EDUCATION SECTOR ANALYSIS (ESA) FOR BANGLADESH

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PREFACE

Bangladesh is a member of the Global Partnership for Education (GPE), with an education sub-sectoral plan implemented recently with GPE's support. Government of Bangladesh (GoB) is intent on benefiting further from financial and technical support from GPE in fulfilling its education development agenda, especially within the framework of SDG4.

Bangladesh has received an Education Sector Plan Development Grant (ESPDG) in support for education sector plan development. As the ESPDG grant agent, UNESCO Dhaka Office, on behalf of Education Local Consultative Group (ELCG), has agreed to support the process of preparing two necessary documents, an Education Sector Analysis (ESA) and, based on it, the Education Sector Plan (ESP). The time frame of the ESP is proposed to coincide with the 8th Five Year Plan (FY2020/21 – 2024/25), now under preparation.

GPE envisages that the preparation of an education sector plan would follow usual key steps: a. education sector analysis, b. selection of policy priorities, key strategies, and plan targets based on the sector analysis, c. a simulation exercise of costing of the plan and financing, and d. drafting the plan document.

The sector analysis is seen as an independent phase to analyze objectively the functioning of the system. It is an indispensable first phase of plan development. The selection of policy priorities, key strategies, and plan targets is the first major phase in plan formulation per se. This selection needs to be based on the findings from the sector analysis

The education plan is expected to be guided by an overall vision. This refers to overall socio-economic development aspirations which is supported by holistic education planning combining all subsectors, including lifelong learning and non-formal education. Soundness and relevance of such a plan must come from establishing the connection of the plan priorities and strategies with the main issues identified in the sector analysis. All major issues from the ESA need to find a response in the plan and all plan priorities must be grounded in the ESA findings.

The Education sector analysis for Bangladesh, as the first phase in plan formulation, has been prepared under considerable time pressures. The first draft was put out on 26 November 2019, by the National Expert Team (NET) appointed in cooperation with the civil society organization *Unnayan Shamannay* (meaning "Development Coordination").

Content of ESA

The ESA reviews each of the following education sub-sectors focusing on issues of access and equity, internal efficiency and quality:

a) Pre-primary and primary education including Ebtedayee Madrasah
b) Secondary education including Dakhil Madrasah
c) Higher secondary including Alim Madrasah
d) Technical and vocational education
e) Non formal education
f) Tertiary education

Major cross-cutting issues in the education sector were also reviewed. These are:

I) Teacher supply and quality;
II) Climate change, natural and man-made emergencies,
III) Education response to the forcibly displaced Rohingyas;
IV) ICT for and in education;
V) The 21st century skills and the Fourth Industrial Revolution;
VI) Access to WASH and girls' menstrual hygiene;
VII) Children with special needs;
VIII) Incentives – stipends, mid-day meal, and free books; and

IX) SDG National Indicator Framework and monitoring.

Education resources and budgets and education governance and system management are also discusses in separate sections.

The ESA used existing data, mainly BANBEIS statistics, but also information from other sources, such as the Multiple Indicators Cluster Survey (MICS) focusing on children and budget information from relevant government sources.

Collaborative consultations on ESA findings

It was recognized by all concerned that the ESA findings needed to be endorsed by the education stakeholders, especially the government, in order for it to serve as a credible basis for ESP formulation. A special consultative meeting was organized on 8-9 December, 2019 of government and non-government stakeholders to discuss the initial ESA draft, and the proposed ESP.

Some 35 participants joined in the consultation on 8-9 December representing Education Ministry officials (MoE and MoPME), research institutions, non-formal education institutions, NGOs and Civil society organizations. An overview of the findings from the ESA was presented to the participants followed by a lively discussion. The participants in three thematic groups identified issues that must be addressed in respect of three major areas of concern: a. Access and Equity, b. Quality and Relevance, and c. Governance and System Management, based on the ESA preliminary findings and their own experiences.

The ELCG was also consulted on the ESA findings. In close collaboration with the Coordinating Agency, UNICEF, the draft ESA document was shared with all ELCG members. Close to 100 comments were received, which were discussed in a meeting organized by UNESCO Dhaka Office on 18 December, 2019 in collaboration with the GPE Coordinating agency (UNICEF). The observations were taken into consideration and were incorporated in the revised ESA.

