru' program was to offer a strength-based alternative pathway for such vulnerable students to increase the possibility of employment or further studies after school. Dhasvaaru was offered to students who were in their last year of secondary schooling and offered to those students who had an interest in learning skilled work. Students were offered to choose and undertake training from more than 60 skill areas standardized by TVET Authority. Students learn the required skill set while on an internship in different companies. Students are provided with a Level 3 MQA approved certificate upon successful completion of their course. Students can opt to do any 5 O' Level subjects with their TVET course. In addition to TVET courses, Dhasvaaru offered support programs such as Life Skills Education, career guidance, support groups and leadership camps which further helped students to sharpen their skills.

Dhasvaaru was piloted in 2014 with 151 students from 11 schools in Malé and has now expanded to all the atolls, with 1364 students trained from 162 schools nationwide in 2017. A total of 4598 students have been trained within the past five years (2014-2018), out of which 74% have been certified. Furthermore, it is

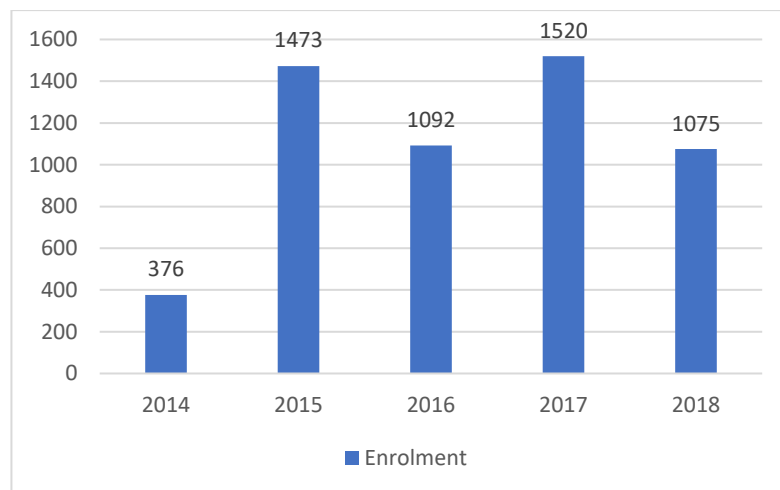
claimed that 79% of Dhasvaaru graduates (2014-2016 batches) are engaged in employment, education or training.

Students who complete vocational education are followed until they are 18 years old. Their engagement status in employment or further studies is noted down and further support is provided if needed.

It is evident that enrolment in TVET programmes has grown due to the incorporation of TVET into the formal school system. However, there is little evidence that there is a general increase in the number of participants elsewhere. Youth Centres have been established in the outer regions. Regardless, there is little to no effort in establishing career guidance kiosks and promoting locally available jobs.

Furthermore, to increase the number of students who are exposed to TVET, it is also important to incorporate components of career guidance into the school system in a sustainable manner. Availability of career information materials, setting up career guidance corners, conducting career guidance programmes, having annual career days which exhibits the skills of the students, visiting workplaces and encouraging career role models to visit schools are some of the initiatives that can be implemented by both primary and secondary schools. While also incorporating TVET programmes into the school system, it is vital to consider core skills, employability skills and transferable skills. In countries where TVET programmes are well known in matching training and work-life, there are 'School-to-Work Transition' programmes implemented successfully. While TVET and BTEC programmes are often viewed as second-chance programmes and sub-standard programmes in the Maldives. Emphasis should be placed to make the general public aware of their place in the system and to create a programme where students learn more complex knowledge and skills with pathways to higher levels of education, in a vertical continuum of applied technical knowledge and skills. When post-secondary education space is structured separately around TVET and higher education systems, it results in a view that the TVET option is not a respected pathway to higher education and training.

Figure 5.5: Growth of BTEC enrolment (O' Level plus A' Level) in schools, 2014-2018



5.3.5 Pathways in the TVET educational and training system

TVET qualifications are based on national vocational standards developed by the TVET Authority and endorsed by the sector councils. They are aligned to the levels on the Maldives National Qualifications Framework (MNQF) and approved by the Maldives Qualifications Authority (MQA). A student who completes a level on the MNQF can progress to the next higher level in the same area of studies. The following shows the progression routes for levels 1 through 5 (MQA, 2009).

It should be noted that the assumption about knowledge and skills are incompatible is no longer relevant as the situation now calls for workers with skills and knowledge. It is important to design a structure to accommodate new knowledge, new labour market expectations, flexibility and multiple entry points, pathways and exit options.

When discussing the quality of the TVET programmes, it is also important that there should be a two-way cross-over between the academic and applied streams.

With the changes in technology, designing, building, operations and maintenance fields of jobs now demand medium to high level of Science, Technology, Engineering and Mathematics (STEM) skills. Therefore, it is a necessity that STEM skills be incorporated into TVET programmes. Furthermore, the most recent literature and innovative practices show that 'knowledge clusters' are more appreciated than specialized fields in the TVET.

Table 5.3: Pathways in the TVET System

Level	Qualification	Minimum Credits	General Entry Requirements
1	Certificate I	10	<ul style="list-style-type: none"> • Completion of Basic Education • Ability to communicate in the language of instruction
2	Certificate II	30	<ul style="list-style-type: none"> • Completion of Basic Education • Attainment of a Level 1 qualification
3	Certificate III	40	<ul style="list-style-type: none"> • Completion of Basic Education • Attainment of a Level 2 qualification
4	Certificate IV	120	<ul style="list-style-type: none"> • Successful completion of Lower Secondary Education, OR • Attainment of a Level 3 qualification in a related field
5	Diploma	120	<ul style="list-style-type: none"> • Successful completion of Higher Secondary Education, OR • Attainment of a Level 4 qualification in a related field, OR • Attainment of a Level 4 Foundation Study Program approved for the specific Diploma program
6	Bachelor's Degree	320	<ul style="list-style-type: none"> • Successful Completion of Higher Secondary Education, OR • Attainment of a Level 4 qualification in a related field, OR • Attainment of a Level 4 Foundation Study Program approved for the specific Diploma program

5.3.6 Regulatory and quality assurance arrangements – the role of the TVET Authority

Regulation and quality assurance in TVET

The accreditation of assessors follows a set process. First, they are chosen based on the recommendations of the sector councils. They are inducted into the occupational standards set by the TVET Authority, and the curricular competencies or performance criteria based on the standards and trained through workshops and assessment methods that are most suitable for making competency-based training and assessments.

The set process of assessing skills and competencies and the acquisition of National Qualifications has a set procedure. Once a training provider has completed training a batch of students for a particular qualification, they would apply to the TVET Authority to conduct the assessments. The TVET Authority would then send an accredited assessor to assess the students. Those who are able to demonstrate their competency would pass. They are awarded a nationally recognized qualification by the TVET Authority. Those students who fail an assessment would be required to retrain and retake the assessments later. However, this is not a common practice.

Many community organizations such as youth organizations are known to conduct TVET type of education courses, especially in areas related to women, such as sewing, cake baking, cake decoration, woodwork, embroidery, short courses in computer literacy, and so forth.

Trainers are usually hired from among those who are well-known to have a particular area of expertise. They normally would not have formally been trained to act as trainers. Nor would they be required to have such training as the vast majority of TVET courses are unaccredited.

The situation, however, is different for courses conducted by the TVET Authority or by other organizations in collaboration with the TVET Authority. Trainers are formally trained through workshops to adhere to the National Competency Standards. And the TVET Authority sends its assessors to assess the students and issues certificates. This system thus has a system of quality assurance built into it.

The situation is very different when it comes to quality assurance of the TVET education courses conducted by community organizations. At present, there is no formal quality assurance mechanism for TVET programmes conducted by non-governmental organizations. Quality in such cases appears to be related to the satisfaction of the participants in being able to understand and practice the skills being taught. Assurance of quality is limited to the ability of the organizations conducting the courses to recruit high-quality trainers, and in turn, the willingness and ability of the trainer to engage with the students in order to impart the skills being taught.

Regulation and quality assurance in TVET

The BTEC programmes are conducted in schools under the supervision of the Ministry of Education and Pearson. It is conducted according to the Vocational Education Policy of

Ministry of Education, which outlines the need for vocational education in schools, and instructs schools on how to begin vocational education, recruit students and implement vocational programmes.

This policy also describes the internal verification process and standardization. Since BTEC is an international certification that is internally administered and externally verified, the standard verification process is given high importance.

Policy implementation came through a program called 'Ufaa' via schools. Since all of the schools are registered as a single centre, a central team from Maldives Polytechnic carries out standardization and supports all schools. It has a course director, a quality nominee and an administrator to communicate with Pearson on behalf of the schools that provide BTEC.

Within each school taking BTEC qualifications, there are 4 people who are directly responsible for the smooth running of the BTEC stream: the principal, BTEC course coordinator, internal verifier and the assessor.

There is a panel of BTEC Coordinators, Assessors and Internal Verifiers who review internal BTEC policies and create course content that will serve as a guide on the content that is required to be taught. The BTEC administration also monitors quality by employing a team of quality nominees who are responsible for designated areas of the country.

In this system, all assessments are administered through an assignment brief which tells students what to do for assessments. These assignment briefs are internally verified by trained internal verifiers to ensure that they contain the assessment criteria against which students learning will be evaluated and that the assessments are fit for the purpose.

The assessments are then administered, and evidence of student learning is appropriately recorded. Once assessments are taken, they are evaluated by the concerned assessors according to the assessment criteria. An internal verifier then samples the assessments to ensure that the evaluations are made according to the assessment criteria and corrective steps are then taken if required. Pearson then sends its external verifiers to verify the sampling done by the internal verifiers and corrective steps are then taken if required.

The quality assurance of the BTEC system can thus be seen to be robust and trusted by a large number of stakeholders including many government entities.

5.4 Access and equity in TVET provision

5.4.1 Access

Recently in 2012, the Asian Development Bank (ADB, 2012) reported that “pronounced inequalities in access to social and physical infrastructure and services and economic opportunities” existed in the Maldives. It further identified that “geographic challenges” as the main barrier.

Sea Locked

These challenges are plain to see. Each one of the islands is sea locked. In 2015, ADB identified inadequate and poor quality maritime infrastructure as a critical constraint to connectivity and something which limits the provision of basic goods and services as it leads to high transport and logistics costs. Although some big islands have airports, the vast majority does not. People living on these islands have no way of reaching another island except by ferry. The ferry services running between the islands are painfully slow and may take up to a day to reach one’s destination. And it would be nearly impossible to return on the same day. A key requirement for efficient ferry service is a safe harbour and access facilities. Almost half of the inhabited islands do not have them, and 25 islands have no harbours at all.

Small Communities

Maldivians live in small towns on small islands dispersed by sea. In 2014, only two inhabited islands had 10,000 people and 65% of the islands had fewer than 1,000 people living in them. Small island communities may be peaceful to live in and convivial but there are distinct disadvantages of being small. Some major disadvantages which have negative implications for engaging in Technical and Vocational Education are lack of TVET educational opportunities and employment opportunities in their home islands. Students wishing to engage in technical or vocational education might not be able to access any such programs physically while living in their home islands.

Online Delivery

However, with the challenge of being a dispersed, small island nation-state, it is possible to provide Technical and Vocational Education online using broadband internet and Virtual Private Networks as the TVET Authority and some private colleges have done.

TVET Authority has already done with its pharmacist course and several others. However, this too has its own shortcomings. One of them is that students may not be able to get the hands-on experience that is taken for granted in physical training sessions. Another is the low quality of broadband connections.

In many parts of the world, there are alternative delivery modalities including virtual delivery, distance delivery and Open Educational Resources (OERs), which needs to experiment in the Maldives.

Special Schools

Specialized technical and vocational institutions existed before in the form of the popular VTC in Malé and on selected islands in the atolls as Rural Youth VTCs. Students who could afford to travel to Malé and the regional atolls with the facility of staying in local houses converted to boarding lodges travelled to be trained from expert trainers. However, some of the RYVTCs that existed in the atolls have been incorporated into the structure of the MNU while others as campuses of the MP are dysfunctional.

2018 also saw the opening of the Technical and Vocational Education Centre (TVEC) in Baa Atoll Kihaadhoo. This TVEC is owned and operated by the Coastline Foundation, a private organization. Unlike other institutions such as the Polytechnic, the TVEC is a boarding school and students do not have to pay for tuition, accommodation and food. Unfortunately, at present, the TVEC can only accommodate fifty students.

Maldives Institute of Technology (MIT)

Maldives Institute of Technology (MIT) established in 2005 as the Center for Career and Technical Education (CCTE) delivered the TVET program first from 2007 to 2008. Since then, they have continued this. At present, MIT is built on the principles of Competency Based Training (CBT) and have adopted training delivery procedures and protocols of the TVET System of the Maldives. It is considered as the largest single private training provider of TVET programmes in the Maldives with the underlying aim to enrich people's lives as the leading provider of qualifications and balanced learning support for work and life.

Table 5.4: Graduate Output of TVET at MIT, 2014-2018

#	Name of the Programme	Students completed					Total
		2014	2015	2016	2017	2018	
1	Electrician Level III	67	110	130	115	92	514
2	Marine Mechanic Level I	4	6	8			18
3	Refrigeration Level III	20	42	59	28	36	185
4	Tour guide Level III	95	6		9		110
5	Marine Mechanic level II		4	5			9
	TOTAL						836

Villa College

Villa College, the first private college registered in the Maldives, offers full-fledged Certificate, Diploma, Degree and Post-graduate programmes. In addition, it offers VET programmes at MNQF Level 3 and 4 in the areas of Hospitality and Tourism, Diving and Water sports.

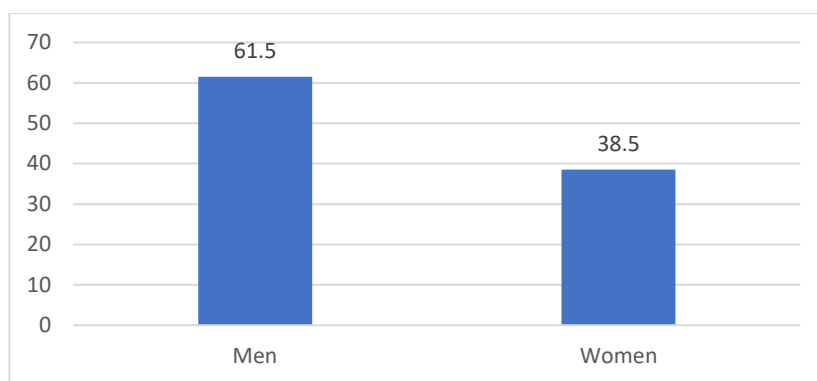
In addition to the two institutions mentioned above, Male' Fitness Club Academy, Maldives Maritime Academy, Zikura Institute, Four Seasons Resort (Maldives) and Housing Development Corporation have also been registered training organisations conducting TVET Authority approved programmes.

5.4.2Equity

Gender

Historically, women had contributed immensely to the economy. They made the coir rope that was once famous throughout the world. They cooked and dried the tuna that was exported. In the past, women were more involved in home-based work, and, therefore, their contribution to the economy was not taken into account.

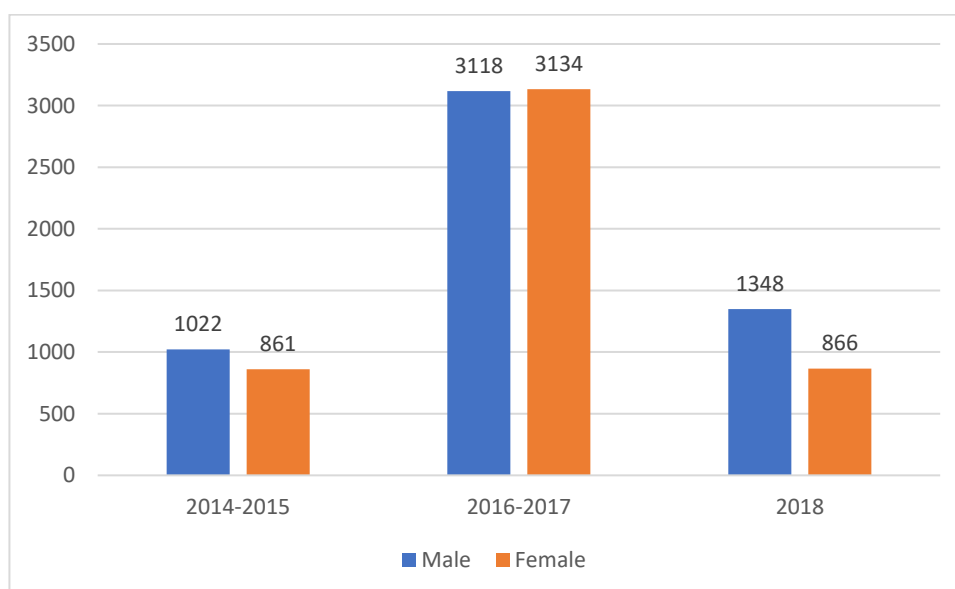
Figure 5.6: Employment Skills Training Project



Source: Asian Development Bank, 2012

According to the Asian Development Bank (2012), Development of TVET programmes will translate to skills training geared specifically for employment and that is what the ADB (2012) found from the Employment Skills Training Project conducted from 2004 to 2010 by the Maldives government and funded by the Asian Development Bank. Out of the 5,829 people trained, 38.5% were women.

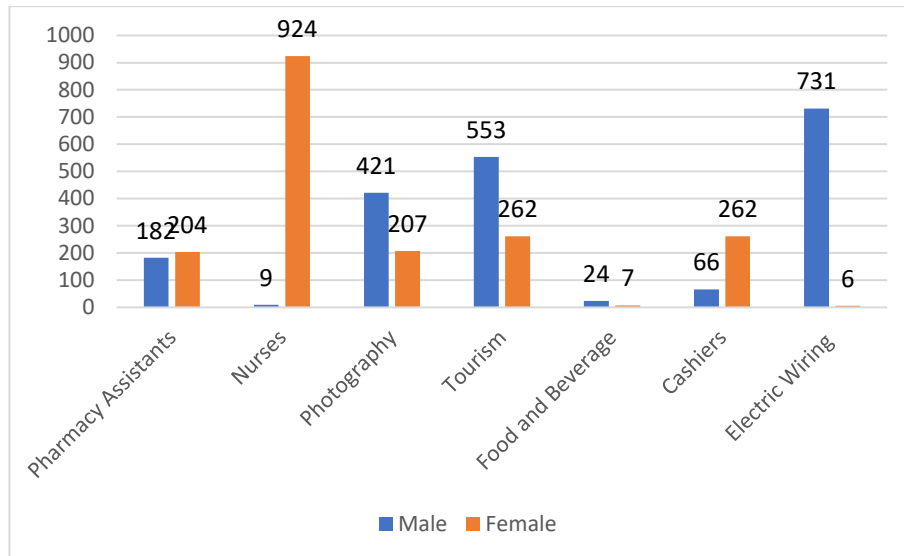
Figure 5.7: TVET participation by gender



More recent data from the TVET Authority on its own training programmes show that total female participation in skills training programmes in the past four years has been on par with male participation. This could have been due to the recent initiative to undertake

pharmacists and nurses training programmes under the supervision of Maldives Polytechnic.

Figure 5.8: Participation in different vocational training programme



However, there is huge variation between the genders when we analyse the data by type of industry. Participation in some of the vocations, such as photography, tourism, food and beverages and electrical wiring, appears to be dominated by males while participation in others such as pharmacy assistants, nurses and cashiers appear to be dominated by females.

However, giving TVET training to equal numbers of men and women is not going to be sufficient to redress the employment bias against women in the country which has resulted in 39% of women being unemployed compared to 19% of men in 2010. A lot of women in the country are in dire condition when we also take into account the fact that the average monthly earnings of women are only 66% of the average monthly earnings of men.

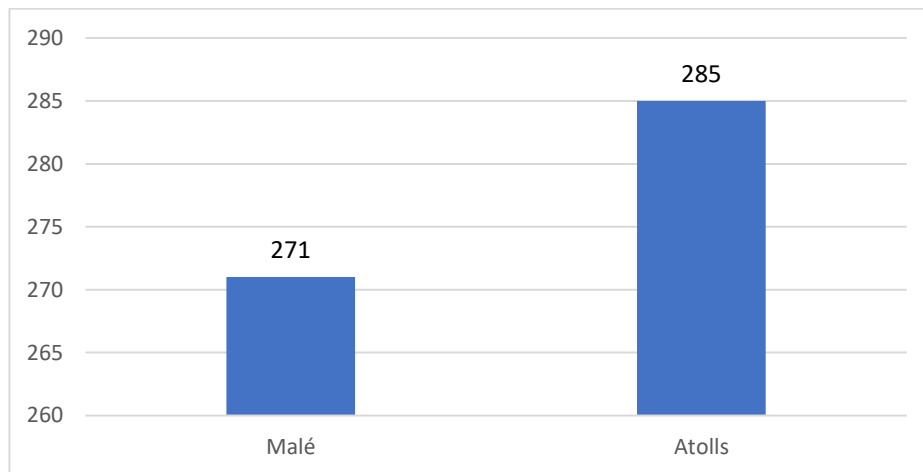
To effectively monitor enrolment, continuation and progression, time-bound quantified indicators are needed.

Malé vs Atolls

It is a widely recognized fact that there is significant inequality between opportunities available to people living in Malé and the outer atolls.

A recent, unpublished issue paper identifies the limited number of trainers in the atolls and the unwillingness of trainers in Malé as challenges to conduct or assess skills and training in the atolls. Additionally, the high cost of travel to and from the atolls, the huge amounts of time involved in travel, and the lack of motivation among school leavers to get trained compounds this already difficult situation.

Figure 5.9: Student enrolment in technical education in 2012



Source: ADB, 2015.

However, despite the fact that 62% of the population live in the atolls, access to TVET education in the atolls was almost the same as that in Malé in 2012.

Inter-Generational

So far, the government, private and community-based organizations have made the 15-25-year-old age group their target student population to receive TVET training. The data collected so far do not indicate in any way that older age groups have received TVET training from the government. However, anecdotal evidence suggests that community-based organizations in the atolls frequently enrol older people in their training programs.

5.4.3 External efficiency

TVET

Data on demand for TVET education in the Maldives was not collected due to the short duration allocated to writing this chapter. However, estimates may be obtained by treating some forms of data collected as proxies for demand for TVET education.

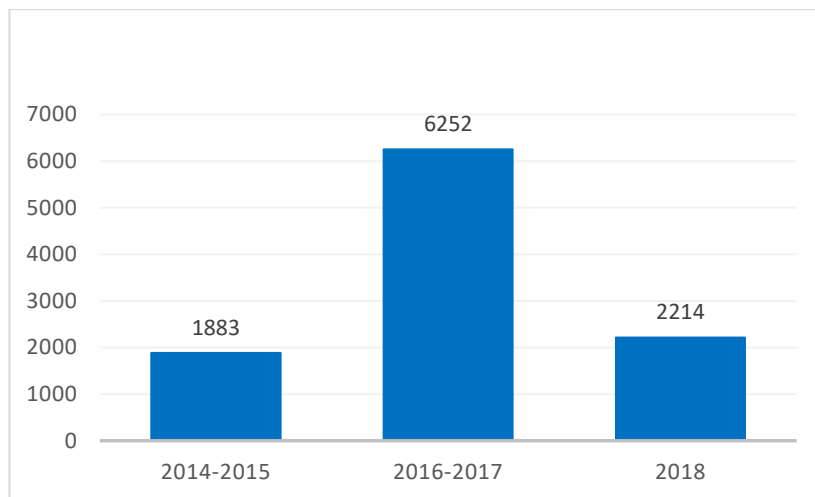
One such proxy is the number of people trained through various vocational training programs conducted by the government and the private sector. Another proxy could be the number of vacant skills-based positions in various parts of the government and the private sector.

An example of a proxy could be those trained through projects. The Employment Skills Training Project conducted with assistance from the Asian Development Bank and completed in 2010, trained 5,829 youth over a five-year period on various courses including:

- Construction
- Sewing and embroidery
- Welding
- Sewing and fabric painting
- Lacquer work
- Glass painting and pyrography
- Basic handicraft
- Handloom Weaving
- Fabric painting
- Sewing
- Hydroponics
- Bead embroidery
- Cake decorating
- Clay flowers and clay moulding
- Arts and crafts
- Bag sewing
- Soft toys
- Stocking flower
- Sugar flower
- Wood carving
- Screen painting
- Fibre works
- Sewing and cake decoration
- Basic handicraft
- Glass painting
- Basic quantity surveying
- Agricultural course
- Basic refrigeration
- Diesel engine maintenance
- Resort service proficiency
- Aluminium fabrication
- Fashion designing
- Furniture carpente

Figure 5.10 shows the number of students trained by the TVET Authority from 2014 to 2018.

Figure 5.10: TVET enrolment



Source: TVET Authority, 2018

Thus, the estimated demand for skill-based training could be put around 900-1000 per year.

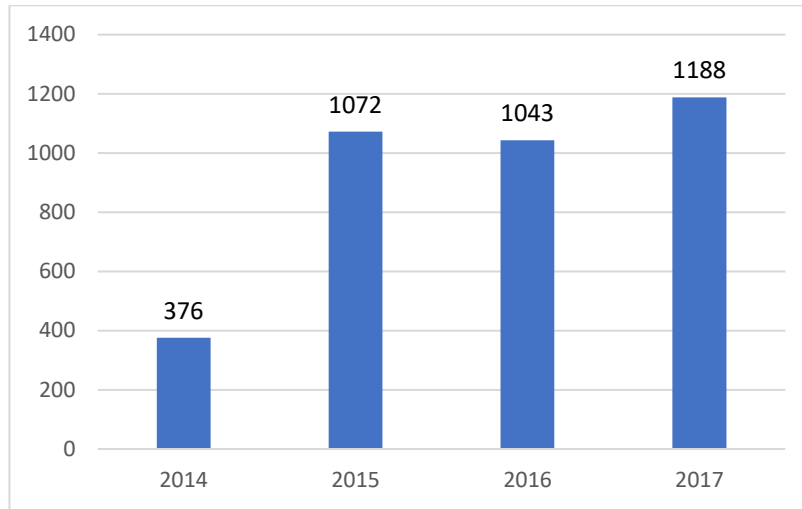
The Ministry of Education launched a skills training program offering 2050 scholarships in January 2018. The number was the total of skills-based human resource requirements obtained from government departments and public companies. However, the funds were not available in a sustainable manner which resulted in students having to bear the necessary cost for continuation of their studies.

The data obtained from the ministries and public companies were only a part of the assessment. The assessment did not take into account the needs of the private sector. Nor did it take into account a large number of expatriates working in the country in skilled and unskilled jobs such as electricians, mechanics, air conditioner repairmen, waiters, cooks, nurses, and so on. In order to arrive at the true demand for TVET education, it would be necessary to consider these.

BTEC

The figure below shows enrolment in BTEC programs in the lower secondary schools throughout the country. As can be seen, enrolment increased dramatically from 2014 to 2015. Since then, enrolment in BTEC has been uneven.