Discussion on ESP Goal and Sub-goals

During the two-day consultation, the participants discussed anticipated ESP overall goal and sub-goals. The Senior Secretary of the Ministry of Education, the Secretary of the Ministry of Primary and Mass Education, and the Secretary for Madrasa and Technical and Vocation Education Division were also consulted on these. Taking into account the existing policy documents and the inputs by the participants, the overall goal of the ESP was set as to:

> *Contribute to the achievement of the SDG4 goal of equitable, accessible and quality education towards building a sustainable and prosperous society and promoting lifelong learning for all in line with the objective of Bangladesh becoming a developed country by 2041.*

Three sub-goals were set relating to three main components of the overall goal:

A) In relation to Access and Equity: *"Ensure compulsory basic education and increase scope for further education for all irrespective of gender, age, religion, ethnicity and disadvantaged groups."*

B) In relation to Quality and Relevance: "*Learners at all levels acquire relevant knowledge, skills, attitudes and values to live in health and safety, to live in harmony with nature and people, and to compete in the national and international job market.*"

C) In relation to Governance and System Management: "*Strengthen the result-based management system for effective implementation of the Five-Year Plan, SDG 4 strategic framework and the Education Sector Plan, with increased budget allocations and better use of resources*

While still provisional until they are confirmed through further consultation, the above goals are reasonably ambitious and are consistent with the existing policy choices. With the ESP results framework, which will be a part of the plan document, special efforts will be made to ensure that specific targets are set and those targets are further checked through the simulation model.

An ESP policy-and-plan matrix

A tentative policy-and-plan matrix has been drafted on the basis of the selected ESP goals and sub-goals. A policy-plan matrix consists of a structured table showing the key strategic elements:

a) The ESP overall goal reflecting overall policy
b) The ESP main components and corresponding sub-goals
c) The outcomes under each sub-goal
d) The outputs under each outcome
e) The key interventions under each output

Based on consultations and discussions, the provisional policy-plan matrix has been drafted up to the level of outputs and is presented in the concluding section of this report. It can be seen that a total of twelve outcomes have been determined, of which three for access and equity, four for quality and relevance, and five for governance and system management. The numerous outcomes related to the quality of education and system management are a signal to indicate that the critical issues facing Bangladesh education are those of quality and governance. More consultations are planned in order to further develop the policy-plan matrix and to elaborate it up to the level of interventions or activities.

Proposed ESP Outline

The drafting of the ESP will be done by the NET with technical support by international consultants, and in collaboration with key national stakeholders and UNESCO Dhaka Office. To facilitate the work, an outline indicating the provisional content of the plan document with its chapters and main sections has been agreed. In line with documents of this kind, the ESP will have four substantive chapters. The four main chapters envisaged are:

a) A summary of the findings from the ESA;
b) The proposed strategic framework with the set goals, outcomes, outputs and interventions;
c) A chapter on the implementation arrangements that put together accompanying instruments to make implementation as smooth as possible;
d) A chapter on costs and financing with a presentation of the costing hypotheses and the agreed financing scenario.

It should be noted that the ESP is more appropriately described as a plan framework as the proposed content suggests. A national education sector plan as the guiding document for educational development of the country over a medium term requires more details including detailed sub-sectoral plans than can be presented within the confines of the envisaged ESP content and with the available resources and time. It must be prepared with the lead given by the concerned sector and sub-sector authorities, and must be owned by them and national policy-making bodies. Further detailed work on education sub-sector action plans is expected to be done as part of the Eighth Five Year Plan (FY2020/21 to FY 2024/25) preparation and implementation process.

The Education Sector Plan to be prepared as part of the GPE process with the ESA as the starting point is, therefore, intended to be a necessary framework and an important contribution, indeed a head-start, for an on-going national process. This process is the more involved and detailed exercise of education subsector plan and program development, and their adaptation and refining in the context of the Eighth Plan, SDG4 framework, and the Perspective Plan (2021-41).

ESA SUMMARY

(Numbers in parentheses indicate reference to relevant sections of the main text.)

Overall progress in social and economic development in the last three decades, backed up by robust economic growth, especially in the last decade, has been commendable. Yet, there are numerous hurdles to be overcome to attain nationally set development objectives, fulfilling the commitments for sustainable development (SDG 2030), realizing the full growth potential of the economy and utilizing the productive potential of the country's youthful workforce. (1.1)

The unexpected shock of the Covid-19 pandemic and its health, social and economic impact brought to the fore the critical need for emergency preparedness and response capacity and their educational implications as well as the longer term lessons for building resilience to different kinds of vulnerabilities. (1.1; 4.2)

Structural change in the economy, as Bangladesh moves to the middle income status, is changing the composition of employment – with shifts from farming and agriculture to industries, manufacturing and services -- which has major implications for education and skills development. (1.1)

The context and complexity of how education and training lead to skill formation and skills turn into productive and decent work opportunities have to be recognized. Even if the mismatch or skills gap hypothesis is given prominence, unpacking this problem and finding solutions take us to the heart of change and reform to be visualized and implemented in the education system and its various sub-systems. The continuing struggle obviously is to build an inclusive system of education with quality and equity that serves the vision and aspirations of the nation. (1.1)

At this juncture an education sector plan framework based on an objective sector analysis is necessary to support the education sector components of the 8th five year plan (2021-25), the SDG-related initiatives and the subsector programmes. Such a plan framework would contribute significantly to better planning, coordination and implementation of the education programmes. This would also be a step towards promoting a holistic view and mitigating various problems of fragmentation in education planning, implementation and governance mechanisms. (1.2)

The sector analysis in this report begins, following the introduction (Section 1), with an overview of the policy environment and the gist of policies as stated in various relevant documents (Section 2). This is followed by a broad mapping of the subsectors of the education system (Section 3), main cross-cutting concerns (Section 4), the state of education finance, resources and resource management (Section 5). Governance and system management issues are discussed in the next (Section 6). The concluding section envisages a policy and planning matrix and the steps towards the formulation of an education plan framework (Section 7). In the interest of highlighting the main points concisely, some relevant details are placed in Annexes. (1.2)

A) Policy Environment

This section presents key elements of the National Education Policy 2010, the overall policy statement that is intended to guide educational development, as well as highlights of key documents related to policies in major sub-sectors. The latter include the Non-Formal Education Policy (2006) and the Non-forma Education Act 2016; the Compulsory Primary Education Law 1990 and the evolution to a sub-sector programme approach; quality improvement, expansion of access and shift towards a sub-sector programme at the secondary and higher secondary level; the National Skill Development Policy 2011 and other related documents. (2)

The review of the policy environment indicates that certain priorities have been stated largely in aspirational terms. Effective strategies, operational plans and implementation mechanisms and means have to be strengthened on some of the key policy objectives. (2.1 – 2.4)

Where actions have been taken and progress has been made, and where progress has lagged in different sub-sectors of the education sector, are discussed in the next section. (3)

B) State of sub-sectors

Early Childhood Development and Pre-Primary Education

A one-year pre-primary education has expanded in recent years with most grade one students of primary school now participating in pre-primary education (PPE). A two-year preprimary stating at age 4+ is under consideration. Apart from pre-primary, public provision of early childhood development (ECD) programs is still limited. The latest Multiple Indicator Cluster Survey (2019) reveals that 19 percent of the children in age 36 to 59 months have participated in some form of organized ECD. There is ample scope of improvement in different ECD domains; there is also significant differences between services available in rural and urban areas and by income status of households. (3.1)

Primary Education (Including Ebtedayee Madrasah)

Bangladesh has achieved near universal enrolment of primary education with gender parity. The government has successfully zeroed in on the access issue. There remain formidable challenges on the quality front. The SDG4 Strategic Framework for Bangladesh identifies two major dimensions of quality education. First, quality has to do with the ability of teachers to facilitate the teaching and learning process in ways that result in achievement of the expected learning outcomes. Second, the education system needs to ensure a conducive learning environment, in which effective learning can take place for all children. National Student Assessment undertaken with nationwide sample of students in grade 3 and 5 shows that the majority of students are not achieving required grade level competencies in Bangla and Mathematics. (3.2)

Arguably, the widespread availability of guidebooks in the market and dependence on these as well as the culture of private tutoring are symptoms of deeper problems. These problems relate to the inadequacy in number and quality of skilled and professionally motivated teachers and the early and frequent high-stake public examinations with their negative backwash effects on teaching-learning practices. Promoting assessment of student learning that emphasizes formative and school-based assessment linked to teaching-learning focused on foundational skills is seen as a special challenge. (3.2)

Secondary and Higher Secondary Education (Including Dakhil Madrasah)