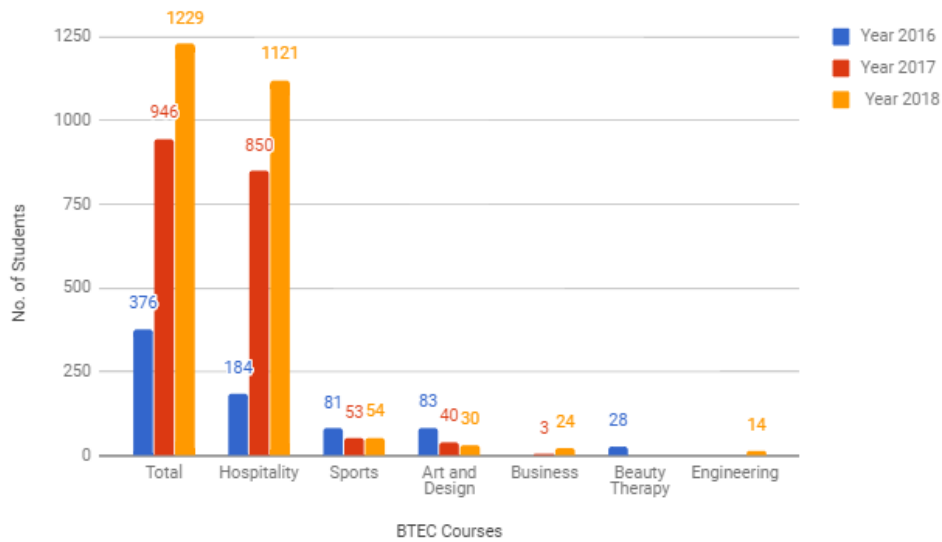
Figure 5.11: Enrolment in BTEC at lower secondary school



Source: Source: Ufaa Office, 2018

When we consider enrolment by type of course, we notice that enrolment in hospitality has the most enrolment compared to all other- areas.

Figure 5.12: BTEC enrolment by course type



Source: Ufaa Office, 2018

5.4.4 Findings

The issue of access to TVET education is quite clear because these are connected to the very nature of life in the country. In addition to these, there are issues related to equity and external efficiency. These are briefly discussed below.

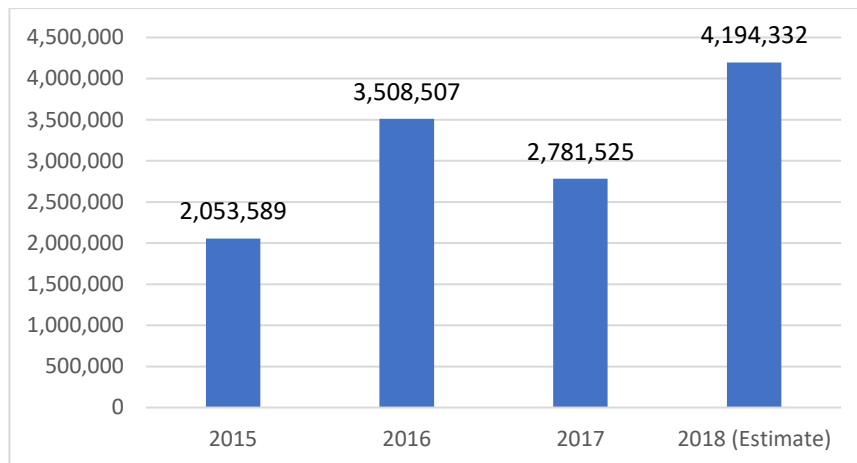
1. The huge expense of reaching a large number of small communities living on islands separated by the vast sea.
2. Having to travel across the sea to attend training on other islands.
3. The huge expense of attending specialist TVET schools on other islands.
4. Considering that expatriates make 34% of the workforce (ADB, 2015), the number of people who need to be provided with TVET education may be much higher than the number currently being served.
5. TVET programs need to be more widely available both in Malé and in the atolls. Much greater effort needs to be made to enrol students from the atolls, especially women.
6. There is a great need for more comprehensive research into finding more accurate figures for demand for TVET education because the figures at present make little sense.

5.5 Cost and financing of the various TVET programs

5.5.1 Funding for TVET programs

Most of the data that we currently have are about the amount of funding the government gives to running TVET programmes. The main government body which conducts TVET programmes is the TVET Authority. The following chart shows the amount of government funding used by the TVET Authority.

Figure 5.13: TVET funding by the government in MVR



Source: Source: TVET Authority, 2018

A glimpse of the costs of TVET programme in a specialist boarding school may be estimated by looking at the newly opened TVEC Centre at Baa Atoll Kihadhoo, built and operated by the Coastline Foundation. It is built on 220,000 square feet of land provided through the Ministry of Education. It has shared rooms for the accommodation of 50 students, multiple training rooms, a kitchen, a mess hall, administrative offices, and so forth. Accommodation and food are free for all students studying there.

Currently, they offer the following programmes at Level 3 of the MNQF: (i) electrician, (ii) engine repair and maintenance, (iii) refrigeration, air-conditioning and plumbing. Each programme is scheduled to run for 6 months. The centre ran these programs in 2018 at an estimated cost of MVR 12 million which is MVR 40,000 per student per year.



TVEC at Baa Atoll Kihadhoo, 2019

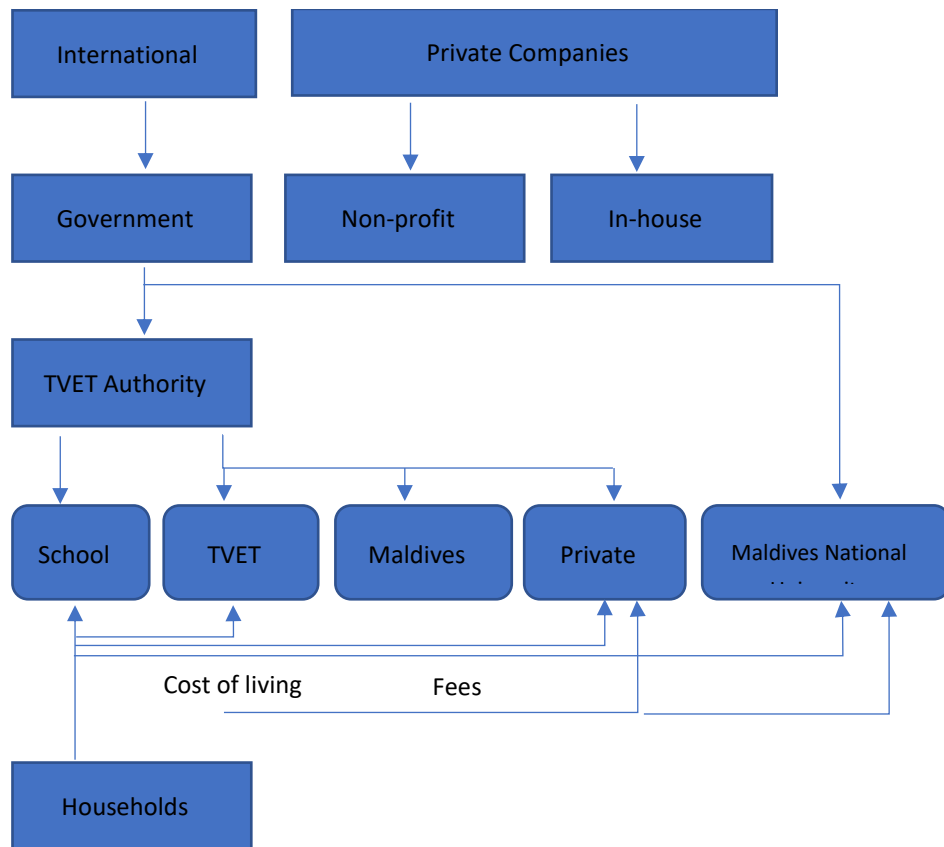
Although data on the costs and financing of TVET education by community organizations are currently unavailable, it is not uncommon for NGOs to run such programs. Many of these community-based organizations, in fact, conduct TVET related training programmes in their communities. For example, Feyli Jamiyya, an NGO in Baa Atoll Eydhafushi, conducted a computer skills programme for 32 students at a cost of MVR 91,650.

However, that gives an incomplete picture. More research into the funding and administration of TVET education programs by community-based organizations is required to completely understand that picture.

Table 5.5: Overview of Typical Funding Sources of TVET

Source	Remarks
Government budgetary allocation	Funds TVET Authority, Maldives Polytechnic and some TVET programs run by private providers.
Private households	Directly contributes to TVET training through course fees. This also includes other indirect costs such as the cost of living and transport when undertaking TVET education.
Companies	Private and public companies contribute by conducting or sponsoring staff training. For example, Four Seasons conducts hospitality apprenticeship programs for free. From 2002 to 2009, over 156 Apprentices have been trained under this programme.
Community-based organizations	Many of these organizations conduct training as part of their scheduled calendar activities every year.
Private Foundations	They provide funding to conduct TVET courses or they may run their own TVET institutions. An example is TVEC Center at Kihaadhoo operated by the Coastline Foundation.
Private training providers	They sometimes sell training courses directly to students. At other times, they find sponsorships.
Donors	They include the Maldives government, foreign governments (as bilateral aid packages), international and domestic foundations (e.g.

Figure 5.14: Core Flow of Funds in the TVET System



5.5.2 Analysis of public TVET expenditure

The costs and method of financing of the component of the TVET education sector connected to vocational training by the government or sponsored by the government is not difficult to obtain. For example, the following shows the cost of conducting skills courses by the TVET Authority.

Table 5.6: TVET expenditure

Year	2014	2015	2016	2017	2018
Cost	1, 317,622	2,053,589	3,508,507	2,781,525	4,194,332

Source: TVET Authority, 2018

Based on available data this translates to a per-student cost of MVR 1,790 in 2014-2015 and MVR 1,006 in 2016-2017. However, this is unreasonable and requires further scrutiny.

The exact cost of conducting BTEC qualifications in schools is not known but an estimate for it may be derived by multiplying the total number of students who took BTEC courses and the cost per student of an average school. The cost in Table 5.7 has been calculated by assuming MVR 10,000 per year per student.

Table 5.7: Cost for the BTEC program

Year	2014	2015	2016	2017
Number of students	376	1072	1043	1188
Cost	3,760,000	10,720,000	10,430,00	11,880,000

5.5.3 Analysis of other funding sources

Funding by private non-profit organizations

The TVEC centre built and run by the Coastline Foundation has an annual budget of MVR 12 million for 2018. That is MVR 40,000 per student per year for 2018.

Community-based organizations

How much funding community-based organizations actually spend on running TVET education for their own communities is not known precisely. However, as mentioned earlier, these organizations are known to run TVET education courses, and one such organization is known to have conducted a computer skills program in 2010 for 32 students at a cost of MVR 91,650.

Private training providers

Private training providers, including colleges, are known to conduct TVET programs. However, how much funding is actually generated is not known.

5.6 Achievements, strengths and opportunities

Vocational education is becoming increasingly popular among students as enrolment for both Dhasvaaru and BTEC expanded over the 4 years from its initial pilot in 2014. Students who were identified to be underperforming in the academic pathway did well in vocational education courses, underlining the need for a wider range of opportunities for different types of learners. Although there was initial hesitation from parents and school heads to start the vocational programme, the success of students who participated in the pilot programmes has helped mitigate this; 79% of students who have completed Dhasvaaru and 93% of students who have completed BTEC are now productively engaged in the community in education, training and/or employment. Accordingly, both of these programmes have gained more confidence and trust from the community. Evidence for this is shown in the increase in programme enrolment over the past four years for both Dhasvaaru and BTEC. It would be both important and timely to undertake an analytical study of the experience in the expansion of vocational education opportunities in schools in recent years

The methodology used in the delivery of these programs, including flexibility, (student) needs-centred plans, and a variety of assessment methods, provided more opportunities for students to practice skills and apply the knowledge they have gained. It is evident from the students' point of view that this process has increased their self-confidence and overall performance in school. For example, below are a few views of some of the students who took part in the BTEC program.

“The more I got into it, the more I started loving it, and that kept me going. I even surprised myself by how much I was learning – I was doing so much better than I thought I would.” –15 y/o girl, Dhasvaaru'17

“BTEC gave me in-depth knowledge of the world which I would not have gained from other streams.” – BTEC Level 2 graduate, Feydhoo School

Despite challenges faced in geographic dispersion, the Maldives has been successful in implementing vocational education nationwide. In 2018, BTEC was offered in 178 schools at 2 different levels and Dhasvaaru in 162 schools. Moreover, one of the major success factors of the BTEC program is that schools becoming increasingly proficient in the delivery, assessment and verification of BTEC courses. This is apparent in the biannual external standardization of BTEC reports that has been showing positive reviews and the certificates for Maldivian students getting released faster and more smoothly.

Despite these success stories, genuine concerns have also been raised regarding the forced nature of the selection of students into these programmes, and the lapses in administering and monitoring of the Dhasvaaru programmes. The Dhasvaaru programme needs to be reviewed in its entirety.

5.7 Quality of TVET provision

In many parts of the world and including the Maldives, the government is a service provider as well as a quality regulator which presents a conflict of interest. Therefore, it is important that the quality assurance systems are independent and that they apply the same standards to the public and the private sector.

One of the challenges facing the TVET sector in the Maldives is that due to the extent and variety of providers, there is a lack of ability to implement even the very few national standards that are in place.

The quality assurance systems should ensure that there are no concerns regarding the competencies achieved by the TVET trainees. It is an implication which is foreseeable that there may be questions raised regarding the capacity and expertise of the TVET workforce.

Discussions on specific sectors such as tourism and transport and several other industries which involves cross-border communication have resulted in a dire need in having competency-based criteria and standards that are also internationally accepted. For instance, the European Union has adopted various frameworks such as the Bologna Declaration for higher education and the European Training Framework for TVET which provides a framework for programme structure and credit transfer within and across borders which helps to eliminate duplication, and consequentially the additional costs to students.

In this regard, it is important for the Maldives to have such a framework that acknowledges and accredits the skills and competencies across the sectors, regardless of the service provider.

5.8 Key findings

1. The Maldives has a developing system of TVET. The task ahead is to develop it into a comprehensive system, especially a system of Technical and Vocational

Education, in which people would be able to participate continuously throughout their lives as and when they require to reskill and upskill and learn. At the same time, it is important to acknowledge the fact that the TVET system of the Maldives is a supply-driven system at present. Therefore, it is important to restructure the TVET system to include more private and public-sector engagement.

2. So far, about three thousand people per year receive training via these programmes through the efforts of the government alone. Information on such programs conducted by community-based organizations suggests that they may also output a similar number. The private sector may also contribute a similar number through their own training programs, giving a total of 6,000 per year. Also, there is a large number of the expatriate population whose members are also engaged in skilled labour which means that the demand for skills is probably much bigger. However, no data currently exists that can allow us to arrive at an accurate figure. Thus, research into finding out the nature and quantity of demand for skills in the country is required.
3. The fact that the Maldivians live in small island communities dispersed across a large area of sea, making accessibility one of the most challenging problems to solve for anyone who intends on helping the most vulnerable segments of the population through education and training.
4. Rebranding education purely as a trade commodity has disrupted how we think about providing educational services. Very often, the quality and image of the polytechnic and TVET education system are seen as lower than that of the standard colleges and universities.
5. Female participation in vocational and technical programmes is comparatively less than that for males. Increasing the participation of women in TVET programs is important not only to having women gainfully employed but also to decrease the gender parity gap in employment. This requires creating awareness and educating people to recognize and give importance to women to develop skills that are valuable in the workplace and thereby leveraging half of the population for sustainable development.

5.9 Recommendations

1. A more demand-driven approach is needed to cater to the needs of the labour market. Such a system should:
 - a) Consider making TVET programmes accessible to everyone and be able to cater to all people as a strategy to promote life-long learning,

- b) Strengthen TVET's linkages to industry and workplace settings,
- c) Develop TVET competency-standards that are validated by both public and private sector,
- d) Make a transition from a supply-driven TVET system to a demand-driven TVET system, and
- e) Increase the type and frequency of learner placement programmes, internships and on the job training in various sectors.

The first point drives home the fact that this system aims to serve everyone in the Maldives, which is noble but, right now, an unattainable goal. It makes sense then to concentrate the efforts on the neediest segments of the total population such as youth and women and men in the least served areas. It is understood that a large number of youth, including students studying in lower and higher secondary schools, are not aware of the opportunities available for further studies in the Maldives, especially with respect to TVET learning pathways.

2. One solution for finding number three identified above, is to use the ferry system to gather people into one location for training sessions or community meetups. Another is to deliver training or meetings through video conferencing software. This is already being done by the TVET Authority.
3. One way to mitigate the barrier imposed by geography, as noted earlier, is to deliver TVET programs online, as is being already done. But the low quality of the broadband networks in the atolls results in frequent disconnections. Not only are there frequent disconnections, but the cost of the connections is also very high. The Ministry of Education should work with the ISPs to improve the quality of the mobile networks and bring down the costs to a level which is more affordable to people living across the country. This will enhance the efficiency of the training programs and improve participation.
4. There is a great need to develop teams based in the atolls to deliver practical training and apprenticeships because trainers in Malé are unwilling to travel to the atolls. Another option could be to pay a stipend to those who attend TVET programs away from home.
5. Increasing women's participation can be achieved through strategies such as conducting a media campaign to educate and recruit more women into TVET and BTEC programs in all fields.
6. Providing TVET and BTEC training is one side of the equation. The other is placing graduates of these programmes in employment. It is vital to include industry

representatives in the development of curricula. In addition, skills standards need to be developed. The Maldives currently has a more theory-based and a classroom-based TVET delivery modality, and it needs a more practice-oriented, competency-based delivery modality where trainers also have industry experience. This will result in developing skills that are more relevant to the labour market.

Chapter 6: Higher Education

6.1 Quick historical development of Higher Education

The establishment of Allied Health Services Training Centre in 1973 was the initial step and forerunner towards building a Higher Education system in the Maldives. The Vocational Training Center, the Institute for Teacher Education and the School of Hotel and Catering Services were also established prior to the amalgamation of such post-secondary institutions to form the Maldives College of Higher Education in 1998. Thirteen years later, in 2011, the Maldives College of Higher Education transformed into 'The Maldives National University'. In addition, the Institute of Islamic Studies was converted into the 'College of Islamic Studies' in 2004, and in 2015, this institute was transformed into the 'Islamic University of Maldives'. In the past ten years, a notable number of private colleges and private institutions have emerged in the Maldives. The Maldives Polytechnic (MP) is the public sector-based technical and vocational training institute. Currently, there are also nine major private higher education providers in the Maldives: Villa College, Clique College, Cyryx College, Mandhu College, Modern Academy for Professional Studies (MAPS) College, Avid College, Mianz International College, Maldives Business School and Zikura International College.

The Maldives has a Tripartite System of Higher Education with 3 types/levels of institutions: Tier I: Universities (government-funded), Tier II: Degree Granting Colleges/Institutions (few government-based, but mostly private sector-based), and Tier III: Training Institutions (offering short term programs, some in the State sector and the majority in the private sector).

Table 6.1: Type of Higher Education Institutes and enrolment in 2016

Classification	Enrollment in 2016
Government	10,317
Private	5638
Total	9452

Source: Former Department of Higher Education, 2016

In addition to the above-mentioned types of institutions in Table 6.1, there are more than 200 private institutions offering courses up to diploma level in various fields throughout the country. These statistics point to the rise in the number of Higher Education providers in the Maldives. They also point to the fragmented and dispersed nature of the Higher Education sector of the Maldives.

The Maldives is seeking to modernize and develop its Higher Education sector in the face of rising demand for Higher Education. The demand stems from the expanding pool of young secondary school completers and increase of sophisticated skill requirement from employers.

Two public universities have been established in the Maldives through separate legislation: the MNU Act in 2011 and the IUM Act in 2015. The legislation aims to increase the share of the growth of Higher Education in the government sector.

Gross Enrolment in Higher Education in the Maldives

Gross Enrolment Ratio (GER) in Higher Education rose from 6% in 2001 to 10% in 2005, and to 21% in 2011. According to 2015 statistics, the GER of Higher Education in the Maldives is estimated to be about 29.2%. The GER of Higher Education depends on the number of school leavers from Secondary Education. Although the Net Enrolment Ratio of Lower Secondary Education was 90.5%, the Net Enrolment Ratio of Upper Secondary Education was 44.5%. The government-based Higher Secondary education provider accepts students who pass at least five subjects at the GCE O' Level examinations. There

are a few private Higher Secondary education providers who accept students with a minimum entry requirement of passes in three subjects at GCE O' Level examinations. School Statistics of 2018 show that 5,435 students must have completed Secondary Education and 1,967 students must have completed Higher Secondary Education in 2019.

The current low rate of enrolment in Higher Secondary Education is considered to be a challenge for the Maldives. It is also important to note that students who complete Secondary Education sit the Cambridge International Examinations, while students who complete Higher Secondary Education sit the Edexcel International Examinations. It is presumed that there is a variation in standards and performance scores between the two examinations, resulting in a fewer number of students participating in Higher Secondary Education.

At present, a large number of students who complete Secondary Education take the route to Higher Education by completing a qualification deemed equivalent to the Maldives National Qualification Framework (MNQF) Level 4 certificate after their Secondary Education. The GER of MNQF Level 4 courses is 15.5%. According to the MNQF, students who pass three subjects at GCE O' Levels can get entrance to MNQF Level 4 qualifications from the Standard Entry. This also raises the question of students participating in Higher Education at the young age of 16 years. From the Alternative Entry, students who are at least 18 years of age with a minimum of one-year work experience are eligible to enrol in Higher Education programmes.

With the increasing number of students who complete Secondary Education, the scope and structure of Higher Education have become important issues. The target of the government is to increase the GER to a level where the Higher Education system should cater to at least 60% of the students who complete Secondary Education.

6.2 Governance structure of Higher Education in the Maldives

The Ministry of Higher Education, the Higher Education Council (HEC) and the Maldives Qualifications Authority are the overarching bodies of the Higher Education system in the Maldives. The Ministry of Higher Education was established in November 2018. In the past, the Ministry of Education oversaw the responsibilities of Higher Education under the Department of Higher Education. The mandate of MQA is to assure the quality of post-secondary qualifications awarded in the testimony of educational attainment.

According to the Master Plan for Higher Education, The Higher Education Council (HEC) has the overall responsibility to develop national policies on Higher Education. The HEC is proposed to be chaired by the President of the Maldives and comprises members that include the Minister responsible for Higher Education. The former Department of Higher Education (now transformed to the Ministry of Higher Education) is to act as the Secretariat of the Council, taking the responsibility of drafting papers that are presented to the Council, which will then be sent for endorsement by the Social Council at the President's Office and subsequently to Cabinet for approval. Those that require Parliamentary approval will proceed to the Parliament through the Attorney General's Office. According to the Master Plan for Higher Education, policies that are agreed and approved by HEC and Parliament should be implemented by the Ministry of Higher Education, and the Maldives Qualifications Authority (MQA). However, neither the council nor the procedures are being implemented at present.

The Maldives Qualifications Authority (MQA) established as Maldives Accreditation Board (MAB) in the year 2000 by a Presidential Decree and renamed in 2010 as the Maldives Qualifications Authority (MQA) is the body that regulates Higher Education quality assurance. The Maldives Qualifications Authority (MQA) has developed the Maldives National Qualifications Framework (MNQF) in the year 2001 and further refined it in 2009 and 2016. The MNQF brings all recognized qualifications into a single unified structure with procedures to support:

- National competency standards setting;
- Quality assurance of teaching, assessment and certification;
- Student and learner support and reporting.

Though there is no Act that specifically govern the Higher Education subsector, registration and monitoring of Higher Education are governed by the Ministry of Higher Education and the MQA assure the quality of Higher Education. However, there are many challenges facing the sector to carry out its mandated tasks. Some of the challenges include a shortage of human resources, physical facility, IT infrastructure and finances.

The lack of proper regulation to govern the Higher Education sector of the Maldives is a challenge faced by the Higher Education sector. The Master Plan for Higher Education (2017 – 2020) has policy recommendations to develop the governance of Higher Education.

The increasing number of private Higher Education institutions has led to the necessity to strengthen the regulations of the MoHE and the MQA as well as to introduce regulations to manage higher education providers.

In the Maldives, if a Higher Education provider wishes to offer courses that are approved by the MQA, the institute has to be registered in the Ministry of Higher Education. The Ministry of Higher Education provides an initial registration upon verification that the provider meets the minimum criteria set to register a Higher Education institution. However, if the institute is to conduct a course approved by MQA, the institute will undergo a procedure of course approval, followed by batch validation prior to graduation.

More recently in 2017, an institutional audit policy has been developed to strengthen the regulations. Under the institutional audit policy, all colleges and universities should conduct a self-evaluation according to the guidelines set by the MQA and submit the report to the MQA. After submission of the self-evaluation report, an independent panel will evaluate the report and provide recommendations and commendations. However, there are several challenges in implementing the policy. The fact that the Maldives has small-knit communities makes it a challenge to conduct an independent institutional audit. Furthermore, sourcing the required expertise and obtaining finances involved for transport from one-island to another adds to the challenge. There are institutes which have several campuses and outreach centres across the Maldives. To carry out an audit across the country has its own demands. A college can offer courses up to MNQF Level 9. Only universities can offer programs at the MNQF level 10.

6.3 Teaching staff and student numbers

Teaching vacancies from the public institutes are advertised in the Government Gazette as well as in the media. Teaching positions for private Higher Education providers are published on their respective websites and other relevant websites. According to MQA Guidelines for Programme Approval, teaching staff should have a qualification level above that of their teaching course. Though the MNU and IUM have developed criteria for academic staff promotion and wages, currently there are no nationwide criteria for the qualification of the teaching staff. Thus, wages and promotion vary from institution to institution.

Table 6.2: Ratio of students to teaching staff from the statistics obtained in the year 2016 and 2017

	Students (a)	Teaching Staff (b)	Ratio (a)/(b)
Public (2016)			
The Maldives National University	9,718	494	19
Islamic University of Maldives	599	46	13
Total	10,317	540	19
Private (2016)			
Villa College	4,306	209	21
Clique College	558	64	9
Cyryx Collge	702	32	22
Mianz International College	1439	26	5
Avid College	705	43	16
Mandhu College	468	56	9
Maldives Business School	213	10	21
MAPS College	250	24	10
Male' Business School	213	10	12
Total	8,854	474	18

Source: DHE Statistics, 2018.

Institute	Students (a)	Teaching Staff (b)	Ratio (a)/(b)
Public (2017)			
The Maldives National University	9,406	259 (fulltime)	36
Islamic University of Maldives	1,230	46 (fulltime)	26
Maldives Polytechnic	756	49 (including part-time staff)	15
Total	14,145		
Private (2017)			

Maps College	272	24	11
Cyryx College	385	51	8
Mianz International College	1,194	33	36
Mandhu College	473	43 (including part-time staff)	11
Villa College	4,681	230 (including part-time staff)	20
Total	7,005		

Source: MoHE Statistics, 2019. MNU Annual Report, 2017

Note: (i) Former DHE has not received statistics from Clique College, Avid College & Maldives Business School for the year 2017. (ii) Some data officially obtained from MoHE do not match with data available from other sources.

The statistics above show that the government Higher Education providers the student-teacher ratio varied between 1:15 and 1:36. The two universities are known to make use of relatively large number of part-time academic staff. Hence, the student-teacher ratio is likely to be less than that is shown in Table 6.2. There is likely to be excess teaching staff in the public institutions than the carrying capacity of the students. On the other hand, in the private Higher Education providers the student-teacher ratio ranged from 8:1 to 36:1.

The statistics above show that student enrollment has declined from 2015 to 2016 in the private sector. There is an increase in the number of teaching staff employed in some institutions while in others there has been a slight decline. The MNU has decreased their full-time academic staff from 494 in 2016 to 259 in 2017.

The unavailability of qualified teaching staff to work on full-time teaching jobs has been a growing concern to Higher Education providers. Many of the teaching staff are employed on a part-time basis. Therefore, their contribution and commitment to the college and the academic community are limited. Furthermore, due to the lack of full-time commitment to the universities and colleges, they are unable, to undertake the expected role of teachers or lecturers in academic research and student support.

A loan scheme to counter this issue has been introduced by the former DHE where the government is to provide a loan grant for those who are interested to study and work in the Higher Education Institutes. However, this policy has not been fully implemented and no staff has been trained under this initiative.

To address this issue, a thorough analysis of the pattern of student enrollment and teacher recruitment needs to be done. Furthermore, a national standard for teaching staff is also a much-needed requirement to ensure a high-quality Higher Education in the country.

6.4 Subject areas offered

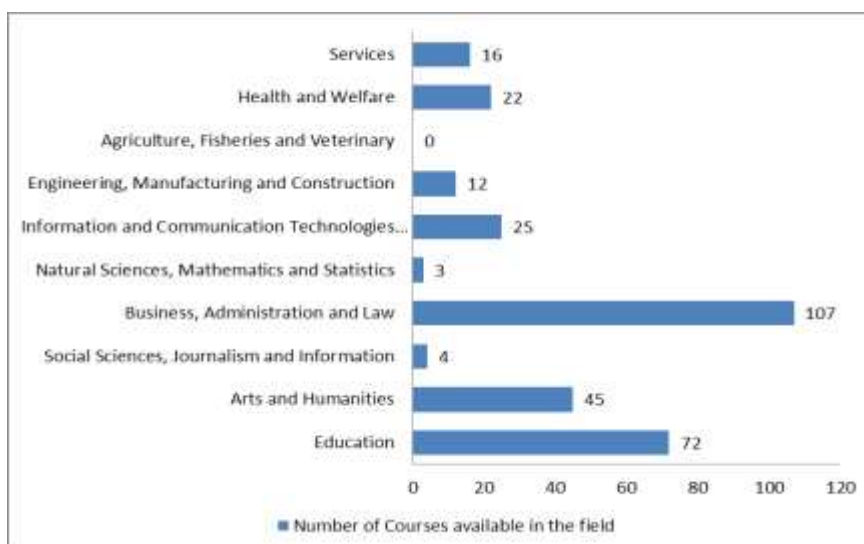
It has always been noted that Maldivians prefer to undertake their higher studies abroad rather than in their own country. This has adversely affected the growth of enrolment in the local Higher Education institutions. One of the reasons for this preference could be a lack of public confidence in the quality of Higher Education offered in the Maldives. The government has formulated policies to encourage local Higher Education sector development. One such policy is to restrict financial aid to study abroad programmes which are conducted by a local Higher Education provider. However, it should also be noted that the majority of the students studying for Higher Education in the Maldives study on the self-funding basis and thereby this policy does not make a significant impact in reducing Maldivians travelling abroad for higher studies.

Diversification has been an issue and noted in the study conducted by the World Bank (2009). The table below shows the number of programs offered by the local Higher Education providers across fields of study. It has been noted that many programmes are offered in the areas of Business, Administration and Law, as well as in Education.

No Higher Education program is offered in the fields of Agriculture, Fisheries and Veterinary science in the country. The situation prevails despite the fact that fishing has been the main source of income, even before the tourism industry was introduced to the Maldives in the year 1972. Fish is the main product exported by the Maldives.

According to the statistics given below, the highest number of courses offered are in the fields of Business, Administration, Law and Education. Higher Education courses need to be designed and developed in diversified areas which will cater to the skills and competencies required for a knowledge-driven economy. It is important that the national skill priority list compiled by the Ministry of Higher Education be revised in collaboration with the private and public sector to ensure that it aligns with the areas required for funding and investment.

Figure 6.1: Number of Courses Offered in Different Subject Areas



Source: Former Department of Higher Education, 2017

6.5 Access and equity in Higher Education

The Higher Education enrolment pattern in the Maldives is similar to the recent trends seen from other countries. In the Maldives, Higher Education enrolment is higher for female than male students. It should be noted that there is a gap in rural-urban development in the country, resulting in a huge influx of inward migration to the capital city of Malé. A majority of the Higher Education providers are also based in Malé which limits the geographical distribution of services, making Higher Education less accessible to the students in the outer islands. Though campuses are being established in the outer islands, they are also located in the islands where the population is higher. To address this challenge of accessibility of Higher Education services, several private Higher Education institutes have developed alternative forms of delivery including block-mode studies and virtual study programmes.

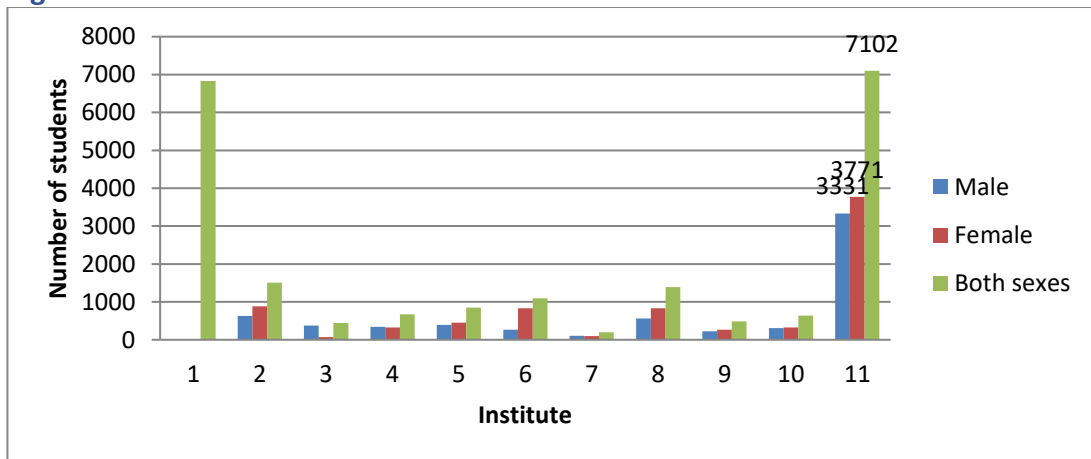
An analysis on the field of the study programme, the socio-economic benefits of Higher Education, job opportunities available for graduates and wages from the available job opportunities would lead to finding the reasons for the current low male enrolment in Higher Education.

Admission to Higher Education is provided by the individual institutions, though all the institutions are required to follow the Minimum Entry Requirements set by the MNQF.

The MNQF has two main entry requirements: (i) the general entry requirement; and (ii) the alternate entry requirement where the students with mature entry or alternative qualifications are considered in Higher Education courses. This has also resulted in a situation where some institutes have the majority of students entering the Higher Education system via the alternative entry route, instead of the general entry route. This becomes a challenge in the delivery of the course where institutes often deliver sub-standard programmes to cater to the need of the market.

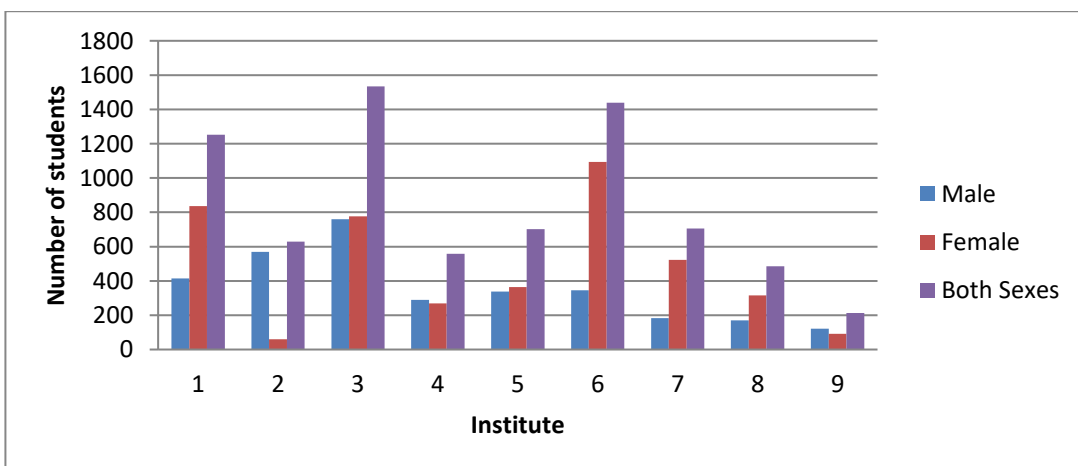
In the Maldives, higher education enrolment is higher for females than for male students. Tables 6.2 and 6.3 show the enrolment pattern in some HEIs, wherein most institutions female enrolment is higher than the male enrolment. An analysis needs to be conducted to further examine the reasons for this.

Figure 6.2: Student Enrolment 2015



Source: Former Department of Higher Education, 2017

Figure 6.3: Student Enrolment 2016



Source: Former Department of Higher Education, 2017

Table 6.3 provides the student enrolment of HEIs in 2017 as made available by the MoHE. The enrolment statistics appears incomplete as data from the MNU and three private colleges are missing. Regular collection of credible statistics from HEIs is something that the newly established MoHE needs to attend to.

Table 6.3: Student Enrollment of University, College and Polytechnic 2017 by Gender

Higher Education Provider	Classification	Type	Student Enrolment		
			Male	Female	Total
Islamic University of Maldives	Government	University	354	876	1,230
Institute for Security and Law Enforcement Studies	Government	College	740	102	842
College of Defense and Security Studies	Government	College	650	58	708
Maldives Polytechnic	Government	Polytechnic	707	49	756
Villa College	Private	College	2227	2454	4681
Cyryx College	Private	College	186	199	385
Mianz International College	Private	College	293	901	1194
Maps College	Private	College	106	144	250
Mandhu College	Private	College	217	251	468
Total			5480	5034	10,514

Source: Statistics from Ministry of Higher Education, 2019

Note: Statistics from MNU and 3 private Colleges Clique College, Avid College & Maldives Business School for the year 2017 not available at former DHE.

The main campuses of the majority of the higher education providers are based in Male' which makes higher education less accessible to the students in the atolls. Though campuses and outreach centres are established in the atolls, they are also located in more populous islands. An analysis on the subjects offered or the socio-economic benefits of higher education, job opportunities available for graduates and wages of the available opportunities would help to understand the reasons for the low male enrolment in higher education.

According to the Master Plan for Higher Education, the Government defines Higher Education as diploma programmes and above (Level 5 and above qualifications defined

in the Maldives National Qualifications Framework). Such a definition was justified on the basis that diplomas mark the entry point of Higher Education, and Diploma qualifications often form the first year of a Bachelor’s degree in the Maldives. In terms of entry age into Higher Education, age 18 marks the beginning of Higher Education in the Maldivian education structure. When GER is defined as above, the estimated GER for 2017 was 32%.

According to the World Bank (2011), limited access to Higher Education opportunities and inadequate access to Higher Secondary Education were the two main reasons for low Higher Education enrolment in the Maldives. From 2010 to 2016, the student enrolment in Higher Education has risen from 7,052 to 15,195. Further to this success in increasing access to Higher Education, Government foresees the need for further diversification of Higher Education opportunities and to enhance the geographical balance of access available in the country.

Table 6.4: Higher Education student enrolment in the Maldives

	2010	2011	2012	2013	2014	2015	2016
Government	3314	3686	4528	4128	5846	6000	7142
Private	3737	4156	5106	4654	4959	8823	8053
Total	7052	7842	9634	8782	10805	14823	15195
Percentage change		11	23	-9	23	37	3

Source: Master Plan for Higher Education, 2017

Enrolment data of 2018 from the two universities show that 26% of the enrolment of MNU and 51% of enrolment of IUM are below MNQF Level 5, which is Diploma. This is an issue that would require closer attention in the State universities in the future, especially if research programmes are to increase.

Based on significant growth in HE enrolment in recent years, a 7% growth rate is projected for Higher Education student enrolment over the next five years.

Over the past five years, a fair number of problems have also been identified in the modality of the courses run by the higher education providers, which is left unregulated by the authoritative bodies. These include the following:

- (i) There is no set policy defining a full-time and part-time load of studies.

- (ii) Many students tend to study and work at the same time, resulting in a 'triple burden effect'.
- (iii) To cater to the need of the working students, institutes conduct courses after official working hours. Though the classes are conducted after the working hours, students are offered full-time mode of study, leaving the students to cope with a full-time job and full-time studies. However, most of the programs are conducted as part-time delivery in the name of so-called 'block mode', in the full-time duration and in the name of full-time study.
- (iv) The majority of the institutions are left empty during official working hours making the institutions run below its full capacity.
- (v) There is no set policy defining various modalities of learning. To cater to the market demand, many institutions conduct courses on alternative forms of delivery where student-teacher interaction time is restricted and no notional learning or absorption time incorporated into teaching and learning.
- (vi) There is no set policy defining annexes or extensions to the institutes such as learning centres, outreach centres and campuses. Therefore, these extensions are often left unattended.

It will be important to monitor the infrastructure development in the Higher Education sector to identify whether the institutions are running below the carrying capacity. Since the current enrolment trends show that Higher Education enrolment is increasing each year and the aim is to have 60% GER by the year 2022, it will be important to monitor the capacity of Higher Education providers.

6.6 Cost and financing (Special focus on scholarships and loans)

Foreign assistance to the Maldives reduced when the country transitioned from the Least Developed Countries to the Developing Countries status in January 2011. However, the Government of Maldives has introduced financing through loan and scholarship schemes which have to some extent increased the number of students who are enrolled in the Higher Education in the past few years. However, there is no sustenance in providing financial assistance under these schemes and often times, the student has to rely on self-funding or funding from family to continue his/her Higher Education.

There are few local banks which also provides Higher Education loan schemes. The Maldives National Bank (Bank of Maldives) offers education loans at the rate of 11.5% and schemes are eligible to those who provide a security deposit equivalent to 150% of the loan required. This high-interest rate makes loans at the local banks unaffordable to

students. The newly elected government has announced a Higher Education loan scheme with a reduced interest rate from 6% to 3.0%.

With regard to loans and scholarships provided by the government, it is important to note that in the recent past, few students were attracted to these schemes. A more technology friendly application method, and a more transparent evaluation and selection method need to be in place. This will ensure accessibility and help to gain public confidence in such schemes. Furthermore, there are several scholarships and financial aid in return for which students required to serve to the country upon completion of their studies. However, at present, there are no regulations which enforce this requirement.

The current policy in Higher Education financing is also to provide all students having three passes or equivalent at Higher Secondary School Terminal Examinations an opportunity for Higher Education. The total spending on Higher Education in 2017 is estimated to be about MVR 356 million, which includes the institutional budgets of the MNU, IUM, Maldives Polytechnic, DHE and MQA. The scholarships and student loans are usually dispersed through the budget of the former DHE. However, it should be noted that the government universities alone do not cater to the targeted Higher Education population in the Maldives. The total government spending in 2017 is estimated to be about 0.6% of GDP. The Sustainable Development Goal targeted for the year 2030 includes an increase in public spending on education. It recommends 15 – 20% of public expenditure on education and 4 – 6 % of GDP.

As the Sustainable Development Goal in Higher Education for the year 2020 include expanding the number of scholarships available globally, it is expected to have an increase in foreign aid in the form of scholarships or loans towards financing Higher Education. The 4th goal of the Sustainable Development Goal is:

“Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”

Goal 4b of the SDG 4 is about scholarships for higher education. It states:

“By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational

training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries.”

As stated in the Incheon Declarations and Framework for Action for the Implementation of the Sustainable Development Goals, scholarship schemes can play a vital role in providing opportunities for young people, contribute to the internationalization of tertiary education and provide access in global knowledge transfer and adapt those to the country’s conditions.

“Scholarship programmes can play a vital role in providing opportunities for young people and adults who would otherwise not be able to afford to continue their education. They also offer an important contribution to the internationalization of tertiary education and research systems, particularly in the least developed countries. They can help increase access to global knowledge and build capacity to transfer and adapt knowledge and technology to local conditions.”

(Education 2030: Incheon Declaration and Framework for Action for the Implementation of Sustainable Development Goal 4, 2016)

There are two main types of funding for Higher Education in the Maldives: loan schemes and scholarship schemes.

6.6.1 Loan Schemes

Loan schemes were first introduced in the early 1990s to provide full or partial funding to students studying abroad and locally. Financial aid in the form of loans was awarded based on merit to avoid gender or social disparities between the students. However, it is important to note that this criterion did not take the socio-economic background of the students into consideration.

Table 6.5: Loans awarded between 2013 and 2018

Year	Number announced	Number Awarded
2013	1192	1,192
2014	1280	571
2015	1532	700
2016	1525	722

2017	1000	566
2018	600	297
Total		4,048

Source: Ministry of Higher Education, 2019

Over the last six years from 2013 to 2018, over 4000 student loans have been awarded by the former DHE. The students who were awarded loans were free to choose the country (within the list provided with the announcement), institution and programme they want to study within the Skill Shortage List prepared and published by the former DHE. The only requirement for the institution and program is that they should be approved or recognized by the MQA. This loan was restricted in quantity. The loans were awarded in three different forms. They are:

Ongoing Students

In this scheme, students who have started their studies but need some financial help to complete their studies were provided with a fixed amount of financing to complete their studies.

New Students

In this scheme, students who wish to study a course at MNQF Level 5 or above were eligible to apply. In this scheme, the students were provided with university fees, living expenses, book allowance, establishment allowance and some other expenses like tickets, visa, insurance and departure allowance.

Supplementary Loan Scheme

Introduced in the year 2013, this scheme aims to provide students who have already received a partial scholarship or grant from the former DHE with the additional financing required to cover their university fees or living expenses.

The number of loan schemes introduced in the past five years has varied. The table below shows the number of loan opportunities provided as full-funding and ongoing over the last five years (includes both local and abroad). It can be seen that the number of students who received the loan is about two-thirds of the number that was announced. This could be due to the limitations set in 2014 for countries in which the students can study abroad, as well as the policy of not providing funding to study abroad for the programs offered locally. Also, the issue of having to repay a loan with the administrative fee of 5% can be

challenging when there is no minimum wage set, and the wages are low when compared to the high living standards. A proper socio-economic cost-benefit analysis on this issue will assist in finding the actual reason for the underutilization of this opportunity.

Table 6.6: Scholarships awarded in the past 5 years

Year	Number Awarded
2013	1,192
2014	571
2015	700
2016	722
2017	566

Source: Former Department of Higher Education, 2018

The above-mentioned loan schemes are fully provided by the government budget. The fund was created with the aim to develop into a revolving fund. However, the collection of loan repayment from the students who have completed their studies has been low over the years. This has led to the decision of the government to transfer funds to a financial institute to better manage the fund. Thus, from 2010 the fund has been managed by the Bank of Maldives. At present, repayment is relatively high. However, there are pending payments. A high commission is also paid by the government to the Bank of Maldives to manage the fund.

6.6.2 Scholarship schemes

The scholarship schemes have been introduced by the Government of Maldives in the early 1900s. The aid provided by each provider differs from time to time. There are two types of scholarships provided by the Government of Maldives; those offered from aid through bilateral relations and those offered from aid through government-funded schemes.

Bilateral Schemes

These are the schemes where the Government of Maldives receives scholarships or grants through its bilateral relationships. The coverage in these schemes differs, from some of the schemes covering all expenses while some schemes only provide the tuition fee. All the scholarships are awarded based on merit.

In order to increase the utilization of these opportunities, a supplementary loan scheme was introduced in 2013 where additional funding in the form of living allowance or the remaining course fee is provided to the students where funding provided by the country or agency is not adequate.

Presidents and High Achievers Scholarship

Introduced in the year 1984, the student or students who achieve the first place with “A” grade in five subjects in the Higher Secondary Completion Examinations is provided with a fully-funded scholarship. The student was free to choose the country and the program he/she wanted to study provided that it was approved by the Maldives Qualifications Authority.

In May 2017, “A*” was introduced into the Higher Secondary School Certificate, so a minimum 5 “A*” is required to qualify for the President’s Scholarship. High Achievers Scholarship is a new scheme introduced by the government for students who achieve 5 “A” in the Higher Secondary Completion Examinations. The difference between these two schemes is that the students who are eligible for the High Achievers Scholarship have a limitation of choice in the selection of the country to study.

This criterion has been changed in 2019 by the new Higher Education Ministry. The High Achievers’ Scholarship Award, given to A’ Level students who scored 5 or more “A” is now expected to include programs from OECD countries. The scholarship previously granted eligibility to universities from China, Philippines, Malaysia and Indonesia along with SAARC nations.

Nursing and Teaching Scholarships

Introduced in 2014 where the scheme aimed to provide full funding for students who choose to work in these two fields. This scheme was discontinued after the first year as the support for the scheme was very limited. Though a number of job opportunities are available in these two fields, it was noticed that this scheme was under-utilized. As this was a fully funded scheme, a thorough cost-benefit analysis of pursuing careers in these fields should be carried out. Furthermore, it is also important to understand the pre and post training requirements involved in such schemes to better understand the suitability of the scheme to those who are in need.

2050 Scholarship

Introduced in the year 2017, this scheme provided 2050 scholarships to students with a tuition-free scheme to study a course between MNQF Level 1 to 5. The students are required to study in the Maldives, and the tuition fee for the course is paid by the government. The students who meet the minimum criteria for the selected course was eligible to apply.

6.7 Quality Control

The Government of Maldives has recognized the need for quality control in the higher education sector. To ensure the quality of higher education, the Maldives Accreditation Board was created by a Presidential Decree in the year 2000. Since it is created, the MQA has developed a number of standards to assure the quality of higher education qualifications provided in the country and also in overseas institutions. The MQA has developed the Maldives National Qualifications Framework (MNQF), which was first developed in 2001 and revised in the year 2011, acts as a guide to the stakeholders of higher education, including the higher education seekers, providers and employers.

The MNQF is designed to:

- Facilitate the development of a quality assurance mechanism for the post-secondary education sector.
- Provide a framework for recognition of qualifications offered in the Maldives and abroad.

The MNQF provides a comprehensive and coherent national framework that facilitates quality improvement, quality assurance, and private sector participation in post-Secondary Education. The MNQF also ensures that students, employers, education providers and the community at large easily understand the learning outcomes involved in various qualifications (MQA, 2018).

Table 6.7: The levels of qualifications of the MNQF

LEVELS	QUALIFICATIONS
Level 10	Doctoral Degree/ Higher Professional Certificate/ Higher Professional Diploma
Level 9	Master's Degree/ Advanced Professional Certificate/ Advanced Professional Diploma
Level 8	Graduate/Postgraduate Certificate/ Graduate/Postgraduate Diploma

Level 7	Bachelor's Degree with Honours/ Bachelor's Degree/ Professional Certificate/ Professional Diploma
Level 6	Advanced Diploma/ Associate Degree/ Professional Certificate
Level 5	Diploma
Level 4	Certificate IV
Level 3	Certificate III
Level 2	Certificate II
Level 1	Certificate I

Source: MQA, 2018

MNQF features

The features of MNQF (MQA, 2018) follows: The qualifications recognized in the MNQF are classified into two groups: (1) Further Education and Training, and (2) Higher Education. The levels of qualifications (e.g. Certificate I and Certificate II) are differentiated based on the breadth, depth and complexity of knowledge and skills that are included in various qualifications. All qualifications in the MNQF have a purpose and are interrelated to each other, providing for articulation from one qualification to the other by recognizing prior learning. Qualifications recognized within the MNQF are expected to be readily understood by the public, credible and useful to the employers.

MNQF provides pathways for life-long learning. The recommended minimum credit hours and credit points for each qualification are provided. The length of time it would normally take to complete a course leading to each qualification is expressed in weeks and academic years.

Benefits of MNQF

The MNQF is designed in such a way that it is beneficial to all the stakeholders involved in the Higher Education sector. The benefits of MNQF (Maldives Qualifications Authority (MQA), 2018) for the different stakeholders are as follows:

The learners will be able to obtain qualifications that are:

- Recognized by employers, educational institutions and the general public
- Transferable for various other courses the learner may take in the future
- Able to provide greater choice and flexibility in what, where and how to learn

For the employers, the MNQF would mean:

- Assurance of the quality of qualifications
- Education and training that are relevant to the industry
- Increased availability of skilled and adaptable employees

The course providers will benefit from MNQF by being able to:

- Validate the quality of their courses and certificates
- Offer standards-based training with measurable outcomes
- Provide training for nationally-recognized qualifications
- Transfer academic credits between qualifications and institutions
- Expand the range of programmes offered
- Benefit from external monitoring that leads to quality improvement

Even though a comprehensive qualifications framework is developed, key processes of higher education quality assurance require to be developed and implemented. Program accreditation is one key function that is needed to be strengthened further as well institutional audit.

As in the other areas of Higher Education sector in the Maldives, MQA also has the challenge of insufficiently trained staff. Though the deskwork and the materials regarding the program accreditation have been developed, the lack of professional staff to carry out its mandated tasks has left the Higher Education system of the Maldives under-supervised.

6.8 The Master Plan for Higher Education 2017-22

The current Master Plan for Higher Education (2017 – 2022) is based on five main areas: the desired size and structure of Higher Education, governance of Higher Education, quality of Higher Education, economic and social relevance of Higher Education, and budget and finance of Higher Education. This Master Plan was developed by the former Department of Higher Education.

The recommended policies for the Higher Education sector according to the current Master Plan for Higher Education, which is in need of revision, are stated below.

6.8.1 Size and structure of higher education

Policy 1 *Achieve 60% GER in Higher Education over the next five-year period, while reducing the regional imbalance of Higher Education opportunities.*

Policy 2 Facilitate the development of specialized colleges/ schools/ institutes in fields in which the Maldives commands comparative advantage in Higher Education in the South Asian region.

Policy 3 Develop a streamlined institutional structure of HEIs that would enable increasing enrolment, catering to the diverse needs of students, and to protect and enhance the international standing of the Maldivian Higher Education system.

6.8.2 Governance of Higher Education

Policy 1 Develop, govern and regulate Higher Education through appropriate legislation.

Policy 2 Consolidate all functions of HE governance and regulation under DHE and strengthen DHE.

Policy 3 Seek guidance from stakeholders and experts in developing the policy planning and governing of HE.

Policy 4 Enhance public accountability and management of HEIs.

Policy 5 Develop internal institutional governance of HEIs through regulation and technical support

Policy 6 Support governance of HEIs through guidance and training.

Policy 7 Ensure public accountability of HEIs through better management and achievement of performance targets.

Policy 8 Facilitate innovative pedagogical practices through governance.

Policy 9 Promote good governance and share experience and knowledge of governance practices.

6.8.3 Quality of Higher Education

Policy 1 Develop policies and procedures for institutional QA and improvement for programmes and awards that are publicly available.

Policy 2 Clarify the mandate of DHE regarding QA and review present functions of MQA to address overlaps in responsibilities between MQA and DHE.