There has been substantial improvement in enrolment of girls and boys in secondary education with girls surpassing boys. The transition of primary completers entering secondary education is around 95 percent. The net enrollment rate was about two-thirds of the designated secondary school age-group (11-15 years) and just over one-third of the higher secondary age group (16-17 years) in 2018. The rates of completion have lagged at just over one-third of the enrolled for secondary and one-fifth at the higher secondary stage. Moreover, nature of skills and competencies achieved by students, and weakness in the transition from education to work, have resulted in high unemployment and underemployment among youth (SDG4 Strategic Framework for Bangladesh). (3.3)

The nature of challenges related to quality is aggravated in secondary education due to two factors. First, often the primary education completers do not have the pre-requisite entry level competencies for secondary education. Secondly, the increase in subjects in the curriculum compared to the primary stage, and its discipline-based structure, require that the teachers at the secondary and higher secondary levels are qualified and trained in specific subjects. Inadequate numbers of subject teachers, especially in key subjects as math, science, English and computer skills, impact negatively the quality of learning. The recently initiated Secondary Education

Development Program (SEDP) has identified a number of areas for quality improvement including: i. Curriculum reform; ii. Teacher quality, capacity, and management; iii. Examinations and assessments; and iv. Better teaching-learning in key content areas -- Bangla, English, Mathematics, Science and ICT (SDG4 Strategic Framework for Bangladesh). (3.3)

Policymakers often emphasize vocationalization of secondary education and increased enrollment in vocational/technical stream. There has been a substantial increase in proportion of TVET enrolment among secondary level students in a decade – from 2 to 16 percent in 2018. There is, however, a need for clarity on what the nature of vocationalization should be and how it responds to the employment market. What choices are attractive to students, and how these can be delivered effectively are open questions. The secondary vocational stream has been the main vehicle for increasing secondary level vocational-technical enrollment. Experience so far of this stream needs to be assessed in respect of skills actually acquired and their marketability. The issue of technical and vocational education is discussed further below. (3.3)

A learning assessment mechanism at the secondary level comparable to National Student Assessment (NSA) at primary level is not in use. Bangladesh could consider joining OECD's Programme for International Student Assessment for Development (PISA-D), a pilot project that aims to make cross-country assessment more accessible and relevant to a wider range of countries. PISA measures across countries key knowledge and skills of secondary level students at age 15 that are essential to function in modern societies. Cambodia, a country facing quality issues similar to Bangladesh, has joined PISA-D in its bid to improve student learning and assessment capacity (3.3 – 3.4)

A positive move taken is to follow a common integrated curriculum up to grade ten and delay streaming of students into disciplinary areas (science, humanities, business, etc.) until grade 11, rather than grade 9 at present. This is a step towards building a common foundation of basic competencies for all students and not forcing young people to make a future career choice too early. The success of this measure will depend on adequate provisions for qualified subject teachers especially for science, math and English, as noted, in all schools, and in which student performance has remained deficient. (3.3 --3.4)

Technical & Vocational Education (TVET)

The TVET system needs to deliver market responsive gainful employment or self-employment to some 1.5 million young people seeking to enter the world of work every year. A total of 22 ministries, each seeking to provide various kinds of training without effective coordination signals the need for a coordinated approach and averting the risk of fragmentation of activities in the system. Following the introduction of a skills development policy (2011) and establishment of the National Skills Development Authority (NSDA) the basis for an integrated planning and management of TVET has been created (SDG4 Strategic Framework for Bangladesh). (3.5)

The declared priority of the government is to increase in a major way TVET enrollment. How this has worked needs to be probed in respect of achieving the key objectives of imparting relevant skills for the graduates to enter the job market or continue successfully at the next stage of education. With many actors in TVET besides MOE institutions, a total picture, with relationships, purposes and extent of services of different actors need to be spelled out. How the diverse initiatives, activities and projects are made to achieve clearly stated results remains a concern. How the activities under many different auspices are coordinated and directed towards addressing the persistent skills gap issues is a continuing challenge in TVET and the broader skills development arena. The newly established National Skills Development Authority is mandated to address these challenges. It still has to find its bearing and be fully active. (3.5)

Non-formal education

A full picture of its scope and extent is difficult to construct because of its flexible, opportunity-based and need-based character. At least four government agencies carry out publicly funded non-formal education interventions. These are: 1) Bureau of Non-formal Education, 2) Directorate of Youth Development, 3) Department of Social Services, and 4) Bangladesh Computer Council. NGOs and the private sector also provide non-formal education for youth and adults but reliable data have been scarce. Non-formal youth and adult education overlaps in part with some forms of TVET. (3.6)