Policy 3 Develop a guideline that incorporates external QA as an integral part of the MQA's QA functions. This guideline should clearly stipulate the aims and objectives of external QA and indicate how this function complements or is different from other QA processes conducted by, for instance, DHE and MQA.

Policy 4 Develop a plan of action to review MNQF involving experts, representatives from HEIs and other stakeholders.

Policy 5 Develop experts in disciplinary areas.

Policy 6 Empower the MQA to function as independently as possible, free from unnecessary pressures, but with proper supervision and support from DHE.

Policy 7 Develop guidelines to make HEIs autonomous, but accountable with the right balance between autonomy and control.

6.8.4 The economic and social relevance of Higher Education

Policy 1 Collect and annually publish enrolment statistics, and systematically monitor enrolment demand and future training needs.

Policy 2 Initiate and facilitate the development of new academic programs based on Higher Education needs projections.

Policy 3 Develop industry-focused curricula to enhance curriculum relevancy and employability of graduates and enhance the status, curriculum and delivery of TVET qualifications.

Policy 4 Include experience-based learning and incorporate core knowledge, values and skills in all academic and TVET programs.

Policy 5 Develop a National Research Council to allocate and manage state funding for research and to ensure research becomes an instrument of economic and social development.

Policy 6 Facilitate strategic development of e-learning / online learning in Higher Education.

Policy 7 Create an open, flexible and integrated Higher Education system that values prior learning, encourages credit transfer between institutions as well as TVET and academic strands, and facilitates life-long learning.

6.8.5 Budget and finance of Higher Education

Policy 1 Increase the percentage of spending on Higher Education.

Policy 2 Increase the share of private sector participation in the provision of Higher Education in the Maldives.

Policy 3 Increase the geographic spread of Higher Education investments in order to improve inclusive Higher Education provision in the atolls.

Policy 4 Mobilize funding allocation for research in Higher Education and development of the private sector Higher Education.

Policy 5 Extending equitable access to Higher Education.

6.9 Findings

1. The higher education sector in the Maldives is growing. Even though there are 02 public Universities, 09 private colleges, 01 polytechnic there is no proper mechanism or regulation to assist in their governance. The only regulation that exists for colleges was developed in 2007 and amended in 2011 does not cover the necessary areas in governance and structure of a college.
2. The sector has a Master Plan for the period 2017-2022. Although published recently, the Master Plan is in need of revision.
3. There are more than 200 higher education institutions registered at the former DHE and 35 of them offer programmes at Diploma and above qualifications. However, the MoHE and MQA do not have the qualified staff to manage these.
4. The basic statistics for higher education gathered at the former DHE appear to be rather incomplete.
5. The lack of qualified staff has been an issue that has been identified by higher education institutions as well. To address this issue, the former DHE has initiated a loan scheme to train staff for University, College and Polytechnics. The people who are trained under this scheme would have a bond to serve at these institutions for a specified duration.
6. Though the MNU, the IUM and some private colleges have their own funds for research, there is no public research grant /facility available in the country.
7. Though the manuals for Programme Accreditation have been developed, due to the lack of funding and professional staff at MQA, the process has not yet commenced.
8. Although not officially recognized, the so-called 'block mode' teaching is widely used in HEIs. Currently, full-time equivalent programmes are conducted in the 'block mode', which is a part-time arrangement, while qualifications are awarded in the full-time duration. Though the definition of this mode of delivery varies, it is being used to deliver full-time equivalent programmes in condensed "blocks" of contact time typically on a weekend (or 2-3 days) and students are exposed to 10-12 hours of didactic teaching. However, currently there is no regulation that guides the use of this mode of delivery.

6.10 Recommendations

1. As a matter of urgency revisit the Master Plan for Higher Education 2017-2022 to either revise it to reflect the current needs of the country or develop a new Strategic Plan for Higher Education.

2. Develop appropriate legislations related to governance and other areas of Higher Education in-line with the current developments of this sub-sector. To develop a vibrant private Higher Education sector, it is recommended that flexibility in the structure and operations be encouraged while maintaining the standards and quality regulations. In addition, it is also important to note that while MNQF has frameworks and basic standards outlined, its complementing job structures needs alignment to the framework and subject fields. Furthermore, technical and vocational training needs to be expanded in the Maldives.
3. The collection and publication of higher education statistics need to be systematised and improved.
4. To determine the scope of the Higher Education sub-sector in the Maldives, it is vital to conduct a national Training Needs Assessment and align courses and priorities according to a shortage of skills which will facilitate to establish a demand-driven Higher Education system.
5. While there is a need to decentralize the Higher Education operations due to the geographic distribution of the country, it is important to revisit the policies outlined in the Higher Education Master Plan in light with the decentralization policy of the new government; Policy two and Policy five of the governance component discussed above need critical analysis. As DHE has now evolved into the Ministry of Higher Education, its mandates should reflect the need for developing and sustaining a quality Higher Education system in the Maldives.
6. At present, it is presumed that the majority of the quality assurance regulations are aligned to controlling entry requirement to the programmes. However, as the sector develops, it is important to emphasize on providing flexible entrance pathways while setting up measures to control the exit point, thereby encouraging more students to participate, and at the same time, ensuring that only students who surpass a particular level of a quality graduate from the programmes.
7. The MQA needs to commence the quality assurance process of programme accreditation as soon as possible. It is vital to highlight that the current context needs to be considered, where teaching and delivery modalities should be more closely monitored by the regulatory authorities.
8. It is also necessary to establish Learning Information Management Systems to monitor the patterns and trends in the Higher Education sector, thereby implementing policies based on facts and figures. At present, only enrollment and a few graduation statistics are obtained by the relevant authorities, which results in lacking a comprehensive overview of retention and completion patterns and trends in the Higher Education system; including those studying locally and abroad.

With free Higher Education pledges promised by the new government, it is important to develop policies that are streamlined to the national development goals, and such policies should also be crucial to define exclusion and inclusion criteria.

9. A policy on 'block mode' teaching needs to be developed to ensure that the qualities of the programmes are maintained.
10. A policy is urgently needed to properly define delivery modes of teaching. This should also include guidelines either to halt an officially unrecognized 'block mode' teaching or to properly regulate this mode of delivery for appropriate levels of qualifications.

Chapter 7: Education and Training Contribution to Economic and Social Development of Maldives (External Efficiency)

Educational attainment and achievement are among the most readily used indicators of social outcomes. It affects societal wellbeing both directly and indirectly. The aim of this chapter is to explore education and its impact on economic and social indicators in the Maldives. The chapter is divided into three sections. The first part will look at the education system and its inputs and outputs. The second part will look at education and its impact on economic outcomes. The final part will explore the impact of education on social outcomes in the Maldives followed by key findings and recommendations based on the three parts. This analysis is also called external efficiency.

7.1 A summary of enrolment and completion trends

7.1.1 Primary and Secondary education

The Maldives has one of the highest literacy rates in South Asia, reaching as high as 98% in 2017 (National Bureau of Statistics, 2017). The Maldives has an Early Childhood Education system followed by Primary, Secondary, Higher Secondary and Higher Education. This section will describe enrolment and completion rates in different education levels in the Maldives. The reason for incorporating enrolment and completion rates in this chapter is because education level and its impact on socio-economic factors cannot be explained without referring to the skill levels of the population in a country. The skill levels of a population are determined by enrolment and completion rates in different levels of educational hierarchy in a country.

Enrolment trends show that the total enrolment is highest at the Primary levels (Grades 1-7) in each year. Enrolment decreases as it moves to higher levels. For example, 45,326 students were enrolled in Primary levels in 2017. However, only 4,191 students were enrolled in Higher Secondary levels (grade 11-12). One reason for the low level of

transition and relatively low enrolment at the Higher Secondary level, compared to the Secondary level, is that, currently, this is just one option for grade 10 leavers to progress to the next level of education. There are other pathways to enter the Higher Education system other than through the Higher Secondary level.

Table 7.1: Total number of enrolments by level

Level	2013	2014	2015	2016	2017	2018
Pre-Primary (Nursery, LKG, UKG)	22,480	22,823	23,412	22,263	21,000	20,401
Primary (Grades 1 - 7)	39,408	40,499	42,137	43,781	45,326	47,236
Lower Secondary (Grades 8 - 10)	19,876	18,925	18,096	17,256	16,778	16,289
Higher Secondary (Grades 11 - 12)	4,138	4,552	4,380	4,120	4,191	3,977
Special (classes for special needs)	195	284	316	368	481	298
Total	86,097	87,083	88,341	87,788	87,776	88,211

Source: Ministry of Education, 2018

The Higher Secondary Education provider of the government requires five or more O/level passes (a minimum of a C grade) for entry into Higher Secondary government-based schools and centres. Table 7.2 shows that 77% of the students achieved five passes in the O/Level exam in 2017. The pass rate shows an improvement in each year. However, even though the total pass rate of the O/Level exam had increased each consecutive year, a large number of students (23%) did not achieve the passing score to move on to the Higher Secondary levels (refer to Table 7.3). This indicates that there are many students who do not reach the required level of five passes in the O/Level exams. Five passes in O/Level is also counted with the local qualification of Secondary School Certificate (SSC) examination which includes both Dhivehi Language and Islamic Studies.

Many students who achieve a passing score in the O/Level exams do not continue to Higher Secondary studies. This can be observed when the pass rate in table 7.3 is compared with the table 7.5 which shows the total number of students who sat in the A/Level exams. For example, the number of students who passed in the O/Level exam in the year 2015 was 2937, while only 1708 students took part in the A/Level exam after two years in the year 2017. The expected route is, if a student achieves a passing score from the O/Level, he/she will move on to the next level and will complete the A/Level in the next two years. However, table 7.3 and 7.5 shows that this does not happen for many students in the Maldives. Hence, when considering the population who could not move

to Higher Secondary due to various reasons, it is fair to say that a huge number must have taken other pathways such as alternative entry pathway to Higher Education institutions or by enrolling in TVET programmes. In cases where they did not choose alternative paths, many of them must have left the school system without reaching their full educational potential. It is presumed that representation in lower levels of education system has a considerable impact on participation at Higher Education. It should also be noted that the aggregate data will also show that there is a gendered difference in participation, retention and completion, both at lower levels of education and at higher levels of education.

Table 7.2: Pass percentage of students who sat in O/Level exam and their results

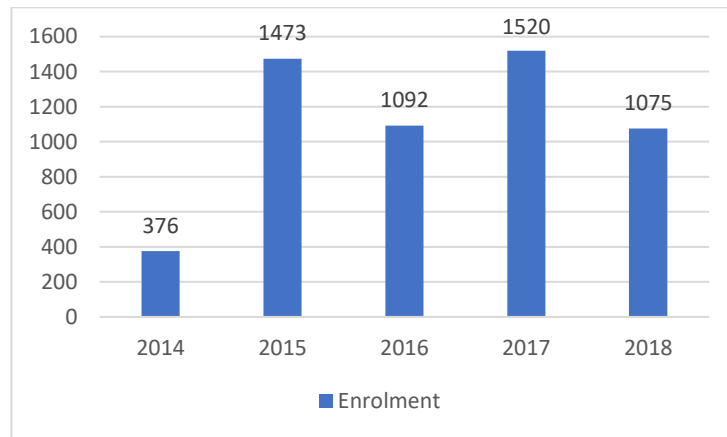
Number of subjects	2013	2014	2015	2016	2017
No (zero) pass	13.9	14.2	13.1	12	13.7
1 or more subject	86.2	96.5	93.9	96.9	83.7
3 or more subjects	58.9	63.6	65.8	79	92.8
5 or more subjects	49	52	55.7	70	77
8 or more subjects	20.4	21.7	22.4	23.9	21

Source: Statistics provide by the Ministry of Education, 2018

The students who took the alternative pathway of in-school TVET programme (supported by the former Ufaa Programme) exited the school system with an MNQF level three certificate. The three main programmes under the Ufaa programme were S-TVET, Dhasvaaru and BTEC (Ministry of Education, 2015). By 2018 that there were 178 schools offering BTEC O' Level and 44 schools offering BTEC A' Level courses. (Data from Scholl Administration Division, MOE, 2019). The first batch of 319 BTEC O/Level students graduated in January 2017 and the first batch of 11 BTEC A/Level students graduated in January 2016 (Ufaa Programme Office, 2017). In 2018, the in-school BTEC programme had 505 O/Level students and 570 A/Level students across the Maldives (Scholl Administration Division, MOE, 2019). However, it should be noted that these programmes are looked down upon by the public as substandard programmes.

Students who complete the above-mentioned programmes were expected to be trained in line with workforce development and human capital demand of the country. According to the records of the TVET Authority (2018), the in-school TVET enrolment in BTEC has increased from 376 in 2014 to 1,520 in 2017 but dropped to 1,75 in 2018 (See Figure 7.1). With such growing numbers, it is important to analyse the long-term benefits of having these programmes in place.

Table 7.3: Number of students enrolled in the BTEC program from 2014 to 2018



Source: Statistics provided by the School Administration Division, MoE, 2018

Students who pass five subjects or more in the O/Level exams can either join the MNQF level 4 programmes offered from a Higher Education institution or they could join Higher Secondary Education. Alternative pathways are open for students who sit the O/Level exam but do not attain the passing score to continue to Higher Secondary levels. These alternative pathways are determined by the years of work experience and age of the student. More recently, a University Preparatory Programme (UPP) has been added to the MNQF structure to encourage students who do not meet the general entry requirement to provide a pathway to Higher Education.

Table 7.4: Total number of students sat and passed in the O'Level examination, 2013 – 2017

	2013	2014	2015	2016	2017
Total number of participants	6,181	5,404	5,272	5,497	5,467
Total Passed (5 or more subjects)	3,029	2,810	2,937	3,848	4,210
Total did not pass (less than 5 subjects)	3,152	2,594	2,335	1,649	1,257
Percentage passed (5 or more subjects)	49	52	55.7	70	77

Source: Statistics provided by the Ministry of Education, 2018

Table 7.4 and 7.5 shows statistics related to Higher Secondary Education pass rate. The population who sat the Lower Secondary Exam (GCSE O/Level) was quite high and their pass percentage was 77% in 2017, (4210 students, Table 7.3). However, as it is shown in Table 7.5, only 1708 of those students who passed continued their education to Higher Secondary. Secondary to Higher Secondary is a straight pathway where students who pass

the O/Level exams (secondary exam) are expected to enrol into the Higher Secondary Education. However, the statistics in Table 7.3 and 7.5 show that all the students who pass in Lower Secondary exams (O/Level exams) do not move on to Higher Secondary levels. Therefore, it is important to investigate the patterns and trends of enrolment in Higher Secondary Education to determine the reasons for discontinuation of studies from Secondary Education to Higher Secondary Education.

Table 7.5: Pass percentage of students who sat in the A/Level exam and their results

	2013	2014	2015	2016
No (zero) pass	8.9	10.2	10.6	4.4
1 subject,	91.2	89.9	89.4	95.7
2 subjects	78.7	79.2	76.3	91.9
3 subjects	43.3	38.7	36.1	62.8
4 subjects	25.2	23.9	25.7	48.1
5 or more subjects	16.1	15.6	17.5	34.7

Source: Statistics provided by the Ministry of Education, 2018

The students who attain a passing score (pass in three or more subjects) in the A/Level can continue to Higher Education to complete their Bachelors' Degree in three years without having the need to enrol in a foundation programme. Students who do not attain a passing score from the A/Level either exit the formal education system or take alternative pathways such as foundation programmes or another certificate level 3 and 4 courses in Higher Education institutions. This is evident from the Higher Education Statistics, which shows that universities in the Maldives also have a student enrolment of about 35% representing in courses below MNQF level 5 (Diploma). Similar trends are also seen in private colleges and other Higher Education Institutes.

Table 7.6: Total number of students sat and passed in the A/Level examination, 2013 – 2017

	2013	2014	2015	2016	2017
Total number of participants	1,725	1,815	2,052	2,000	1,708
Total Passed (3 or more subjects)	747	702	740.1	1256	n/a
Percentage passed (3 or more subjects)	43.3	38.7	36.1	62.8	n/a

7.1.2 Institution-based TVET and Polytechnic programmes

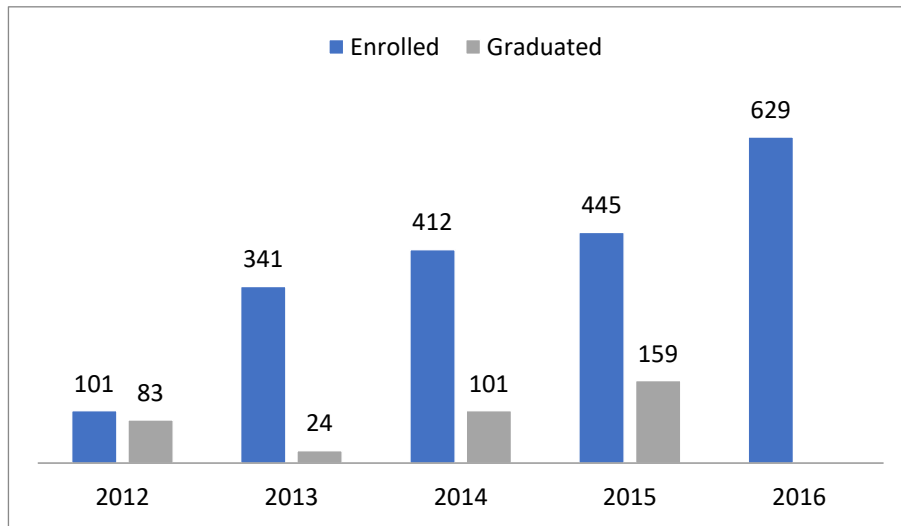
The main goal of the TVET programme is “to ensure that young people can find and follow satisfying careers in an economy that has a continuing supply of new workers with skills and attitude required by industry and business” (TVET Authority, 2016). There are five different Employment Sector Councils (ECSs) under the TVET (TVET Authority 2016). The ECSs are intended to contribute to a demand-driven TVET required for the labour market (TVET Authority 2016). The ECSs are expected to identify the skill needs of employers at different levels within their sectors (TVET Authority 2016). However, this function remains unattended. The main five ECSs at present are the Tourism Sector, Fisheries and Agriculture Sector, Transport Sector, Social Sector and Construction Sector. However, it should be highlighted that there is a role conflict between the Maldives Polytechnic and TVET Authority due to the politicization of these institutions, thereby the work of the ECSs are also inefficient.

Statistics from TVET Authority shows that approximately 5000 students completed their program in 2016 (TVET Authority, 2016). All Polytechnic courses are targeted at different technical occupations in demand. The Maldives Polytechnic offers Certificate (I, II, III, IV) and Diploma level courses from technical areas such as electrical and electronics (Maldives Polytechnic, 2018). More recently, soft skills training such as Small Business Management has also been added to Maldives Polytechnic. However, it should be noted that there is no Learning Information Management Systems to regularly collect, monitor and update the statistics. Therefore, it is difficult to make a fact and figure-based decision in terms of skills and competencies required for the evolving economy. The Maldives Polytechnic courses are offered in five campuses around the Maldives: Male’, R. Alifushi, K.Thulusdhoo, GA. Vilingili and S. Hithadhoo. Figure 7.2 shows the number of students enrolled and the number of students graduated between 2012 and 2016. In addition to the Maldives Polytechnic, there are few other private Higher Education providers that offer technical education in the Maldives. Enrolment numbers in Figure 7.2 show that a good number of students are enrolled each year. However, the graduation/completion rates are extremely low which gives evidence that there are challenges to retention and completion in these courses.

This also draws attention to the question of effort and effectiveness of the authoritative bodies in retaining the students in the system after Lower Secondary Education. Statistics in table 7.3 and 7.5 shows there is a huge gap between the O/Level pass rate and enrolment rate in the A/Level. Similar sorts of results can be observed from the Maldives

Polytechnic as well. While enrolment in the Maldives Polytechnic is satisfactory, the completion rate is extremely poor. Those students who exit from the formal school system and from Maldives Polytechnic are the youngest age group in the labour force. Thus, the loss from these levels is a massive loss of human capital to the country.

Figure 7.1: Number of students enrolled and graduated from the Maldives Polytechnic



Source: Statistics provided by the former Department of Higher Education, 2018.

Note: The graduation figure for 2016 was not available.

Box 7.1: The role of TVET

The role of TVET

In-school TVET

Business and Technology Education Council (BTEC) is an international qualification offered by EDEXCEL. It offers alternative learning and assessment methods designed to cater for every type of learner. BTEC is offered as a stream subject when students join grade 8. Along with 4 compulsory subjects, students study 1 BTEC course and receive a level 2 Diploma certificate when they successfully complete their course. Ministry of education started the BTEC program in Maldives in 2014 under the motto 'No Child Left Behind' (Ufaa program, 2017). Total enrolment in B-TEC improved from 376 in 2016 to 946 in 2017 to 1229 in 2018 (Ufaa program, 2017).

Dhasvaaru program under TVET offers strengths based alternative education pathways for vulnerable students. Dhasvaaru program aims to increase the employment and further study possibilities after school. Students are given opportunities through work experience and internships. Dhasvaaru program covers all schools in Maldives (Ufaa program, 2017). A total of 3754 students have been trained between 2014 and 2017 and 1364 students are currently being trained (Ufaa program, 2017).

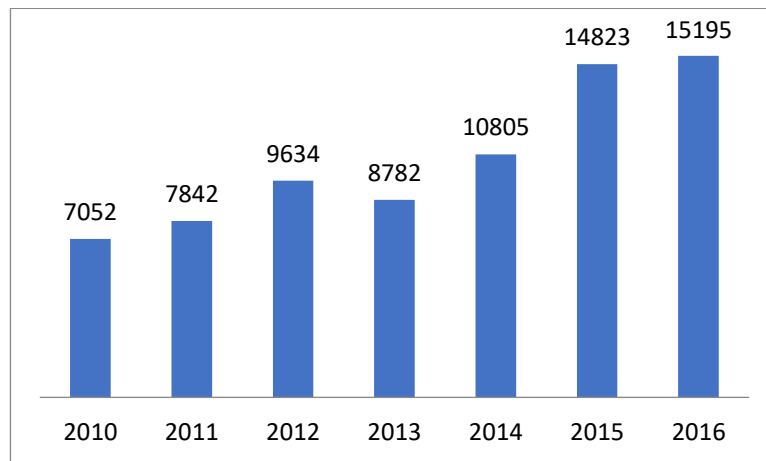
Higher Education

The socio-economic impact of education is more apparent from the adult population in comparison with the younger population due to aspects such as employment and direct-return to investment. Higher Education is the most important aspect that determines the human capital of a country. Table 7.5 shows that the pass rate for Higher Secondary Education for 2015 was 36.1%. The estimated Gross Enrolment Ratio (GER) in Higher Education for the same year was estimated to be about 29.2% (approximately 14,823 students, see Figure 7.4) (Ministry of Education, 2015). The GER estimates are quite high compared to the enrolment in Higher Secondary Education. The reason for the relatively high GER in Higher Education may be due to alternative pathways taken by students to

enter Higher Education. Enrolment data for 2018 from the two universities show that 26% of the enrolment of the MNU and 51% of enrolment of the IUM are below MNQF Level 5, which is Diploma. This is an issue that would require closer attention in the State universities in the future.

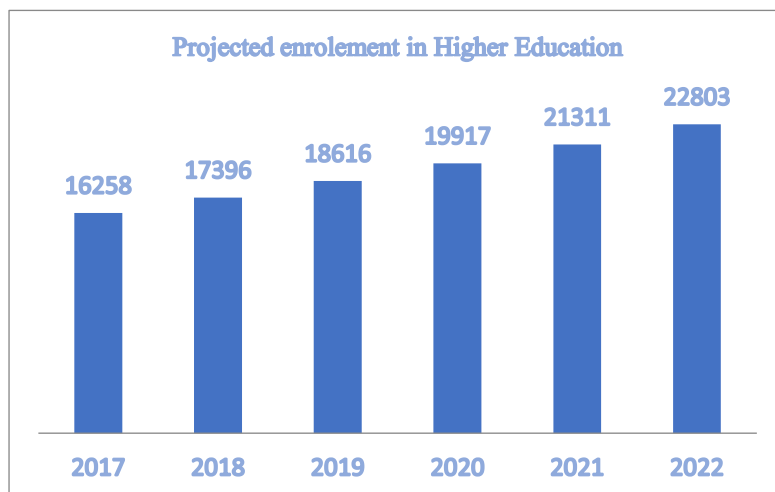
A policy outlined in the Higher Education Master Plan of 2017-2022 is to achieve 60% GER in the next five years (former Department of Higher Education, 2017). The estimations presented in the current Higher Education Master Plan 2017-2022 show a high enrolment in Higher Education (refer to Figure 7.3) and it is projected (as shown in figure 7.4) that the number will increase in the coming years (DHE, 2017).

Figure 7.2: Estimated number of students enrolled in the Higher Education



Source: *The Master Plan for Higher Education 2017-2022*
 Note: These figures are for Diploma and above programmes

Figure 7.3: Projected student enrolment in the Higher Education



Source: *The Master Plan for Higher Education 2017*
 Note: Projection based on 7% annual increase

Table 7.6 shows a large number of students who are expected to be enrolled in Higher Education in the coming years. However, it is still a low rate compared to the total population of initial Higher Education enrolment age group (17 to 23 years) after completing Higher Education.

Table 7.7: Projected enrolment and GER from 2017 to 2022

	2017	2018	2019	2020	2021	2022
Projected GER	32%	36%	41%	47%	54%	60%
Projected Total	162,58	17,396	18,616	19,917	21,311	22,803
Age 17 to 23 total population	50,409	48,469	45,516	41,955	39,225	38,194

Source: Mater Plan for Higher Education 2017-2022 (former Department of Higher Education, 2017, p.26).

Note: Based on 7% annual increase in enrolment.

The availability of Higher Education within the Maldives is limited. At present, courses are mainly offered in the areas of Tourism, Engineering, Construction, Humanities, Health, Information Communication Technology, Business, Administration, Law and Education. There are few to no courses available in the areas of Mathematics and Statistics, Agriculture, Veterinary, Fisheries, Natural Sciences and Welfare studies. As the number of courses and available fields is limited in Higher Education in the Maldives, a large number of students go abroad to attain Higher Education.

Box 7.2: The role of Higher Education

Department of Higher Education is a department under Ministry of Education which oversees higher education in Maldives. The national higher education policies are developed by the Higher Education Council which chaired by the President of the Maldives and members are the Ministers only. The ministry of Education takes the role of secretariat of the council. The policies that approved by Higher Education Council and Parliament are implemented by the Ministry of Education, thorough the Department of Higher Education (DHE) and Maldives Qualifications Authority (MQA).

According to the Higher Education Master Plan (2017 -2022), the structure and the size of the higher education in Maldives will be governed by three main policies. They are:

1. Achieve 60% GER in Higher Education over the next five-year period, while reducing the regional imbalance of HE opportunities.
2. Facilitate the development of specialized colleges/schools/institutes in fields in which the Maldives commands comparative advantage in Higher Education in the South Asian region.
3. Develop a streamlined institutional structure of Higher Education Institutions that would enable increasing enrolment, catering to diverse needs of students, and to protect and enhance the international standing of the Maldivian HE system.

At present, there are two universities, two government colleges, nine private colleges and one polytechnic institution that provide higher education in the Maldives (Department of Higher Education, 2017). The two universities are Maldives National University (MNU) and Islamic University of Maldives (IUM). MNU is the oldest and largest university in the Maldives. According to the Annual Report of MNU, 1,415 students graduated from MNU in 2017 (Maldives National University, 2017).

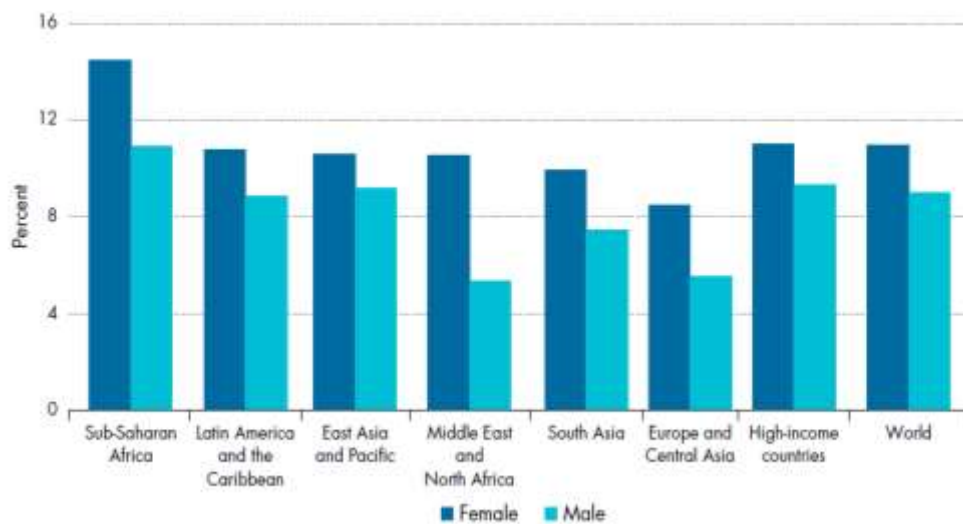
7.2 The economic impact of education

7.2.1 Employment and wage benefits variable

The wealth of households and individuals increases as the education level of individuals rises because the Higher Education level will open more jobs opportunities and it is more

likely that higher skilled employees will be paid better. At present, it is evident that job structures and their corresponding increments are based on qualification. Therefore, income and education have a cause-effect relationship. Higher the qualification, higher the income is. Similarly, higher the income, greater the affordability of Higher Education is. This, in turn, enables households and individuals to improve their consumption and economic welfare. The Human Development Report (World Bank, 2018) estimated the relationship between education level and level of jobs in nine different countries. Their estimates show that there is a significant relationship between higher literacy level and the probability of gaining a white-collar job in seven out of those nine countries. Similarly, the same report states that more schooling is associated with higher wages in Sub-Saharan Africa, Latin America, Caribbean, East Asia and the Pacific, Middle East, North Africa, South Asia, Europe and Central Asia for both male and females. For more reference, refer to Figure 7.5 below.

Figure 7.4: More schooling is associated with higher wages



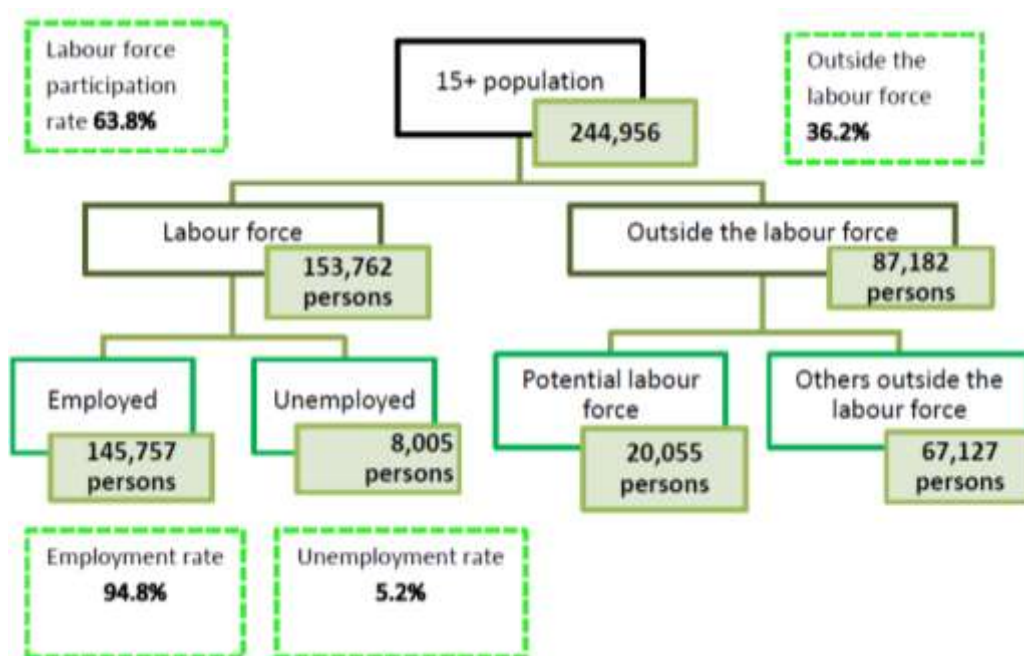
Source: *The World Development Report (International Bank for Reconstruction and Development, 2018, p.39)*

Similar types of results can be seen in the Maldives too. The more educated population of the Maldives tend to be employed with higher salaries and their wealth tends to be higher compared to those who are with lower levels of education. According to the Report of South Asian Human Development Unit (World Bank, 2012), all levels of education have a positive and rising impact on wealth for both men and women in the Maldives. The same 2012 World Bank report shows that there is a significant increase in wealth as the education level increases in the Maldives for both men and women.

7.2.2 The Maldivian Labour market and its structure and dynamics

Human Capital is referred to as the productivity of workers, which depends on the education and skill level of workers. According to the 2014 census, the labour force of the Maldives at the time of census collection was 153,762. Of the total labour force, 145,757 (94.8%) were employed while 8005 were not employed (National Bureau of Statistics, 2014). The local working age (15 -65 years) population was 244,956 and the unemployment rate was 5.2% (National Bureau of Statistics, 2014). The two main reasons for unemployment were lack of job opportunities (35%) and the inability to find suitable jobs (31%) (National Bureau of Statistics, 2014). The gender difference among the employed population was 58% (male) and 42% (female). This corresponds to the Higher Education data which also shows that more females are enrolled in Higher Education than their male counterparts. The Census data shows that, in addition to the local labour force, a total of 59,813 foreigners were employed and working in the Maldives in 2014. A summary of local labour force statistics is provided in figure 7.6

Figure 7.5: A summary of the local labour force in the Maldives



Source: From the employment chapter of Census 2014 (National Bureau of Statistics 2014, p.3)

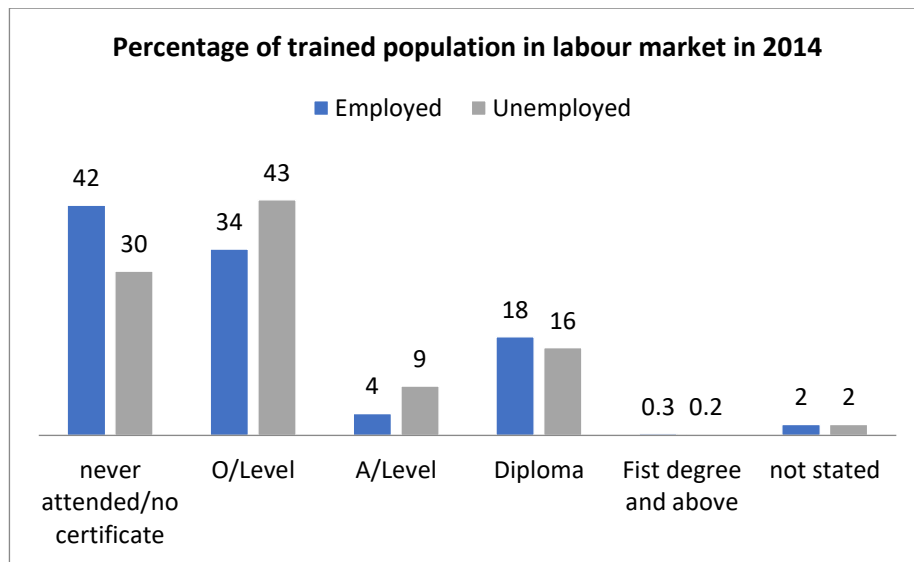
7.2.3 Access to work

The Maldives faces the challenge of producing human capital with the skills and competencies needed for a small multi-island nation to operate in the modern global economy. The skills shortage list of the Maldives developed by the former Department of

Higher Education (2018) contained 311 different areas that had an insufficient number of skilled locals. However, it should be noted that this statistic is based on the information provided by the government institutes and does not take into account the need of the private sector. The statistics of 2017 show that the employed population of the Maldives is 100,602 persons while 5,825 are unemployed and seeking employment. Due to skill mismatching, the Maldives faces a severe shortage of qualified personnel for technical, middle and senior management jobs. As a result, more than 100,000 expatriate workers are employed in the Maldives (National Bureau of Statistics, 2019). The main expatriate employment is found in the field of Tourism, Banking, Finance, Construction, Trade and Shipping. This unmatched employment statistics suggest that employers in the country require 'soft skills' across sectors (Tourism, Banking, Insurance, Financial Services, Management, Trade and Marketing) which young people lack in the Maldives (Sri Lanka Maldives Country Unit of World Bank, 2014).

Hence, it is apparent that education is a direct factor that impacts the employability of locals in the Maldives. According to Gunatilaka (2013), Maldivian locals lost 11,000 jobs at the higher end of the skills spectrum to foreigners in 2010 due to unmatched or mismatched skills, limited relevant experience and other institutional constraints. He argued that Maldivians were not able to increase their share of employment in higher skilled jobs, due to weaknesses in the education system that do not provide Higher Education opportunities and vocational skills for a larger population. He explained that only 17% of those who complete grade 10 proceeded to grade 11 and 12 in 2010. The education attainment and skill level within the labour market (shown in Figure 7.6) also shows that there is a limited number of highly trained people in the local labour force. The Maldives has a very high literacy level, but the majority (42%) of the Maldivian resident employed workforce never attended a formal school, or, even if they had attended formal schooling, they have not achieved any certificate. Furthermore, according to Census 2014, less than a percent of Maldivian employed population have a qualification of the first degree and above. However, this is a number that can be challenged based on the number of students graduating from various institutions each year. Figure 7.7 shows the educational attainment of the locals in both employed and unemployed population. A limited trained workforce is a major hurdle to improve the local involvement in higher level jobs in the labour market and it is crucial to increase the educational attainment and technical skills of the Maldivian labour force to increase the productivity of the Maldives.

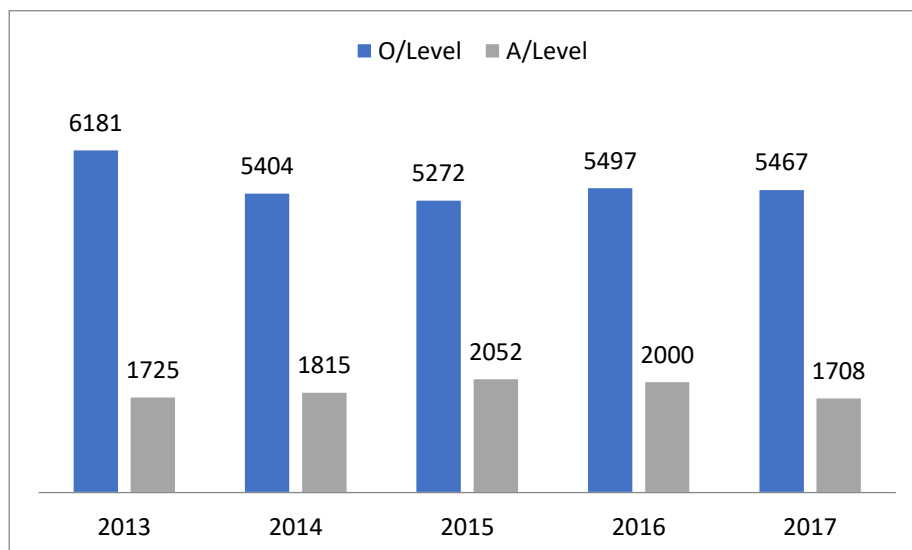
Figure 7.6: Percentage of trained population in the Labour market of Maldives



Source: From Census records published by the National Bureau of Statistics (2014)

The situation is more or less the same even in the year 2017. According to the statistics provided by the Ministry of Education, a total of 5467 students took part in GCE O/Level exam in 2017, but only 1708 students completed year 12 and took part in the A/Level exam. Refer to Figure 7.8 for further reference.

Figure 7.7: Number of students who sat GCSE O/Level and A/Level exam, 2013-2017

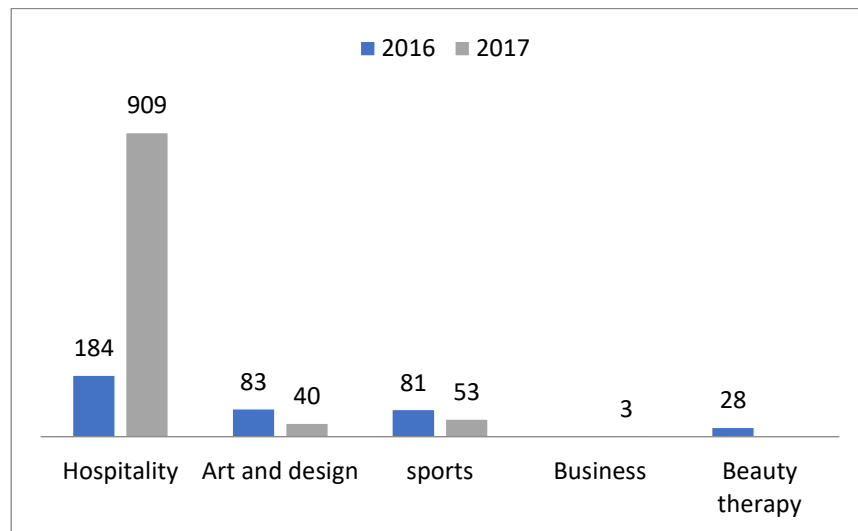


Source: Statistics provided by the Ministry of Education, 2018

However, the reference to the above two pathways might be a little misleading as Maldives has alternative education pathways such as BTEC. The graduates under BTEC programme are expected to be trained with skills and competencies required for the

labour market. As discussed above, a large number was enrolled and graduated from the BTEC program in the past two years as shown in Figure 7.9 and 7.10. It is evident that more students have taken part in the field of Hospitality studies. Therefore, the number of locals employed in the hospitality field is expected to be higher now. With the increase in diversity of programmes, it is also important to regulate and enforce quality standards in all the programmes across the country.

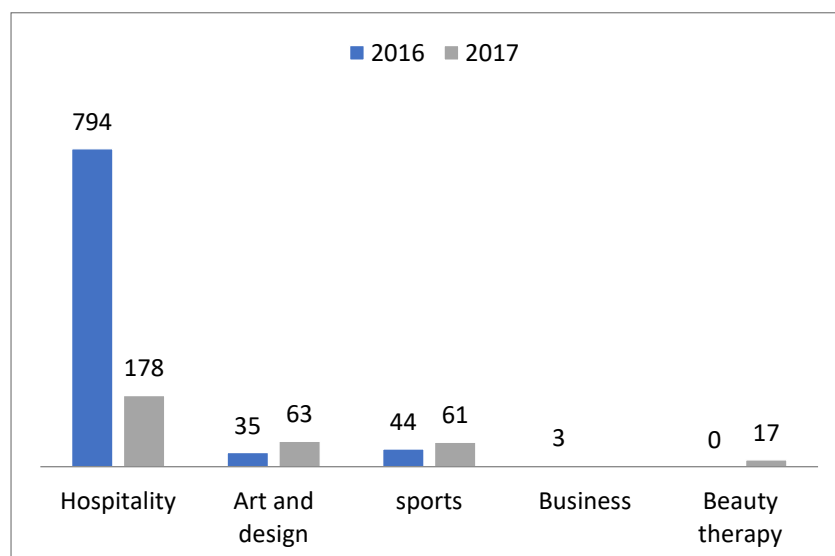
Figure 7.8: Student enrolment in BTEC programs by area in 2016 and 2017



Source: Statistics provided by the TVET Authority, 2018

Note: There was no enrolment for Business in 2016 and for Beauty therapy in 2017.

Figure 7.9: Number of students who graduated from BTEC the program



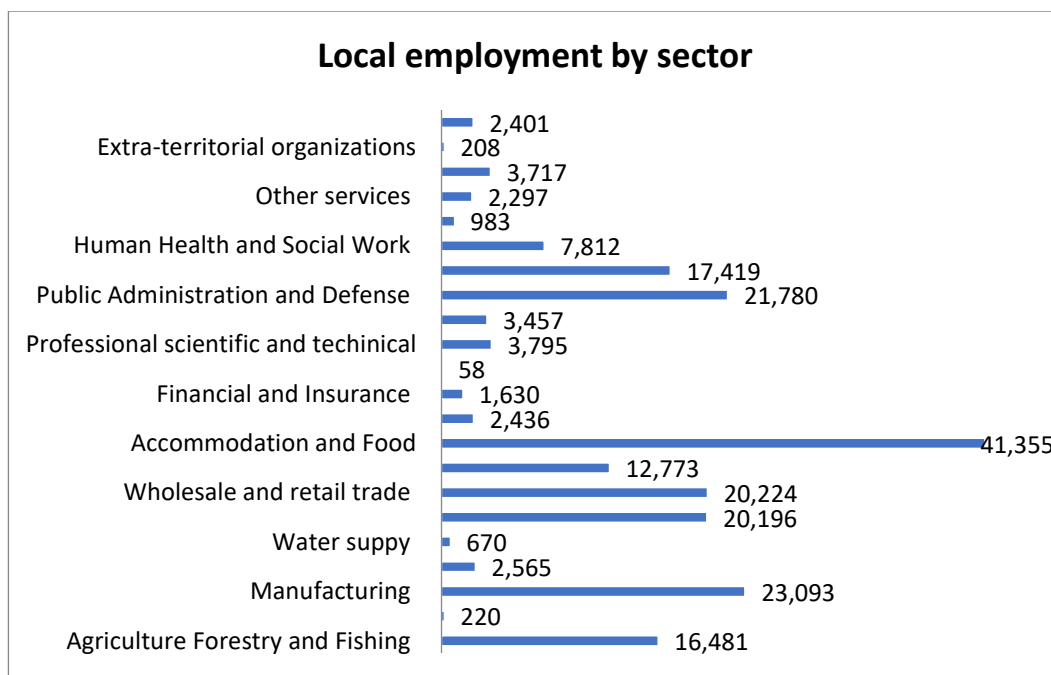
Source: Statistics provided by the TVET Authority, 2018

Note: No student graduated from Business in 2017 and from Beauty therapy in 2016

7.2.4 The balance training -employment (supply and demand)

The demand and supply of local workforce have changed dramatically in the past decade. Results of the 2006 Census shows that the Manufacturing industry provided employment opportunities to most Maldivians. However, Tourism being the most rapidly expanding industry, the results of Census 2014 shows that Tourism has the highest provision of employment opportunities for the locals in recent years. More than a fifth (27, 837) locals are engaged in the Tourism industry. However, only 14% of those are working in the resorts. The second largest sector in terms of employment is the Manufacturing industry with 23,093 persons engaged in-total and the third is Public Administration and Defence (21,780 employees). Refer to Figure 7.11 for more information.

Figure 7.10: Resident employed population by sector



Source: From the employment chapter of Census 2014 (National Bureau of Statistics 2014, p.15)

The census records show that 59,813 foreigners were employed at the time of census collection in 2014. It is most likely that this number has increased in the past three years. Expatriates are mostly employed in the Tourism sector followed by the Construction industry. The census data shows that 35% of the foreign workforce is employed in the Tourism industry and 24% is employed in the Construction industry. This means the training institutions are unable to meet the demand for workforce training and development of the Tourism industry and the Construction industry in the Maldives.

There is no proper mechanism that explores the demand for the job market in the Maldives. A programme called 'Vinavi' was launched recently with the aim of tracking

students' whereabouts and collect data on education and employment status and to guide and support students until they reach the age of 18 years. However, no teachers or mentors were trained under this programme, and therefore, it has not been carried out in a systematic and sustainable manner.

7.3 The social impact of education

Much of the empirical evidence on the social impact of education comes from high-income countries (Heckman, Humphries & Veramend, 2017; Ma, Matea & Welch, 2016). There is a large amount of literature that focuses on the relationship between educational attainment and various social impacts of education. For example, refer to Heckman, Humphries & Veramend, (2017) and Kayani, Akbar, Faisal, Kayani, & Ghuman, (2017). Key social outcomes variables explored in this chapter in relation to the Maldives include:

- I. Health outcome
- II. Gender equality and empowerment
- III. Marriage and Fertility
- IV. Substance abuse
- V. Involvement in gangs and other criminal activities

7.3.1 The health outcome variable

Education has a causal relationship with the health indicators of a community. Some even argue that education is the most important determinant of health (Galama & van Kippersluis, 2013) According to the World Development Report (World Bank, 2018), more educated people have more control over their lives and what they want to do in their lives, increasing the 'Agency' effect which leads to reduced risky behaviour and increased life satisfaction (World Bank, 2018). Hence, a longer healthier life is more probable for more educated populations. This growing evidence is confirmed by many studies. For example, a study conducted by Van Kippersluis, O'Donnell, and van Doorslaer (2009), showed that education significantly lowers mortality in old age in the Netherlands. Their study showed that for men surviving to 81, an additional year of schooling reduces the probability of dying before reaching 89 by almost three percentage points. Similar results were reported for the population of the United States as well. According to the World Bank (2018), mortality rates are significantly lower for adults with more education in the United States.

The Maldives has a population of 344,023 as of 2014 (National Bureau of Statistics, 2017). The average life expectancy at birth is 73.04 for males and 74.67 for females (National

Bureau of Statistics, 2017). This means there is a long way to go in order to reach the highest possible life expectancy rate such as in the high-income countries. Education is undoubtedly a determinant of good health. It has both direct and indirect impacts on health. Even though education is one of the significant determinants of health, there is only a limited number of studies that evaluated the impact of education on health in the Maldives.

One of the recent studies that looked at education and health is a Knowledge, Attitude and Practice (KAP) survey conducted among 2,845 Maldivian women. The main purpose of that study was to explore cancer-related Knowledge, Attitude and Practices among the Maldivian women. Education was one of the strongest indicators of the KAP in that study. The study showed that women with higher levels of education had better knowledge of cancer and they were able to identify at least one symptom of cancer correctly (Health Protection Agency, 2013). Table 7.8 shows the proportion of women with their education level and correct knowledge of cancer from that study (Health Protection Agency, 2013). The table shows that more than half (52.9%) of those who identified one symptom correctly had a Diploma qualification or above.

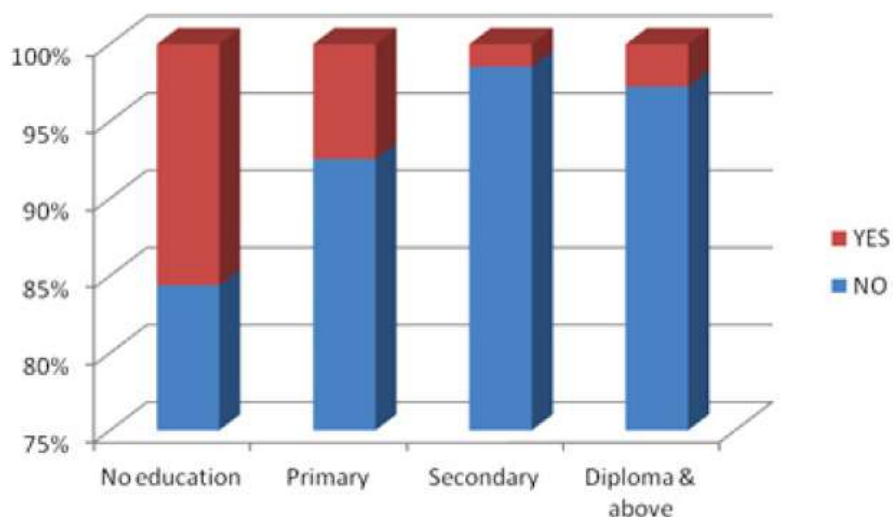
Table 7.8: Education level and correct knowledge of cancer among Maldivian women

Level of education	% of respondents who identified one symptom correctly
No formal schooling	30.5
Primary education	28.9
Secondary education	34.6
Diploma and above	52.9

Source: Table 7.7 is Adapted from KAP survey conducted to explore the knowledge, attitude and practices related to cervical cancer among Maldivian women by the Health Protection Agency of the Ministry of Health, Maldives in 2013.

The same KAP survey looked into the smoking behaviour of the participants and compared it with their education levels. Figure 7.12 shows the results of the study. The study revealed that smoking was most common among the lowest/no education group. Only about 5% of the population in the highest education group and less than 5% of the population in the second highest group smoked while more than 15% smoked in the no education group. Hence, it shows that education is a determinant of positive health among Maldivian women.

Figure 7.11: Smoking percentage among women



Source: Figure 7.12 is copied from KAP survey conducted to explore the knowledge, attitude and practices related to cervical cancer among Maldivian women by the Health Protection Agency of Ministry of Health, Maldives in 2013.

7.3.2 Gender equality and empowerment variable

The female labour force participation is promoted by education and it contributes to women empowerment. According to the World Bank (2012, p. 7), “The role of education in promoting the female labour force participation is an extremely important element of gender empowerment and economic modernization”. The statistics in the same report show that there is a strong positive relationship between the labour force participation of women with Secondary Education or Higher Education (refer to Table 7.8). The standard errors were corrected for heteroscedasticity and all scores were statistically significant at 99 percent for all values in the table.

Table 7.9: Education and Economic Well-Being (Wealth Index Factor) 2009, Generalized Least Squares Estimates for women in the Maldives

	Coefficient	T-Ratio
Constant	-83,320	-32.07
Primary	16,019	8.368
Secondary	40,223	17.89
Higher	64,960	16.48

Source: Adapted from report No. 54- South Asia Human Development Sector, 2012, p. 8

7.3.3 Marriage and Fertility variable

There is evidence showing that girls' education is the best means of reducing child marriage. According to Raj, McDougal, Silverman and Rush (2014), the majority of girl child marriages occurs in South Asia. A cross-sectional time series analysis show the association between levels of education and female age of marriage over the past 20 years in Bangladesh, India, Nepal and Pakistan. The results showed that Secondary Education was a protective strategy against child marriage for the region, though it was less effective for the prevention of marriage among older relative to younger adolescents (Raj, McDougal, Silverman & Rusch, 2014). Another study conducted in Senegal also showed that education was one of the strongest factors that helped the women to delay their marriage (Marchetta & Sahn, 2016).

Decreased fertility level is also an important social outcome of Higher Education. There are studies that show that education has a positive impact on fertility level. For example, a retrospective cohort study that examined the decrease in fertility level in Brazil back in 1930 showed that increase in schooling for women appeared to be the main predictor of decline in fertility level (Lam, Sedlacek, & Duryea, 2016). Another study that looked into the reproductive behaviour and outcomes in Indonesia showed that education reduces the number of births and increased contraceptives use (Samarakoon & Parinduri, 2015). Similar results were shown from the studies conducted by Dinçer, Kaushal & Grossman (2014) in Turkey and Shapiro & Tenikue, (2017) in Sub-Saharan Africa.