On the state of non-formal and adult education, two points need to be particularly emphasized. First, non-formal alternatives for out-of-school children need to be funded and implemented effectively. The government recognizes that a second chance program of sufficient scale and quality must be a part of the main strategy for inclusive quality primary education to serve those who are left out of the main stream – dropouts, working children, those in remote areas and those in other special circumstances. This can work only through effective partnerships built with NGOs which have proven their commitment and capacity to deliver. The second chance option will also be needed for secondary level education, as this stage becomes an accepted part of compulsory and universal basic general education as anticipated in SDG4. (3.6)

Second, a lifelong learning approach needs to be adopted as a key operating principle in the entire education sector, but must be reflected strongly in non-formal and adult education. To make lifelong learning a reality, opportunities for functional literacy for youth and adults must be a first step. A network of community learning centres (CLCs) offering a menu of relevant learning activities and supported by essential resources, complementing formal education, must be built up. Tentative steps have been taken in this direction but a "sector-wide approach" anticipated in this regard has yet to receive government approval. (3.6)

Tertiary Education

Tertiary education is currently at a critical juncture. On the one hand, there is demand from the employers for professionals to serve the growing industrial and service sectors. On the other hand, tertiary institutions are not able to produce adequate numbers of employable graduates to meet specific demands of the job market, while large numbers of graduates remain without a job. (3.7)

About 120 public and private universities were functioning in 2018. In addition, over 3,000 affiliated colleges under the National University and over 1,200 Alim-Fazil (equivalent of higher secondary and beyond) madrasas affiliated with the Islamic Arabic University as well as the Open University are major providers of tertiary education. The affiliated institutions served over three quarters of the total of around 4 million students in tertiary education. (3.7)

Tertiary education enrollment is growing and private education providers are playing an increasingly larger role. Access to tertiary education is not equitable across genders both in public and private universities. Public universities remain highly selective, while high-fee private universities are sharing the burden of tertiary education expansion. The system, therefore, is inherently inequitable for aspirants of higher education from the lower socio-economic strata. Very limited scholarships or bursaries and lack of a system of education loans do not mitigate the prevailing inequities. (3.7)

The distribution of curricula offerings and absence of planning and strategies for improving market relevance particularly in the public sector have given rise to several concerns. These concerns are about "graduate unemployment," oversupply of graduates in humanities and skills shortage for technology and engineering jobs, and uneconomic investment of public and private resources in tertiary education with poor pay-off. Tertiary education governance needs to ensure that expansion is accompanied by effective measures to enforce quality and enhance relevance for the job market. (3.7)

A critical role of higher education is to supply teachers for the school system – in adequate number and quality. It is generally agreed that a major obstacle to achieving quality with equity in the education system is the professional and personal capabilities and attributes of teachers. A vicious cycle -- of teachers with limited capability and poor motivation producing students from primary and secondary schools who are ill-prepared for higher education -- is at work. Many, in turn, become low-capability teachers, thus perpetuating the cycle. A way has to be found to break this cycle and attract the "best and the brightest" of young graduates into teaching and retain them in the profession. This is discussed further below. (3.7)

C) Cross-cutting Issues

The main cross-cutting issues, which present special difficulties as well as potentials for the sub-sectors in varying degrees and for the sector as a whole, are briefly discussed in this section. These are: teacher numbers and quality; climate change and natural and man-made emergencies including the forcibly displaced Rohingyas; ICT for and in education; implications of 21st century skills and the Fourth Industrial Revolution; access to WASH and girls' menstrual hygiene provision; children with special needs; incentives – stipends, mid-day meal, and free books; and SDG National Indicator Framework and monitoring. (4)

Teachers. The need to think afresh about attracting and keeping talented people in the teaching profession has been raised frequently in education discourse in Bangladesh and is recognized as a major challenge for improving education system performance. Bangladesh along with countries in South Asia, unlike other regions of the world, does not have a well-established and widely used pre-service teacher education program, though school teaching is the single largest field of employment for college graduates. To place a *properly qualified and certified* teacher in a classroom in front of students as a standard requirement is yet to be established. Since school teaching is not the first choice as a career for higher education graduates, especially the talented ones, it ends up attracting the less capable of the graduates. A concurrent professional teacher development approach needs to be considered as a necessary step to break the vicious cycle of poor teacher quality and poor student learning. It would combine general education and pedagogy in the four-year degree program, instead of the present sequential model. It has to be accompanied by other necessary steps to ensure the quality of the concurrent program and measures to enhance incentives, status and career path of the education workforce. (4.1)