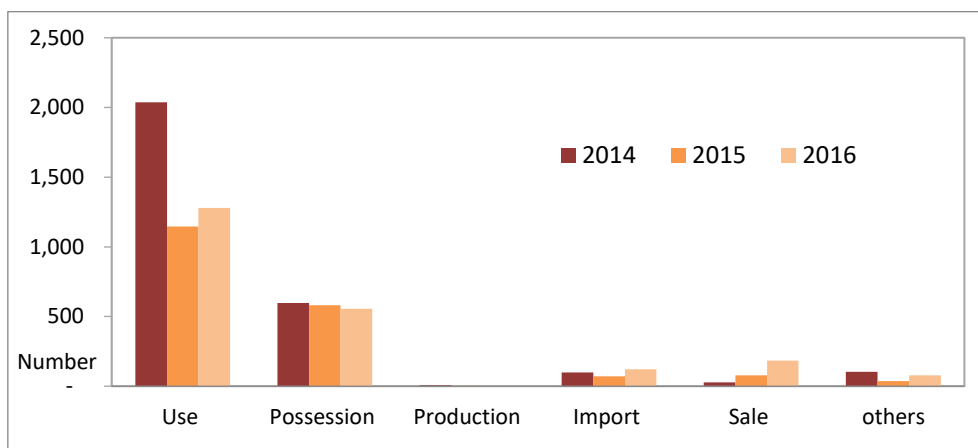
According to the analysis done by the United Nations Population Fund (UNFPA) based on 2014 census records, the population of the Maldives has nearly completed its demographic transition of shifting from high to low crude birth rates and crude death rates and it is gradually reaching a new equilibrium between births and deaths (May 2016). With those gradual changes, the total fertility rate of the Maldives has declined from 6.4 children per woman in 1990 to 2.5 in 2014 (May 2016). Also, the childbearing age has increased in the past years and pregnancies among the teenagers are not common (Ministry of Health and Family & ICF Macro, 2010). The Maldives has a high literacy rate and an excellent primary and lower secondary school enrolment rate. Similar to the above studies, the high literacy rate and the school enrolment rate might have contributed to a low fertility rate and higher marriage and childbearing age in the Maldives. However, these assumptions should be taken with caution as there is no primary study that explored education and its impact on fertility or age of marriage in the Maldives. The Maldives, with a world record of having the highest number of divorces, family dissolution, second and high-order partnerships and joint off-springs are social

factors that need to be taken into consideration when discussing marriage and fertility variable.

7.3.4 Substance abuse

Drug use and smoking are two major health issues faced by the Maldives. A study conducted by the United Nations Office on Drugs and Crime (UNODC) in 2013 estimated the number of drug users in the household of Maldives to be 4,342 in 2013 (UNODC, 2013). Out of the total, 3,154 were from outer islands. The Statistical Yearbook of the Maldives reported that a total of 2000 drug use related cases were logged at the Maldives Police Services in 2017 (National Bureau of Statistics, 2017). Refer to Figure 7.13 for more details. It is quite a large number in comparison to the small population of Maldives. According to Mortimore and Gerry Stimson (2010), the age of first drug user is typically young in the Maldives. According to Gordon Mortimore and Gerry Stimson (2010), many drug users start the addiction behaviour during their school age in the Maldives and out of those persons detained in late 2000, the majority were between the ages 16-24 years, who are also the expected population to be enrolled in Higher Education.

Figure 7.12: Number of logged drug cases, 2014 - 2016



Source: *The Statistical Yearbook of Maldives, 2017*

According to the data in Figure 7.12, it is fair to say that the young and the youth population is more affected by drug use in the country. With no effective precautionary measures implemented, it has become a major social and economic loss to the country. Therefore, it is important to explore the relationship between education and how it helps to mitigate the issue, as many of the drug users are school-aged children and many start using drugs during their school days.

There is only a limited number of illicit drug use related studies in the Maldives. Therefore, it is difficult to draw any conclusion about the correlation or causation effect between the level of education and illicit drug use in the Maldives. However, there are many studies that are conducted in other countries that show that higher education has the opposite effect on illicit drug use. For example, a national study conducted among the Secondary school students in the US in 2009 showed that college students show lower rates of use than their age-mates not in college for almost all categories of illicit drugs. Therefore, it is possible that education might have an opposite effect on start and use of illicit drugs in the Maldives too.

7.3.5 Involvement in gangs and other criminal activities

In the context of the Maldives, gangs are defined as “‘groupings’ of young people that may potentially be engaged in violence, but are not necessarily violent in nature.” (World Bank, 2014). According to the Maldives Institute for Psychological Services, Training and Research (MIPSTAR) (2012), there are about 20 to 30 different gangs operating in the city of Male’. The sizes of those gangs range from 50 to 400 members (MIPSTAR, 2012). The findings reported by MIPSTAR (2012) showed that 63% of the study participants were unemployed and 52% had never been employed. Thus, unemployment was a major factor that was common among gang members. Education is one of the major predictors of skilled employment as was explained earlier. Therefore, we can assume that education could have an indirect opposite effect on gang involvement.

Disruptive behaviour within gangs and among the imprisoned offenders is also an important area to look at when we assess the educational impact on the social wellbeing of communities. A study conducted to assess and propose possible rehabilitation and the reintegration options for offenders in the Maldives by Aishath (2011) showed that the offenders had extremely low levels of education. The study findings showed that 43 (8.1%) were illiterate, 215 (40.7%) were below the grade 7 standard, 380 (72%) had educational standard below O/Level and 165 (31.2%) were between grade 8 and grade 10 (Aishath, 2011). The same study identified that a low level of education was a common factor among the offenders who were imprisoned at that time in the Maldives. The types of repeated offences committed by the offenders included drug-related offences (52.7%), sexual offences (10.2%) and criminal offence against a person (13.6%) (Aishath, 2011). In addition, 78.6% of the offenders in that assessment stated that they have spent their lifetime using and abusing drugs, and it was the most common first offence for most of the prisoners (Aishath, 2011).

A study conducted in the Maldives in 2012 by Asia Pacific Foundation on gangs in the Maldives found that the mean age of those who are involved in gangs are 25 years and the majority of them were single with educational status between grade 8 and GCE O'level. Furthermore, the study also highlighted that the majority of those who are in gang-related activities were unemployed with the common reason being the existence of police records and unavailability of jobs that are commensurate with their desired salary.

The above study also looked into types of possible rehabilitation programs for the prison population. The suggestions from the prisoners included many different types of educational programs such as religious education (86.4%), learning a Vocational Skill (72.9%), learn how to read the Holy Quran (68.4%), learn how to pray (30.6 %), study for O/Levels (51.7%) and study for A/Levels (50.2%) (Aishath, 2011). Therefore, it can be said that education is a mitigating factor for offensive behaviour in the offenders' view.

Education level and schooling are contributing factors to juvenile offences as well. Recent statistics show that there is a large number of school drop-outs among juvenile offenders. The 2016 reports of Juvenile Justice Sector reported that 53% of the juvenile offences are committed by school drop-outs in 2015. Only 3% of the juvenile offenders had completed O/Level education when the cases were reported in 2015 (Juvenile Justice Unit, 2015).

Even though the Maldives does not have statistical data to conclude that education is a predictor of social behaviour, we can learn from other countries that have conducted studies to evaluate the impact of education on social behaviour. According to a study conducted by Machin, Marie and Ica Vujic' (2011), higher education levels may lower crime. Improving education can yield significant social benefits and can be a key policy tool in the drive to reduce crime. Education is an important mitigation factor of crime and it should be given high priority.

7.4 Key findings

1. Education plays a major role in the socio-economic wellbeing of the Maldives. The Maldives has a very high literacy rate and a fair Pre-Primary and Lower Secondary school enrolment rate. However, this education participation rate weakens as it moves to Higher Secondary Education and to Higher Education. There is a sharp decrease in the number of students who move from the Secondary to the Higher Secondary level, which in turn adversely affect the number of students going into

- Higher Education. No studies have been conducted to date to study trends and patterns in retention and completion of studies at various levels.
2. TVET and Maldives Polytechnic are experiencing conflicting roles. TVET has been transformed to TVETA in 2018 as a regulatory authority, while Maldives Polytechnic is to deliver courses under the authority of TVETA. However, due to various pressures, TVETA has also been conducting courses. The graduation rate under TVET has been around 5000 students in 2016. Completion rate under the Maldives Polytechnic was 24 students in 2013, 101 in 2014 and 159 in 2015. The increase in TVET and Polytechnic programmes can be attributed to the relatively recent expansion and growth in the number of students enrolled in the technical and vocational streams in the formal school system.
 3. Education has a direct impact on the labour market of Maldives. Maldivian locals are unable to perform at the higher end of the skills due to unmatched or mismatched skills, limited relevant experience and other institutional constraints. Maldivians are unable to increase the share of employment in highly skilled jobs due to weaknesses such as low enrolment, retention and completion rate in Higher Education.
 4. In recent years, enrolment in Higher Education has increased due to the introduction of alternative pathways to Higher Education, initiating of alternative forms of delivery and increase in private sector participation in Higher Education. However, while there is an increase in enrolment, completion rates are low. More importantly, the expansion of enrolment also saw the serious need for placing quality assurance at the forefront of the sector.
 5. More than a fifth (27,837) of locals are engaged in the Tourism industry. However, only 14% of those work in the resorts. Total workers in the industry are 41,355. So, 13,518 (32.7%) are expatriate workers. This means training institutions are unable to meet the demand for workforce training and development by the Tourism industry. There is a need for a proper mechanism that explores the demand for the job market in the Maldives.
 6. Indirect sources show that education impacts health, fertility, illicit drug use and getting involved in gangs and criminal activities in the Maldives.

7.5 Recommendations

1. Tracer studies are necessary for the Maldives to explore school leavers' activities and involvement in Higher Education. Career counselling at all levels of the education sector is also important.

2. The most recent labour force statistics were available from the 2014 census. It is possible that dramatic changes have occurred in the demand and supply of labour market in the Maldives. Hence, further timely research is needed to explore the labour market needs including skill mismatch and unmet needs.
3. A poorly trained or untrained workforce is a major hurdle to improve local involvement in higher level jobs in the labour market. Hence, it is crucial to increase educational attainment and technical skills of the Maldivian labour force to increase the productivity of the country.
4. At present, only indirect sources are available to make any judgment on the socioeconomic impact of education in the Maldives. Sound research needs to be conducted in the Maldivian context to explore the impact of education on social outcomes in the Maldives. More importantly, any policy level changes in this area should be based on sound evidence.

Chapter 8: Organisational Aspects and Evidence-based Data for Decision Making

8.1 Organisational aspects

The Ministry of Education is headed by the Minister appointed by the President for a five-year term of office. The Minister is supported by political appointees who see to the everyday administration of the office activities and the successful implementation of the strategic educational plans developed in alignment with the policies, goals and objectives specified in the manifesto of the government (Figure 8.1). In this respect, various departments, institutions, offices, divisions and sections are headed by different levels of political heads namely; state ministers, deputy ministers, senior political executives, chief executive officers, executive coordinators and coordinators. In addition to the political heads, there is a Permanent Secretary (PS) who attends to the affairs of staffing and ensures if all units are running in accordance with the rules and regulations of the Maldivian Civil Service. Hence, in addition to the political appointees, each of the units has a civil service head of various ranks of directors who manage and administer the office units of the MoE taking orders and instructions from the political appointees who follow the directions given by the Minister herself. See the organigram above that represents the current organizational structure of the MoE.

Figure 8.1: Organigram of the whole Ministry of Education

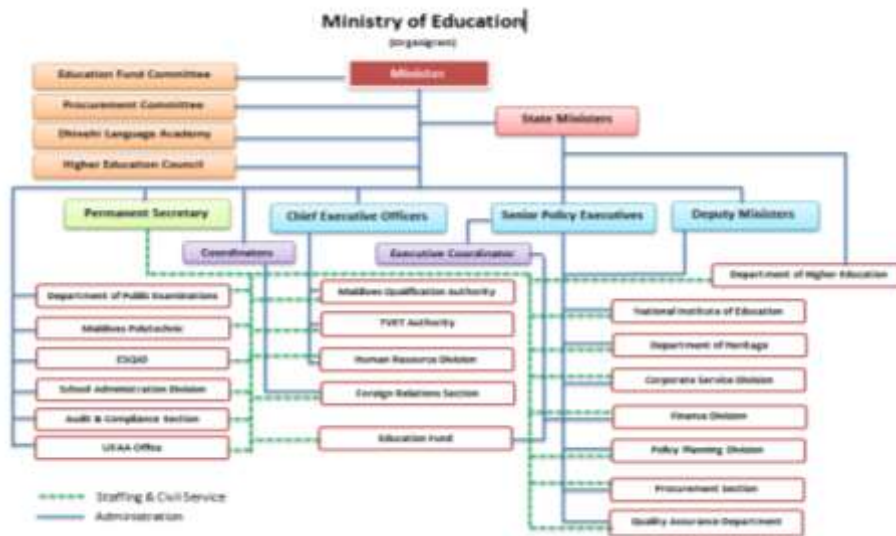
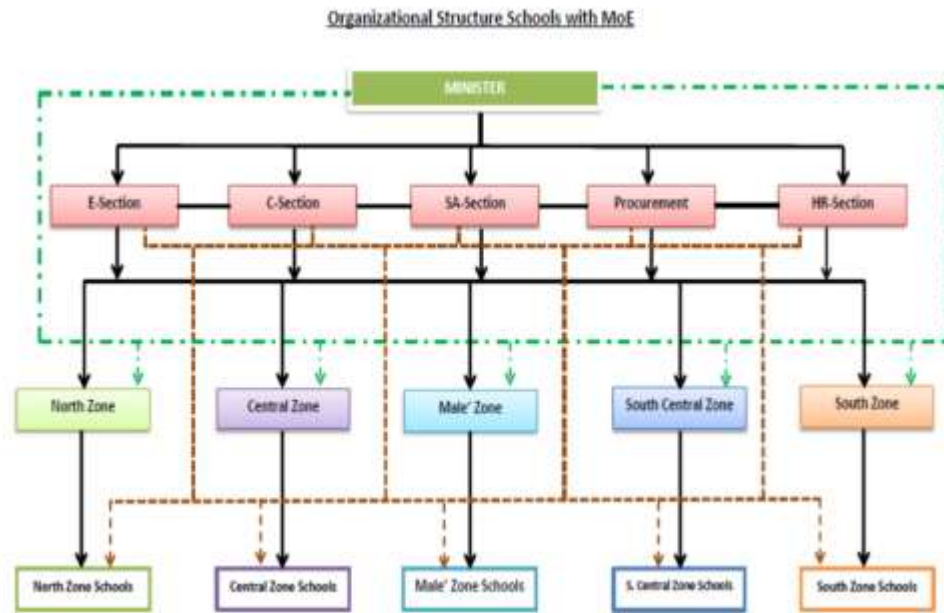


Figure 8.2 shows the organizational structure of the Ministry of Education, its sections and how each section contributes to the different zones of the Maldives to provide technical and financial support to enhance education.

In order to make significant decisions on strategic matters concerning educational services of the country, and also to enhance smooth running of all units of MoE, the Minister calls for senior management meetings fortnightly to hold discussions that closely follow procedures of democracy. These senior management meetings are chaired by the Minister herself.

Figure 8.2: Organizational Structure of the Ministry of Education



Source: Ministry of Education, 2018

8.2 School administration

There are 212 schools across the country, which are administered under the supervision of the School Administration (SA) Division of the MoE. In order for the smooth running and effective administrative purposes, all schools in the capital city, Male' as well as those in various atolls, are administratively divided into several zones that are placed under a Zone Coordinator working in the SA Division of the MoE who follows the instructions given by either the Minister or a political head appointed by the Minister who takes the directives from the Minister. Figure 8.3 shows the distribution of schools in various zones.

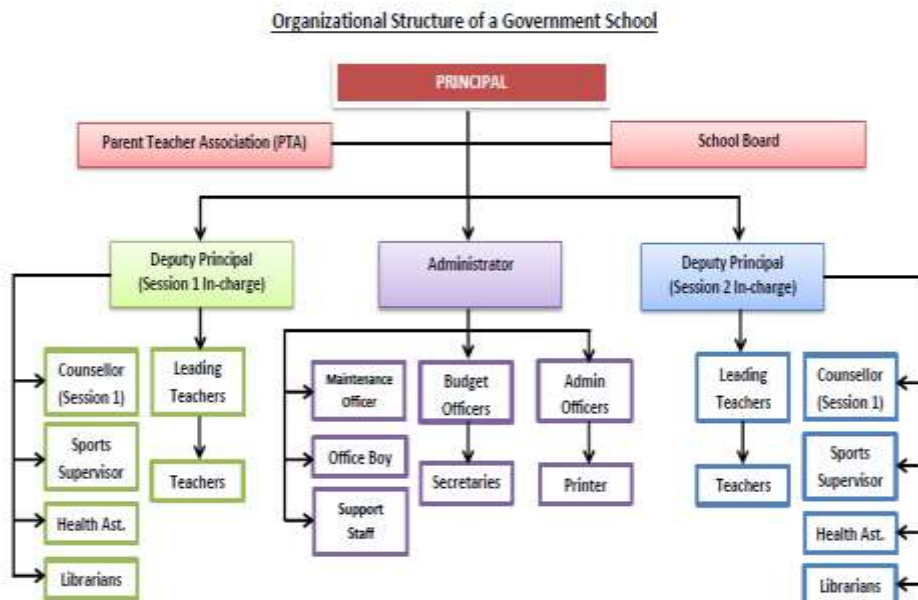
Figure 8.3: Schools under various zones



There is also a focal point in every atoll, who coordinates with the zone coordinators in managing everyday affairs of the schools in their respective atolls. Each of the schools is appointed a principal or a professional staff of similar rank who manages and administers the school in accordance with the rules and regulations of the MoE. In addition to the Zones, there is an Activity Unit and an Academic Unit at SA division of the MoE.

A separate organizational structure is used in schools to assist the coordination and provision of quality education (Figure 8.4).

Figure 8.4: Organizational Structure of a Government School



Source: Ministry of Education, 2018

Currently, the structure of the Maldivian Education system consists of Foundation level (LKG and UKG), Key Stage 1 (grade 1, 2 and 3), Key Stage 2 (grade 4, 5 and 6), Key Stage 3

(grade 7 and 8), Key Stage 4 (grade 9 and 10) and Key Stage 5 (grade 11 and 12). These structures in-line with several education policies were ratified to ensure the best provision of education. In this sense, Pre-School Education has been made compulsory and is available free of charge in all atolls which resulted in the net enrolment in this stage to increase from 51.2% in 2001 to nearly 100% in 2017.

8.3 Key Findings regarding organisation aspects

1. Ministry of Education appears to have reverted back to a more centralised system of administration once again creating the school administration zones that were abolished during the 2009-2012 period.
2. A number of departments of the MoE have been transferred to a newly created Ministry in November 2018.

8.4 Recommendations regarding organisation aspects

1. With the change of government and the transfer of departments, it is important for the MoE to re-draw the structure of the overall organisation of the Ministry to reflect the changes.
2. With the separation of mandates of higher education, TVET, culture and heritage and language academy to other newly formed Ministries, the MoE needs revising its organisational structure soon. Based on the ongoing policy reviews and discussions on decentralisation, a new functional organisation structure should be developed soon for school administration.

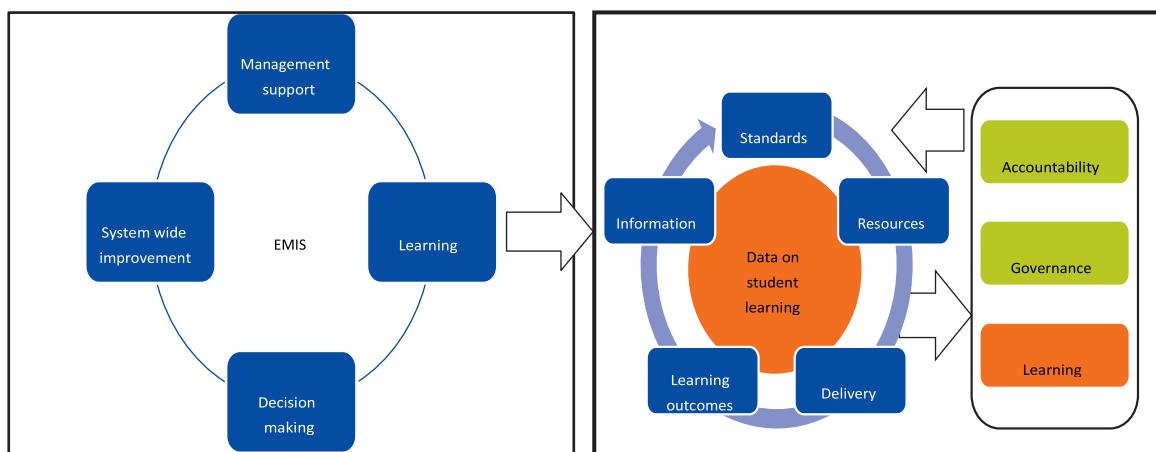
8.5 Importance of MEMIS

Information and communications technology have been bringing new transformations and innovations to education at different levels, one of the most vital level is playing a key role in the management and allocation of educational resources and providing data on students and teachers often referred to as the Education Management Information System (EMIS) (Adam, L 2011). An Educational Management Information System is a multifaceted structure, comprising an institutional arrangement for collecting, processing, and disseminating data (Abdul-Hamid 2014). For an EMIS to be successful it should be associated with appropriate policies, budget, and institutions that function together in a system to produce and routinely use valid and reliable education data (Abdul-Hamid 2017). The sustainability of operation in a data system is also dependent on the manpower and the infrastructure. This section of the chapter will discuss the

Maldives Educational Management System (MEMIS), its value, its designing and implementation routine for data collection from schools, integration of databases for decision making to improve learning outcomes, the current state of education management in the Maldives and recommendations on how to improve the MEMIS.

Data and Information play a critical role in helping an education system achieve high returns. Promoting a culture that recognizes the value of data promises economic benefits for the individual and the nation as a whole (Abdul-Hamid 2017). Evidence shows that good data management systems have a positive impact on student results and a reduction in failure percentage which in turn strengthens individuals' and societies' capacities to respond to the recession and contribute to economic growth and social wellbeing (OECD 2012). When the student data is managed well, it ensures the completion rates of students. Since more schooling is associated with higher income over a lifetime, it is well established that the distribution of personal incomes in society is strongly related to the amount of education people have had (UNESCO 2015). In addition, high-quality, accurate, and useful data ensures that learning remains at the forefront of the education system allow stakeholders to make informed decisions and overcome challenges. This makes data as part of the material of daily operations, processes, and decision making and specifically, data play an essential role in the process: (1) designing and evaluating policies and standards, (2) communicating and facilitating resource allocation, (3) enabling active real-time use in classroom instruction, and (4) strengthening school management and planning (figure 8.5) (Abdul-Hamid 2017).

Figure 8.5: EMIS and Learning-centred Approach



Source: Abdul-Hamid 2017

Data systems such as MEMIS leads cost-efficient, smart, and effective resource allocation and governance not only in the field of education but also in health and other fields as well (Abdul-Hamid 2017; Harris, Green & Elshaug, 2017). This will enable data sharing and evaluating the long-term success of students as well. Furthermore, data systems support school leadership, teaching, and learning and engage the community to achieve better education results (GPE 2017).

8.6 Situational analysis

The need for a comprehensive central database in the educational system of the Maldives came about with the difficulty in managing the old system. In the past, excel sheets were used for data collection. However, multiple data sets were tough to manage across the country, and there were major gaps in the data, and problems in data entry within the education sector. This resulted in the unavailability of a comprehensive data set, additional time spent on cleaning up data, and perhaps most concerning, not being able to track each student to ensure the Ministry of Education is able to reach and support them.

Therefore, in late 2015, the creation of a central database and correcting the existing data became one of the highest priorities and work on the database creation started with assistance from the UNICEF. In preparation for MEMIS launching, in 2016 Google Drive was introduced as a temporary solution across the board to collect the data sets that would be needed for the database (MoE, 2017). In July 2016, Ministry of Education began data entry and export at the central level for the data collected on Google Drive. Data collection through MEMIS database started from here (MoE, 2017).

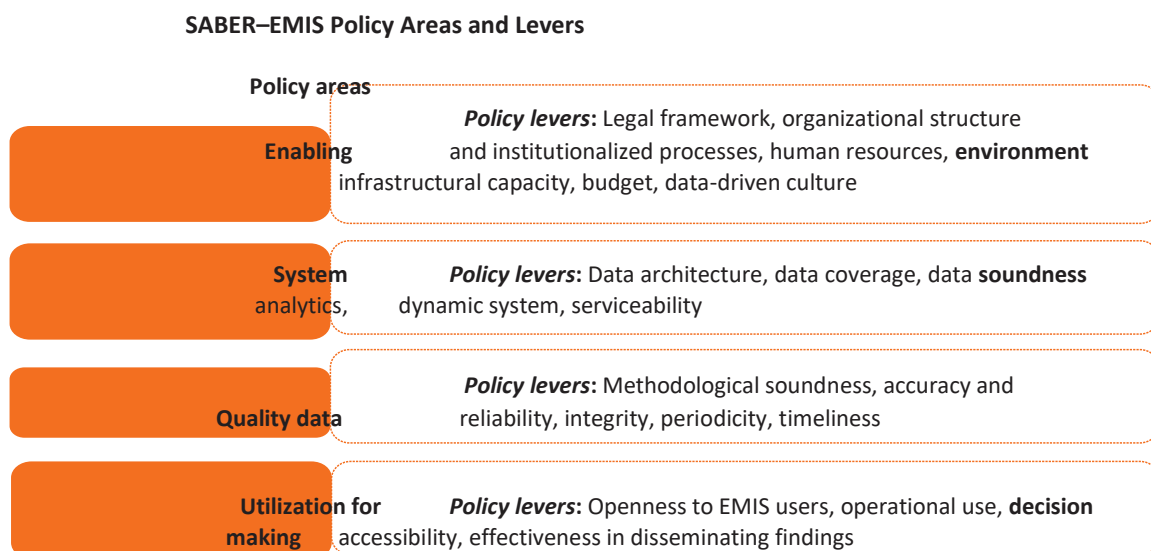
To begin familiarization to this new platform, basic training was completed for all schools in the Maldives in December 2016. Consequently, in January 2017, the schools began entering data into MEMIS and updating the data in time to be launched in July 2017 (MoE, 2017).

MEMIS was officially launched in the Maldives 16 July 2017, which was a major milestone as this database is the first of its kind for the education sector in the Maldives.

8.7 Factors for a successful EMIS

A successful MEMIS will lead to a setup of a comprehensive database which can be customized to align with the education system and its needs. According to Hamid (2017), a successful EMIS is supported by the factors identified in Figure 8.6.

Figure 8.6: SABER–EMIS Policy Areas and Levers



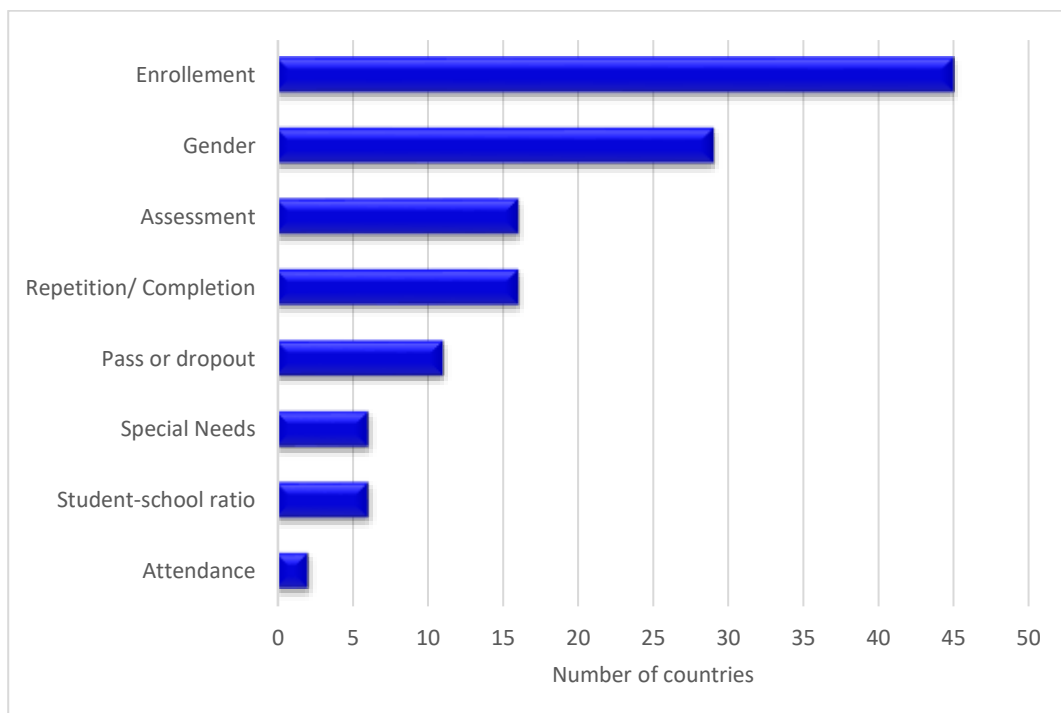
Source: Abdul-Hamid, 2014.

An enabling environment include a good legal framework, organizational structure, infrastructural capacity, personnel, and budget); system soundness (system architecture, dynamics, serviceability, and data coverage); quality data (methodology, accuracy, integrity, and periodicity); and data use (operational use, openness, accessibility, and data dissemination are part of the enabling environment to make EMIS successful (Hamid 2017). In Fiji, a small island state similar to the Maldives, one of the reasons for Fiji Education Management Information System (FEMIS) to be a success was that policies were designed that mandated timely, efficient, effective, and reliable data collection from districts and schools at specific deadlines (MoEHA 2016). Similarly, the Ministry of Education has launched the Maldives Education Management Information System (MEMIS) as part of the "no child left behind" policy (Ministry of Education 2016). This was a global initiative launched by UNESCO with the aim of providing support to countries in the area of education system planning and management through the availability of timely, accurate, and quality sub-national data for evidence-based decision-making, leading to better education outcomes (Ministry of Education 2016). To manage and monitor MEMIS,

teachers were then assigned to their respective classes and subjects. Eventually, every school-age student data (students between the ages 2 to 18) were imported to MEMIS. To maintain data integrity, the information of students was imported from DNR (MoE, 2017). On the student level, the work that followed included assigning schools, classes and subjects to each individual student. With this step, the majority of the initial manual data entry for basic database creation was completed. In addition, every teacher in government schools has a log-in to the system. Student log-ins have also been created but have not been rolled out (MoE, 2017). By the end of 2017, 22 schools in Male' started marking students' attendance via MEMIS and two schools in Male' city prepared their end of year reports for students using this system (MoE, 2017).

In most of the developing countries, there is a limited number of data published on the websites of MoE. There is not much information on student assessment data. Figure 8.7 shows the types of student data published on MoE websites in 131 countries.

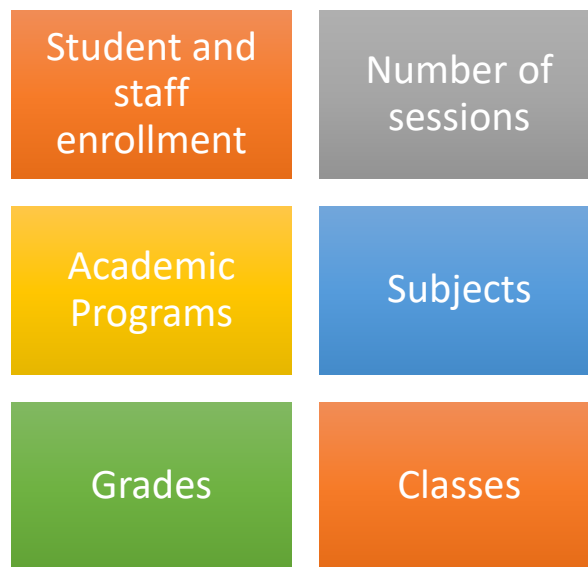
Figure 8.7: Student Data on MoE websites of 131 developing countries



Source: Read and Atinc 2017.

Every school in the Maldives has been registered on MEMIS and data was first entered for the variables indicated below in figure 8.8.

Figure 8.8: Variables first entered into MEMIS



Source: MOE, 2017

In addition to the information mentioned in Figure 7.21, schools were asked to add the teachers' qualification and professional development data. Leading teachers were given the role of ensuring that the general data about each school has been updated on MEMIS.

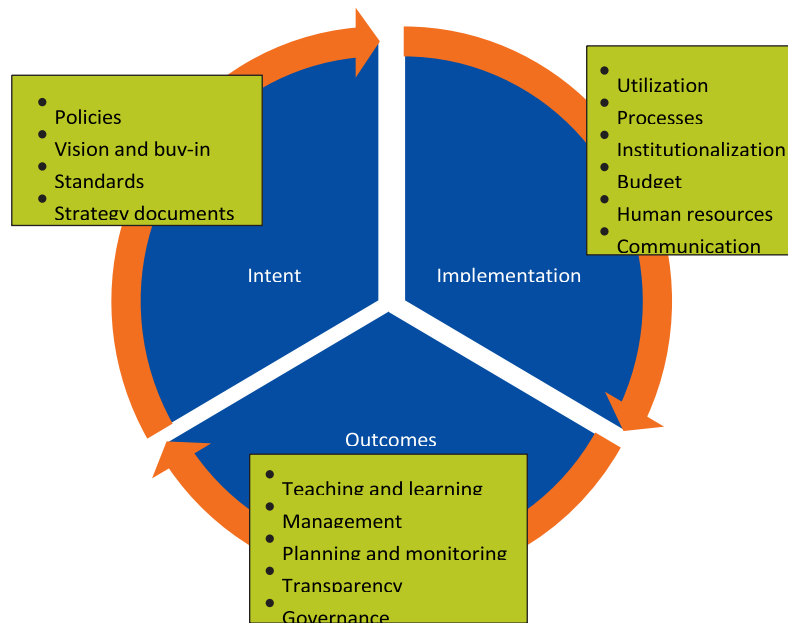
The major strength of the MEMIS is the fact that it can be customized to suit the need of the education sector. As such, the MoE tracks out of school children, access risk assessments of each student, enter WASH module and physical infrastructure information of each school. The MEMIS also has the capacity to add academic behaviour, attendance and other student-related data for daily and functional use in the education sector. The MoE also strategize to mandate the schools to enter data including performance records, examination records, behaviour and key competencies. Data on the WASH module includes water, sanitation, waste, personal hygiene and sewage. With regard to risk assessment, some figures are assigned to certain risk levels which would be generated by the system based on the frequency and intensity of the problems relating to behaviour, health or attendance. These numbers and figures will determine the risk levels of the students to which interventions are expected to be made accordingly by the concerned bodies.

The service providers of the system have 10 more additional products that can be integrated into the system such as a mobile application that can simplify ease of access. As MEMIS is based on an open source platform, it provides limitless opportunities for customizing the MEMIS for local needs through programming. Furthermore, this system

is an internationally supported platform with other countries also using it, which eases knowledge sharing across the platform.

To make it effective, EMIS shall follow a policy pathway to ensure proper outcome cycles (figure 8.9) as indicated by many studies (Hamid, 2017). A policy needs to be constructed in a way to direct how overarching aims of EMIS are articulated by decision makers and documented in policies and legislation, as well as standards and strategy documents (Abdul-Hamid, 2017). These policies also need to be communicated clearly, implemented and understood by all stakeholders including policy makers, county administrators, principals, teachers and students (Abdul-Hamid, 2017; Pont, Nusche, & Moorman, 2009). In addition, when policy options are dictated by donors, it limits choices for planning and implementation (Assela, 2003). The reason behind this is that the implementation can be observed and influenced through use of the EMIS by the stakeholders, budget allocation, distribution of human resources, professional development activities, communication and dissemination of information, and the extent of institutionalization across the system (Abdul-Hamid, 2017).

Figure 8.9: Policy pathway to ensure the proper outcome



Source: Abdul-Hamid, 2017

8.7.1 An information cycle ensures system feedback loops between the data input and output levels, adjusting to the needs of the education system.

In addition to the data policy pathway, an information cycle is crucial. The collection, maintenance, analysis, dissemination, and use of education data should occur in a cyclical manner, referred to as the information cycle (Abdul-Hamid, 2014). Having an information cycle ensures the track of inputs and helps to assess the quality of policies and institutions and informs decision makers on student learning, other outcomes and policy actions (Abdul-Hamid, 2017). The Information produced by the system can be provided back to the data provider (for example, schools) to be reviewed, acted on, and improved and this feedback about the collection and analysis process then informs and improves the next information cycle (Al Koofi, 2007).

8.7.2 The country context drives the choice between options such as decentralized and centralized data systems.

The planning of the EMIS needs to be practical, catering to the specific financial and technological capabilities, a country's size, and the need of the education system. Normally, education systems of large countries may function better when decentralized, whereas the opposite may be true for small countries (Abdul-Hamid 2017). Even though the Maldives is a very small country, due to its scattered geographic nature, a decentralized MEMIS can be more practical. Greater access and levels of participation are strong advantages of decentralized systems but can be expensive at the same time. In addition, roles and responsibilities, financing structure, data privacy, and staffing need to be clearly determined (Abdul-Hamid, 2017). In implementing MEMIS roles were assigned to leading teachers from each school, staff recruitment was specified to some extent, and data privacy issues were resolved through DNR. However, financial structures are not clarified which is an area that can be improved (MoE 2017).

8.7.3 The Systems Approach for Better Education Results (SABER)

In order to address the weakness and challenges, the SABER framework found in (Abdul-Hamid, 2014) provides a structured methodology to assess and benchmark the enabling environment, system soundness, data quality, and utilization for decision making. Such assessment should guide the planning, design, and implementation of any EMIS-related investments because it could reduce cost, eliminate redundancies, identify priorities,

highlight what to do and what not to do, and help in the sustainability of investment in data systems.

8.7.4 Designers of EMIS activities need to account for all stages of the EMIS value chain: pre-start, input, operation, output, and long-term sustainability.

In addition, designers of the EMIS activities need to account for all stages of the EMIS value chain: pre-start, input, operation, output, and long-term sustainability.

8.7.5 The assessment and benchmarking of an EMIS should be used to determine the state of the current data management system

An assessment and benchmarking of an EMIS as identified by Abdul-Hamid (2014) in figure 8.6, can be used to determine the current state of MEMIS which can guide policy changes that improve the quality of data and learning outcomes. As the managing authority, the government should continuously assess the data system and look toward examples of best practices from other countries (Abdul-Hamid 2017). There are certain issues, challenges and constraints in fully implementing MEMIS which are discussed below which would be incorporated into assessment and benchmarking framework.

8.8 Key issues, challenges and constraints in the area

8.8.1 Lack of human capacity in rolling out MEMIS

Although the MEMIS is based on an open source platform, MoE currently lacks the technical know-how to customize it. Currently, the customization is outsourced to an international party, although MoE will greatly benefit from having an in-house programmer. As MoE continues the search to employ a local professional dedicated to the MEMIS, the financial capacity of MoE and availability professional programmers in the country are scarce (MoE 2017).

Furthermore, an experienced team is needed to train all the staff within the ministry and in atolls to familiarize with the MEMIS. A team from MoE has been now trained on the MEMIS customization and its features. A focal point from each atoll has been trained on the MEMIS and on its functions.

8.8.2 Lack of familiarity with a new database system

Although web portal and a mobile application exist, the lack of familiarity with it makes some users become easily discouraged with using the technology. In these initial roll-out stages, it is crucial to have database support in the form of a strong MEMIS team to work out challenges and setbacks in the system. This will further empower them and will make each department within the education more familiar and skilled in data management (MoE 2017).

8.8.3 The existence of parallel database portals

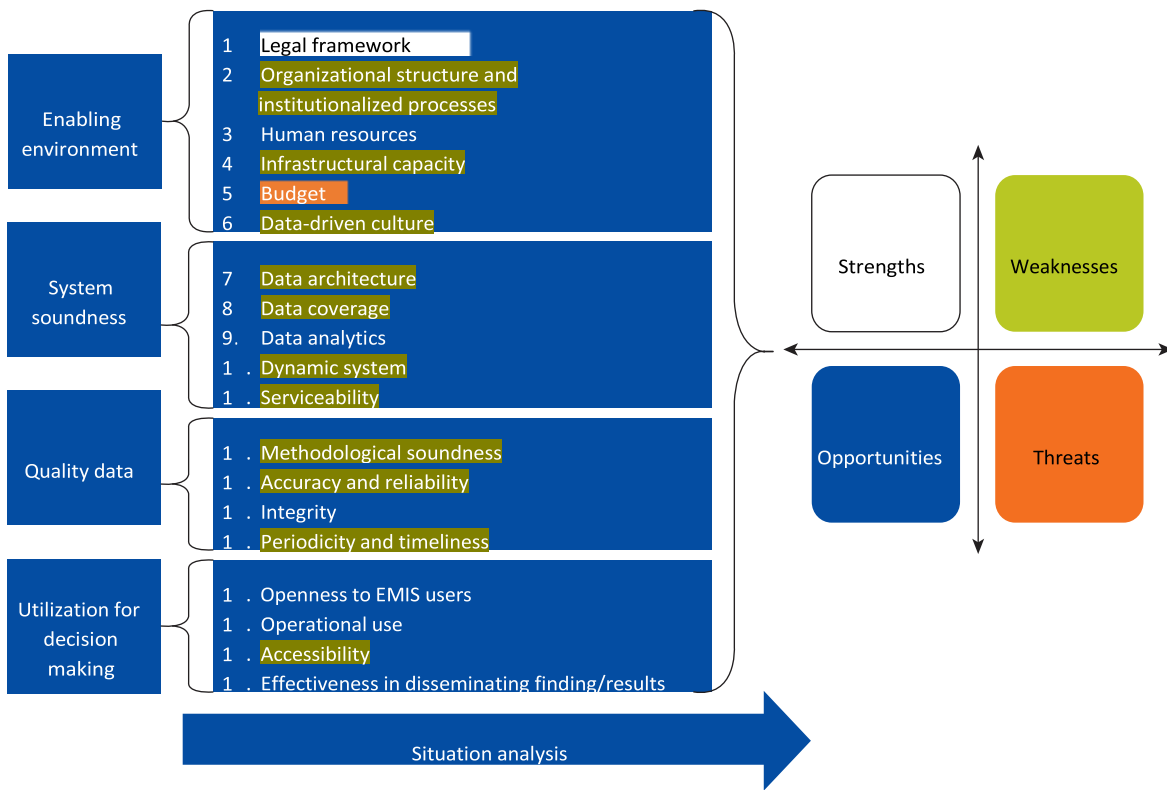
As the MEMIS is still in the process of being integrated, there are very immediate issues to be addressed including the creation of separate databases for MOE's myriad array of functions which also will feed into the MEMIS. Hence, a highly technical collaboration between the portal and its developers are needed (MoE, 2017).

8.8.4 Network and connectivity constraints

Some schools still operate under limited connectivity network capacity, which may be a source of frustration when switching into a new system.

Considering the above points, MEMIS is benchmarked against the framework for assessing and benchmarking an EMIS. As shown in figure 8.10, MEMIS still has some weak points which need improvement. One strength is that there is a legal framework supporting the implementation of MEMIS. The budget can be a threat since the government expenditure on education as a percentage of GDP is small (3.9%) compared to other sectors (Ministry of Finance and Treasury 2015). However, the percentage of the total budget spent on Education is quite high. Any weak points of MEMIS need to be sensibly addressed.

Figure 8.10: A framework for assessment and benchmarking of MEMIS

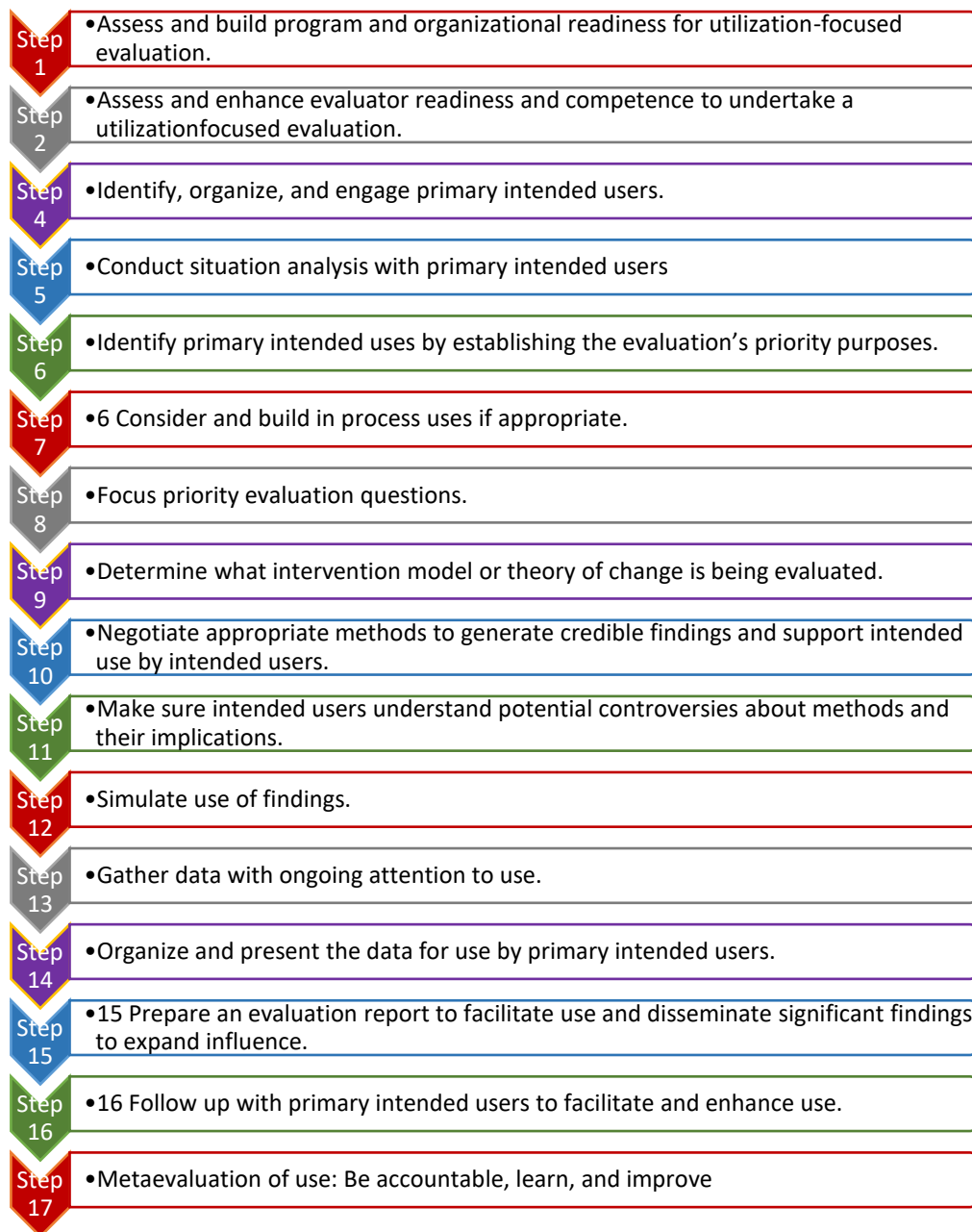


Source: Abdul-Hamid 2017

8.8.5 Other tools that can be used to assess MEMIS

The Utilization-Focused Evaluation (UFE) Checklist (figure 8.11) was developed by Patton, 2013 to assess the status of EMIS. The 17 steps explain how MEMIS can be used to assess and improve MEMIS. These steps were adapted by Al-Hamid 2017 based on experiences of the use of EMIS in different countries. These 17 steps were adapted into 5 main steps as shown in figure 8.10. As specified in figure 8.11 the steps in utilization-focused evaluation consist of identifying the users, assess commitment to utilization, identify a methodology for utilization based on data on commitment, analyze/interpret findings and then disseminate findings (Abdul-Hamid 2017).

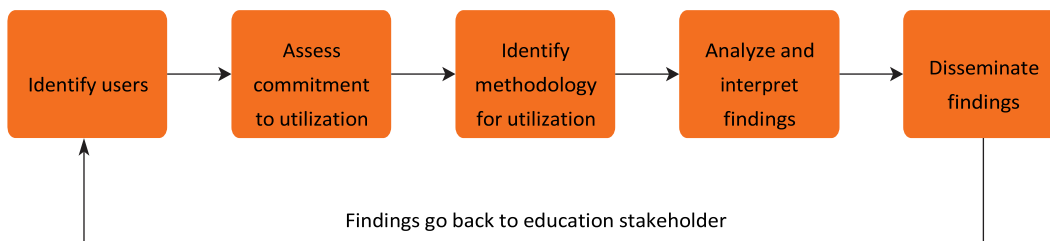
Figure 8.11: Complete Utilization-Focused Evaluation Checklist



Source: Patton 2013

Notes: Seventeen steps to evaluations that are useful—and actually used

Figure 8.12: Key Steps of UFE Adapted to Assess Utilization of an EMIS



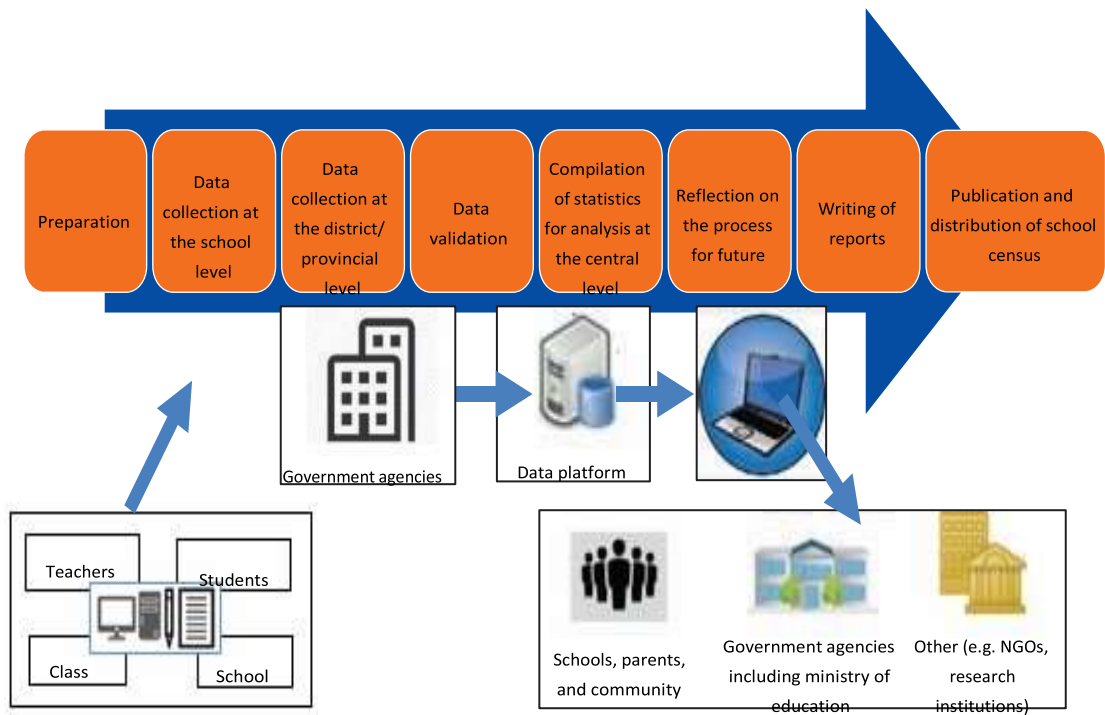
Source: Abdul-Hamid 2017 (Adapted from Patton 2013)

8.9 Designing and implementing routine data collection from schools

After assessing the current status of the MEMIS and deciding on the methodology, it is very important to design and implement routine data collection according to the following points (Abdul Hamid 2017). Figure 8.13 is a flowchart showing the steps of routine data collection.

- The school census provides a snapshot of the education system, which can be compared over time and should be integrated into the Education Management Information System (EMIS).
- It is important that the data collected align with education goals.
- Ensuring that there is legal backing for data collection and its use is crucial for a successful school census.
- Before implementing a school census, the roles and responsibilities and the legal, financial, technological, and administrative capacities need to be assessed, planned and communicated well.
- The school census process needs to be fully institutionalized with defined responsibilities and well-coordinated between the central and atoll levels under the management of a single entity.
- Digital data collection is becoming affordable and easily achieved. It is also a better way to ensure data accuracy, time-saving, and cost reduction. The capacity to use digital data and technology needs to be explored.
- Proper internal and external validations are necessary.
- Penalties should be enforced in case of noncompliance with deadlines.
- Timely completion is crucial, and data need to be analyzed and disseminated within no more than four to six months of data collection.

Figure 8.13: School Census Process

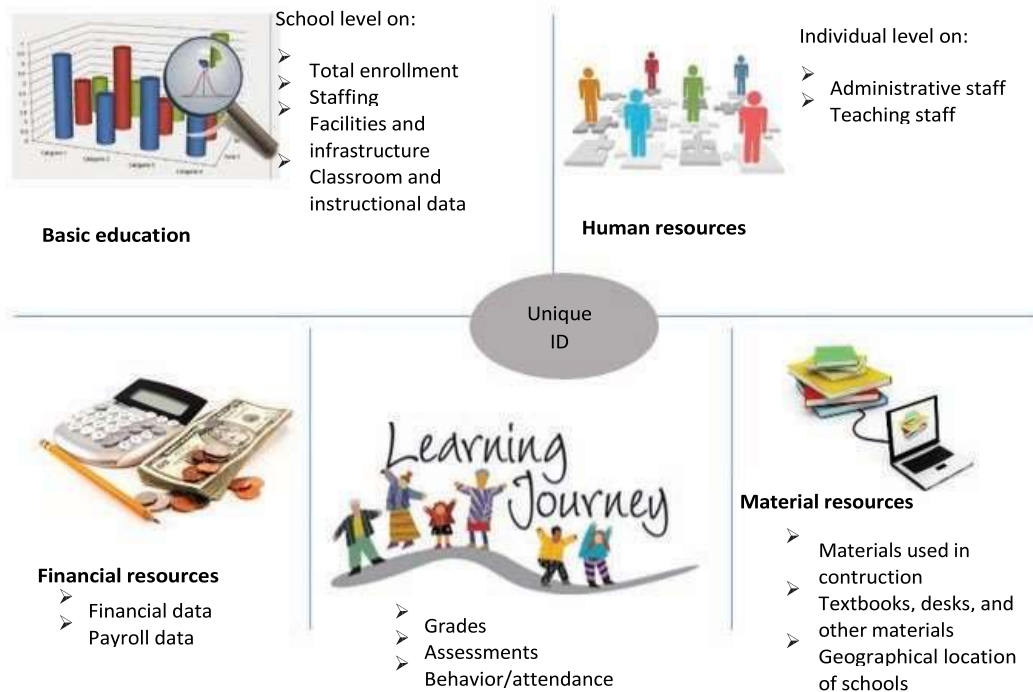


Note: NGO = nongovernmental organization.

Source: Abdul-Hamid, 2017.

8.10 Integration of databases for decision making to improve learning outcomes

Figure 8.14: Unique IDs Help Integration of Different Data Points to Monitor Quality of Education



Source: Abdul-Hamid, 2017

Based on the results and recommendations from the MEMIS reports it is vital to plan interventions accordingly and integrate it into the whole education system (figure 8.14). The following points were highlighted based on studies done in Fiji, Chile, Australia and the United States (Abdul-Hamid 2017).

- Data integration requires strategy, standards, collaboration, and systematic data flow to maximize the value of data toward tangible interventions and results in relation to student learning and improvements.
- Learning data need to be added to data on demographics, teachers, schools, and inputs to get the full story.
- Unique identification for schools, teachers, and students should be based on (existing) national identification systems and policies spanning different sectors and ministries (figure 8.14). It enables governments to track the progress of the individuals throughout their academic experience and allows for tracer studies

based on longitudinal databases. This may reap substantial integration and benefits and insights into policy making especially in relation to learning outcomes.

- Governments should choose between different methodologies/technologies (for example, paper-based, digital (e.g. Ipads), biometric) to find the best fit for their country-specific context.
- Data protection, security, and privacy provisions include a modern cybersecurity architecture, security training for employees, and appropriate data collection and storage rules to eliminate the risk of data breaches.

8.11 Other actions undertaken to address the key issues, challenges and constraints

1. Over the last four years, the Ministry of Education has attempted to track students who complete grade 10 every year to assess their engagement in further studies and employment. It has been noticed that more than 90% of students are engaged in employment or further studies or both from each year. However, while tracking students, it has been noticed that students change their contact numbers and their residential addresses often which make it very hard to locate the student and have a conversation with them. In order to minimize this, with the help of the World Bank Funding, the following actions are planned to maintain contact with the students.
2. Creating a youth hub/café at Maldives Polytechnic in Male'. This hub will be a drop-in centre for any young person who is looking for guidance in further education or employment. A café serving coffee and snacks is inbuilt in the hub to create a more youth-friendly atmosphere to work together with the young person. Anyone can drop in to have a chat with a guidance officer, prepare their application on one of the laptops at the hub, and apply for further education or for employment. In addition to this, space will provide a platform to pass out information on important issues for young people. The target group for this place is between the ages of 15-25 years of age.
3. Career website/portal. This website will be a platform for young people to connect with local employers and also a platform for employers to connect with young people. Every student who is studying in grade 10 will register in the portal with their skills and educational qualifications so that before they complete grade 10 they will become familiar with the portal. Employers can get registered as well to seek candidates with specific skills and/or from a specific location in the Maldives. Furthermore, this website will contain a resume' generator, career guidance

tutorials and allows to provide support and guidance to anyone who needs it via the chat function. The website will also have a listing of local institutions that provide further education and its courses.

4. With the success of the BTEC program for schools, the MoE by 2018 was expanding the project to youth by beginning BTEC courses at the Maldives Polytechnic. With the vast area of courses available in BTEC, courses can be chosen based on both youth and industry demand. With the transfer of the mandate for the Maldives Polytechnic from MoE to the newly created MoHE, this strategy needs to be re-considered.
5. The Maldives is the first country to generate report cards through the MEMIS.

8.12 Key findings regarding data for decision making

1. Although the MEMIS is based on an open source platform, MoE currently lacks the technical know-how to customize it. Currently, the customization is outsourced to an international party, although MoE will greatly benefit from having an in-house programmer.
2. An experienced team is needed to train all the staff within the ministry and in atolls to familiarize with the MEMIS. A team from MoE has been now trained on the MEMIS customization and its features. A focal point from each atoll has been trained on the MEMIS and on its functions.
3. Although web portal and a mobile application exist, the lack of familiarity with it makes some users become easily discouraged with using the technology. In these initial roll-out stages, it is crucial to have database support in the form of a strong MEMIS team to work out challenges and setbacks in the system.
4. As the MEMIS is still in the process of being integrated, there are very immediate issues to be addressed including the creation of separate databases for MOE's myriad array of functions which also will feed into the MEMIS. Hence, a highly technical collaboration between the portal and its developers are needed.
5. Some schools still operate under limited connectivity network capacity, which may be a source of frustration when switching into a new system.

8.13 Recommendations regarding data for decision making

1. Establish a strong network that will function as the steering committee in implementing MEMIS: Having a comprehensive representation of all

stakeholders from every department with regular meetings to discuss the ways in which the MEMIS can better serve their needs is vital.

2. Build a strong team for the MEMIS within the sector with people who have a deep understanding of the database. This will remove the dependency on outsourcing and create effective and efficient solutions. At the moment, a team from MoE is being trained on the MEMIS customization and its features.
3. Train and encourage users to maximize the use of the MEMIS in their daily functioning and keep them updated about the existing functionality. A focal point from each atoll has been trained on the MEMIS and on its functions. If any of their needs are not currently met through MEMIS, develop parallel short-term solutions that can be exported into a long-term MEMIS solution in the future.
4. Assess and benchmark the MEMIS regularly, address and correct any weak points that are evident from the assessment. Plan routine data collection integrate results and plan interventions accordingly.
5. Improve internet connectivity in all access points.
6. Expand the MEMIS to include predictive technology using artificial intelligence and other dictators. This will be extremely beneficial in predicting risk and creating alerts for intervention for students.
7. It is important that the data collected align with education goals.
8. Ensuring that there is legal backing for data collection and its use is crucial for a successful school census. Before implementing a school census, the roles and responsibilities and the legal, financial, technological, and administrative capacities need to be assessed, planned and communicated well.
9. Digital data collection is becoming affordable and easily achieved. It is also a better way to ensure data accuracy, time-saving, and cost reduction. The capacity to use digital data and technology needs to be explored.
10. The school census process needs to be fully institutionalized with defined responsibilities and well-coordinated between the central and atoll levels under the management of a single entity—most commonly the statistical unit within the MoE.
11. The school census process needs to be fully institutionalized with defined responsibilities and well-coordinated between the central and atoll levels under the management of a single entity—most commonly the statistical unit within the MoE.

12. Proper internal and external validations are necessary. MoE should choose wisely between different methodologies/technologies (for example, paper-based, digital (e.g. Ipads), biometric) to find the best fit in the Maldivian context
13. Timely completion is crucial, and data need to be analyzed and disseminated within no more than four to six months of data collection. Penalties should be enforced in cases of noncompliance with deadlines.
14. Data integration requires strategy, standards, collaboration, and systematic data flow to maximize the value of data toward tangible interventions and results in relation to student learning and improvements.
15. Learning data need to be added to data on demographics, teachers, schools, and inputs to get the full story.
16. Unique identification for schools, teachers, and students should be based on (existing) national identification systems and policies spanning different sectors and ministries (Figure 8.14). It enables governments to track the progress of the individuals throughout their academic experience and allows for tracer studies based on longitudinal databases. This may reap substantial integration and benefits and insights into policy making especially in relation to learning outcomes.

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Annex 1: Functions and Staffing of Ministry of Education and its Departments

(as of October 2018)

The specific functions and staffing of the various units of the MoE are described below.

Functions of the Ministry of Education

1. Formulate policies to carry out the instructional activities of school education; informal education; continuing education; higher education and training; and to make the necessary arrangements to ensure the implementation of the policies.
2. Facilitate all tasks oriented with the imparting of knowledge and see to all related affairs; to create opportunities for children and youth of the country in getting access to school education, informal education, continuing education and higher education and training.
3. Register, monitor and maintain statistics and records of all public and private institutions.
4. Maintain the quality of education being imparted from various institutions throughout the country.
5. Plan, organize and implement co-curricular and extra-curricular activities for school children that are required for the successful implementation of the national curriculum and also to facilitate such activities organized by private institutions.
6. Ensure that all school environments enhance and promote habits of good health and well-being, and provide all necessary information to students as such.
7. Work collaboratively with international organizations to help develop educational services in the country.
8. Plan and design various educational programs in collaboration with international organizations.
9. Collect, record and maintain educational statistics and make available for use by others;
10. Accredite various training programs and courses carried out by various institutions registered in the country and conduct monitoring and supervision of all such programs to ensure quality and standard.

Table A8 Number of staff at each department of MoE

Department/ Section/Unit	Political Appointees	Civil Service Heads	Professional Staffs	Admin Staffs	Support Staffs
MOE staffs	11	24	69	78	7
Cooperate Services	1	4	-	13	7
Support Services	2	5	7	4	-

Audit & Compliance	1	1	8	2	-
ESQID	-	2	7	5	-
Finance Division	2	2	19	5	-
Foreign Relations	1	-	2	-	-
HRM Division	1	5	2	15	-
Physical Facilities Development Section	-	1	1	9	-
Policy Planning Division	2	2	10	6	-
Procurement Section	-	1	5	5	-
School Admin Division	1	1	8	14	

Functions of the Department of Public Examinations (DPE)

1. Carry out all tasks associated with the conducting of all public examinations held in the country and award certificates.
2. Carry out all tasks related to the conducting and administration of all overseas exams held in the country in line with the relevant examination bodies overseas.
3. Award certificates for all local educational programs, manage and administer all international examinations carried out in the country.

Table A1.2: Number of staff at DPE

DPE Sections / Units	Political Appointees	Civil Service Heads	Professional Staffs	Admin Staffs	Support Staffs
DPE (All Staffs)		5	22	16	4
Entries and Invigilation (Section-A)		1	5	1	
Syllabus, Record & ICT (Section-B)		1	7	3	
HR, Budget & Finance (Section-C)		1	3	3	
Revenue, Admin, Front Office & Logistic (D) Section		1	7	9	4

Functions of the Department of Higher Education (DHE) - (This Department was transformed into the Ministry of Higher Education in late 2018)

1. Formulate policy for higher education that would meet the national, societal, fiscal, and traditional needs of the country and benefits the individuals while ensuring everyone's participation, and establish, manage, develop and maintain a system of quality higher education that would meet national and international standards of higher education programs.
2. Formulate policies required to provide financial assistance to the students of the Maldives who wish to join programs of higher education and training courses.
3. Establish a system to obtain opportunities from international donor agencies that would provide funds for various higher education programs pertaining to the developmental needs of the country; and formulate policies to help the local students to obtain financial assistance to help them follow a higher education program.
4. Establish regulations for the provision of international opportunities for the students of Maldives to follow higher education programs abroad.
5. Increase and expand opportunities for higher education; improve the standards year by year; and increase the number of successful graduates from time to time.
6. Provide information to local students who wish to know about the higher education programs offered by universities and colleges abroad.
7. Create opportunities for the locals to carryout educational researches and investigations in the country that would enhance educational achievements for the development of the country on areas related to economic growth, societal and traditional needs; and establish a system for disseminating such findings across the nation.
8. Carry out the registration process of all higher education institutions and those that train students in various skills and follow apprenticeship courses across the country, and oversee them from time to time.

Table A1.3: Number of staff at various departments at DHE

DHE Sections / Units	Political Appointees	Civil Service Heads	Professional Staffs	Admin Staffs	Support Staffs
DHE (All Staffs)	1	9	10	21	2
Admin Division		2	2	5	2
Reception				2	
Budget Section		1	3	2	
Training Division		1			
Loan Section		1	1	5	
Scholarship Section		1	1	5	
Planning Division		2	3	2	

Functions of Quality Assurance Department (QAD)

1. Develop and publicize a Quality Code to measure the quality of education provided by the higher education institutes in consultation with the concerned authorities.
2. Monitor activities carried out by various divisions of the education sector to ensure that the quality of the education system is in line with the policies and the set standards.
3. Ensure if all registered educational institutions in the country are running according to the set standards and policies.
4. Review and monitor all activities carried out by public and private schools in the country.
5. Develop the structure and ethical standards of professional staff working in public and private schools and monitor on systems level to ensure that they abide by these standards.
6. Register all teachers working in public and private schools and issue a license for teachers to teach in the schools of the country.
7. Carry out research programs required to improve the quality of the education system in the country and publish the findings.

Table A1.4: QAD staff

QAD	Political Appointees	Civil Service Heads	Professional Staffs	Admin Staffs	Support Staffs	
QAD staffs)	(All	1	2	12	5	1

Functions of Maldives Polytechnic – (This Institution was transferred to the Ministry of Higher Education in late 2018)

1. Plan and conduct training programs based on the skills and apprenticeship needed for the currently available employment opportunities in the country.
2. Plan and conduct mobile skills training programs.
3. Provide information on employment skills to individuals seeking employment opportunities.
4. Create facilities required for conducting training to increase the development of skills.
5. Design training programs in a way that the programs would enhance individuals to go for higher education and training.

6. Create opportunities for open-learning and e-learning to undergo training on skills development.
7. Create a platform to meet the employers of the work industry with the individuals seeking employment opportunities in skilled workmanship and provide career guidance to them.
8. Disseminate to the rest of the islands in the country, the kind of talents and skills (specifically boat building, jewellery, lacquer, weaving and embroidery, etc.) that have been developed only in certain localities of the archipelago.
9. Encourage and promote new products and inventions in the area of technical and vocational skills and share them across the country.
10. Conduct studies and research programs that are pertinent to the type of training conducted in the Polytechnic and publish them for the general public from time to time.

Table A1.5: Number of staff at different departments of The Maldives Polytechnic

Polytechnic	Political Appointees	Civil Service Heads	Professional Staffs	Admin Staffs	Support Staffs
Polytechnic (All staffs)	1	4	20	9	6
Cooperate Affairs	1	1		3	
Academic Affairs			1	1	
Student Services		1		2	
Finance and Procurement		1		3	
Physical Facilities					6
IT service			2		
School of Mechanical Engineering			9		
School of Electrical & Electronics/ IT			4		
Continuing Education			2		
Design & Applied Arts			2		

Functions of TVET Authority - (This Authority was transferred to the Ministry of Higher Education in late 2018)

1. Establish and develop a Technical and Vocational Education system in the Maldives and implement the policies required to operate the TVET system in the country.
2. Formulate policies required to operate apprenticeship scheme; register the individuals that need to participate in the apprenticeship programmes; collect and store this information and provide this information on request to individuals that need it.
3. Register training bodies that participate in the TVET system and employment agencies that contribute other apprenticeship program; and work towards increasing their capacities as such.
4. Decide on a system to conduct employer-based training.
5. Establish a trade testing system to award trade certificates for the individuals who, in spite of not holding paper qualifications, remained in the field and continued in the performance of the similar type of skilled work and who wish to attain advanced levels.
6. Establish occupational standards to train skilled workmanship on technical and vocational fields of work; create training materials and revise them in due course as per the need.
7. Establish benchmarks in alignment with the levels specified on the competency standards performance criteria to assess participants' skills and conduct assessment procedures.
8. Identify the special skills of workmanship that have been developed in various islands or atolls across the country and set standards for conducting training and specify numbers of individuals that need to be trained for these specific areas.
9. Form an official record of the trainers and assessors who wish to conduct the specific training and conduct special programs to increase their capacities.
10. Form panels of experts on various occupational areas; create competency standards with the expert knowledge of these panels and get them approved by the Employment Sector Council as well as by Maldives Qualification Authority (MQA); award certificates to the participants who successfully complete the programs that are conducted in line with the aforementioned standards; and record their information in the Training Management Information System (TMIS).
11. Provide technical advice on the types of programs conducted under the TVET system.
12. Design the benchmarks of Maldives TVET system in alignment with the international standards; get the know-how of international TVET programs and establish close ties between the institutes that conduct such programs.

Table A1.6: Number of staff at TVET

TVET Authority	Political Appointees	Civil Service Heads	Professional Staffs	Admin Staffs	Support Staffs
TVET	1	2	18	6	
(All staffs)					

Maldives Qualification Authority (MQA) - (This Authority was transferred to the Ministry of Higher Education in late 2018)

MQA is a regulatory body, under the MoE until it was re-assigned under the newly formed MOHE. It exercises a self-regulating authority that takes advice from a governing board. MQA's functions are listed below:

1. Establish an approval, accreditation and auditing system that maintains the quality of the higher education and training programs conducted by various institutions in the country.
2. Frame the structure for the national certification standards; modify it from time to time as per the need and implement it.
3. Check on the courses of higher education and training, designed by local institutions to meet the requirements of the national certification standards and give approval; and carry out all processes and procedures involved; create a framework to monitor and supervise the programs that had been approved and conduct the monitoring and supervision activities from time to time.
4. Formulate a structure to accredit the levels of certificate accreditation for the certificates submitted by locals and carry out the tasks of certificate accreditation; form a registry on the MQA accredited certificates and maintain it.
5. Formulate the guidelines required to conduct external academic auditing on the higher education institutions and carry out external auditing.
6. Coordinate with international qualification authorities relating to areas of qualification.
7. Provide technical advice on qualifications to higher education institutions with regard to the programs they wish to conduct to increase the academic capacities of their staffs.
8. Maintain records on the resources, staffs, students, and graduates of public and private higher education and training institutes in the country and publicize them.
9. Provide technical assistance required for the higher education and training institutions on strengthening their internal quality assurance.
10. Provide information to individuals who wish to know about the programs on higher education and training courses conducted by various institutions overseas.
11. Provide advice and opinion, on behalf of the country, on the formulation of international qualifications recognition frameworks; and represent the country on international conferences on qualifications.
12. Publish magazines, news bulletins, etc. on the work of MQA and share news and information through websites and local media as well, to create public awareness.

Table A1.7: Number of staff at MQA

MQA Sections	Political Appointees	Civil Service Heads	Professional Staffs	Admin Staffs	Support Staffs
MQA staffs) (All	1	4		13	2
Cooperate services		2		6	2
Framework & Advocacy Services		1		2	
Quality Assurance Services		1		5	

Functions of the National Institute of Education (NIE)

1. Conduct studies and provide technical and professional expertise for the formulation of educational policies, owing to the social, economic and political changes brought about to the country's development.
2. Formulate national curriculum in line with changes to the development of the country.
3. Determine the implementation level of the national curriculum; bring about required changes in line with changes; provide professional guidance required for the implementation of the national curriculum
4. Prepare syllabi to teach the subjects in schools according to the national curriculum; Make textbooks to teach in schools; and prepare teaching aids required for the implementation of the curriculum.
5. Prepare the syllabi for teaching vocational and technical education in schools and provide technical assistance to teach as per the syllabi.
6. Provide assistance to schools to build professional capacities required for them to instil in students, necessary traits, skills and conduct specified in the national curriculum.
7. Formulate a structure for adopting varied methods and strategies (such as multi-grade teaching) for teaching in schools with limited student populations and the limited resources, and provide technical assistance for capacity building to implement the strategies.
8. Plan and conduct academic and technical training and courses needed to strengthen school leadership and improve the quality of education delivery.
9. Plan and conduct continuous programs to enhance teachers' standards.
10. Provide assistance to develop the capacity in schools to use information technology in teaching and learning.
11. Design programs for inclusive education programs and provide technical assistance to schools to implement them in schools.

12. Provide means and opportunities to join skilled workmanship and apprenticeship for students who leave school without successfully completing school education.
13. Create opportunities to join skilled workmanship and apprenticeship for individuals who cannot meet the entry criteria for joining higher education programs.
14. Make opportunities for community education and continuing education open to the general public.
15. Provide assistance and support to conduct training to disseminate rare traditional skills latent within the country.
16. Establish a system to conduct literacy programs for adults; plan, conduct and sustain means to strengthen functional literacy in the country.
17. Plan and conduct programs to help adults to improve their academic and technical skills.
18. Provide assistance to conduct awareness programs on various needs of society.
19. Publish academic findings and information publicly.

Table A1.8: Number of staff at NIE

NIE Units	Political Appointees	Civil Service Heads	Professional Staffs	Admin Staffs	Support Staffs
NIE (All Staffs)	2	2	68	19	5
Admin & HR Unit		1		6	5
Finance Unit		1	1	5	
Technology & Media Unit			3		
School of Curriculum Development	1				
Humanities Unit			7		
Quran & Islam Unit			4		
Science & Maths Unit			5		
Entrepreneur Unit			2		
Illustration Unit			3		
Administrative Pool				3	
School of Continuing Education			1		
Community Education Unit			2		
Adult Literacy Unit			3		
Admin Pool				1	
School of Research & Development			1		
Research Unit			2		
Innovation & Development Unit			3		
Admin Pool				1	

School of Early Childhood Development	1
Preschool Curriculum Unit	2
Teacher Training Unit	2
Admin Pool	1
School of Teacher Development	1
Teacher Training Unit	3
Inclusive Education Unit	3
Professional Development Unit	3 in NIE + 16 in atolls
Admin Pool	2

Functions of Dhivehi Language Academy - (This Department was transferred to the Ministry of Arts, Heritage and Culture in late 2018).

1. Work towards the protection and development of the local language, Dhivehi.
2. Ensure the use of Dhivehi as the principal mode of communication for the purposes of national administration, trade, education and other forms of public communication.
3. Determine the correct and standard use of Dhivehi language; formulate the syntactic and linguistic systems of Dhivehi Language and disseminate it across the country.
4. Create awareness among the people about the traditions and practices and revive them.
5. Take the necessary steps to ensure and sustain the authenticity of the information shared to the public relating to Dhivehi Language, history, traditions and heritage.
6. Mark important days relating to Dhivehi literature, traditions, and heritage that are declared by the state to celebrate grandly at the national level.
7. Compose books on Dhivehi lexicons, and publish them to make available for the general public.
8. Plan, design, and conduct programs and projects about Dhivehi Language and history.
9. Conduct academic researches and educational activities relating to Dhivehi Language and history in collaboration with relevant local and international groups.
10. Function as a centre that publishes books relating to Dhivehi Language, monographs, reports, magazines and the like; a centre that classifies, arranges in an orderly fashion, and share information on Dhivehi Language and history to the general public.
11. Conduct or make them conduct short-term courses and programs for private and public institutions, relating to Dhivehi Language and history.
12. Organize and conduct seminars, exhibitions, workshops and conferences either by the academy alone or in collaboration with others.

Table A1.9: Number of staff at Dhivehi Language Academy

Dhivehi Language Academy	Political Appointees	Civil Service Heads	Professional Staffs	Admin Staffs	Support Staffs
Academy Staffs)	(All 4	2		1	

Uffaa Office (This office was dissolved in 2018 and its functions are now carried out principally by the School Administration of the MoE).

Uffaa Office believes that every student has strengths and skills that given the opportunity they can excel in it; and when we are doing something that we love, we are happy. The following were the functions of Uffaa Office.

1. Create policies and design programs that would enable the children to stay in school, learn and be happy, ensuring that truly no child is left behind.
2. Conduct internship programs to help students who cannot do so well in academics so that they would find a means to earn a living from some area of skilled work soon after they leave school.
3. Offer vocational stream to students of grade 9 who would continue till the end of grade 10 along with some minimum academic subjects like Islam, Dhivehi, English and Maths.
4. Offer BTEC O'levels for lower secondary grades and BTEC A'levels for higher secondary.
5. Introduce 'VINAVI' (a program until they reach 18 years of age to support students who have not completed formal schooling,) to ensure every student is meaningfully engaged in employment education or training.
6. Make sure every school reaches out to their alumni regularly to check in and offer support
7. Provide Life skills (age appropriate knowledge & skills taught through interactive sessions) for every child in Gr 6-12 through trained facilitators in schools.
8. Orient principals nationwide on Life Skills
9. Introduce and implement attendance policy to schools nationwide and work together with schools to create a supportive culture where children come to school every day to ultimately help them reach their full potential.
10. Ensure all schools across the country, identified children out of school; record data and plan to provide support to these students within the education system to help them continue to attend school till they graduate.
11. Introduce and manage Coding Clubs in all schools across the country which helps them learn to code through games and online learning experiences; conduct free code camp courses regardless of their programming experience or geographic

- location. This is to give youth access to the equipment and connectivity needed to code, as well as for creative thinking space.
12. Conduct risk assessment for all grade 1 students to identify any risks and provide support for children who may need it as the children need love, care and to be brought up in a safe environment.
 13. Introduce 'BURUNU' (a new behaviour management policy) to all schools across the country to help children learn from their mistakes and learn to take responsibility for their behaviour.
 14. Introduce 'FARUKOE' (child of the reef) program to inspire and encourage students to become a strong advocate and make a huge difference to protect our reefs to help them explore and experience the reef and become a Voice for the Nation.
 15. Abandon the use of plastic in schools across the country.

Table A1.10: Number of staff at UFAA

UFAA Program Office	Political Appointees	Civil Service Heads	Professional Staffs	Admin Staffs	Support Staffs
Uffaa Office (All Staffs)	1	1	5	6	

Functions of the Coordination and Support Unit (CSU)

CSU is a temporary office established under MoE for a 5-year term which assumes the function of coordinating the Enhancing Educational Development (EED) projects carried out with the funding provided by the World Bank. Among the staff of the CSU include a project coordinator who leads the unit along with 7 other professional staff.

Functions of the Department of Heritage - (This Department was transferred to the Ministry of Arts & Culture in late 2018).

1. Formulate rules on traditions and implement them.
2. Protect and revive Maldives traditions and heritage; encourage and develop professional skills and talents as well as local produces.
3. Look after the historical places of value that are found in the country.
4. Find out the ancient places and items that exist in the country with the help of scientific processes and procedures.
5. Formulate and disseminate the rules and regulations required for restoring, maintaining and looking after the ancient places and artifacts found in the country; and check if these practices are going accordingly.

6. Create public awareness of traditional heritage.
7. Officially declare the historical places and items in the country (with reference to the Act no. 27/29) and send out notices to the public.
8. Establish places proposed by private agents who wish to create intending to symbolize Maldivian history and tradition; facilitate private parties to maintain historical monuments and encourage them on this cause.
9. Revive the memories of national heroes.
10. Maintain and put into constant use, the two most important places of historical value, namely, the national museum and Bodu Thakurufaan's (the most famous National Hero's) Memorial Centre.
11. Record and maintain from time to time, the accounts of events that are of historical significance for the country.

Table A1.11: Number of staff at the Department of Heritage

Department of Heritage	Political Appointees	Civil Service Heads	Professional Staffs	Admin Staffs	Support Staffs
Heritage (All staffs)	2	4	8	15	
Corporate Affairs Section		1		6	
Heritage Section		1	5	7	
National Museum		1	3	2	