A beneficial fallout of this initiative, if properly implemented, would be to show the way for a qualitative change in the colleges under the National University. (4.1)

Response to Emergencies. Bangladesh is one of the most vulnerable countries of the world to the effects of climate change. A significant proportion of institutions in the country are also affected by multiple disasters, often simultaneously, impeding and disrupting children's learning and even placing them in danger. Educational development plan, operating plans and budgets must take into account addressing these recurring hazards. Education content and learning activities also need to address understanding and coping with climate change and disaster preparedness. The current COVID-19 pandemic, shutting down schools across the world, points again to the critical importance of emergency preparedness in the education system. (4.2)

The Rohingya Crisis. A critical concern facing the forcibly displaced Rohingya refugees, over a million, sheltered in camps in two upazilas in Cox's Bazar district, is the future of their children. Fifty-five percent of the camp residents are children under 18. As children, they are claimants to specific rights of safety, protection, wellbeing and education under international treaties, such as the UN Convention on the Rights of the Child. (4.3)

The Bangladesh Government now, as of January 2020, has lifted the restriction on organized school-level education for older children up to age 14. In line with the government's decision, the education sector for the humanitarian response in Cox's Bazar now plans to pilot the introduction of the Myanmar curriculum in the Rohingya refugee camps starting in April, initially targeting

10,000 Rohingya students in grades six to nine. The use of the Myanmar curriculum will be expanded to other grades in a phased manner.(4.3)

Education opportunities for the Rohingya children need not be seen as an obstacle to whatever geo-political resolution of the problem that may be struck eventually. Proper education is the least that can be done for the children traumatised and deprived of their basic rights. The children of the host communities who are paying a high price due to the refugee crisis should also benefit from the education services for children, both in the camps and in the local communities. (4.3)

ICT in and for Education. Government of Bangladesh, as per its "Vision 2021" is committed to ensure application of Information and Communication Technologies (ICT) in all spheres of development. (4.4)

ICT capacity development of teachers, trainers, curriculum developers, and education managers needs to be improved and be part of an ongoing capacity building program. Knowledge acquired by training attendees, after they returned to their institutions, needs to be better shared with colleagues. With the spread of ICT resources, real-time monitoring, feedback, and reporting mechanisms can be introduced in education institutions as an education management information system (EMIS). The shutdown of schools due to the Covid-19 pandemic illustrates the role and potential of ICT-based learning. (4.4)

21st Century Skills and the 4th Industrial Revolution (4IR). Closely related to the challenges and potentials presented by ICT are questions about the educational responses to the imperatives of two interconnected concepts – the 21st century skills and the 4th Industrial Revolution. (4.5)

Life and the livelihoods of the majority of people in Bangladesh are still to a large degree characterised by the use of the second or even the first industrial revolution technologies. At the same time, most people are also touched by the third industrial revolution through the penetration of mobile phone technology. However, 4IR -- characterized by automation, robotics, artificial intelligence, radical change in the nature of work, and innovation in economic production and services -- has arrived. It has major implications for education, skill development, employment and entrepreneurship, which must figure in education planning and strategies. (4.5)

What are called the 21st century skills are not necessarily all novel, nor do they mark a clean break from what were important in the 20th century or the 19th century. There are common and timeless elements of quality and relevance for learners and society in any system of education. (4.5)

The education authorities— the Ministry of Primary and Mass Education and the two divisions of the Ministry of Education and the National Curriculum and Textbook Board—are all engaged in a review of school curricula in the context of 21st century challenges. What is more important than formulating the curriculum is to find effective ways of implementing the curricula. Teachers -- their skills, professionalism and motivations—are the key here. So is the way students' learning is assessed. The negative backwash effects of the current public examinations—too early and too frequent and many issues about what they actually assess, and the distortion of the teaching-learning process in schools, need to be addressed. (4.5)

Dealing with Child Marriage. Ending Child Marriage is one of the long-standing challenges for Bangladesh and continues to be a crucial constraint in the fulfillment of girls' education and human rights. The government has been undertaking various initiatives which include encouraging girls to stay in school, offering adolescent boys and girls life skills-based education, transferring cash to vulnerable families with adolescent girls, ensuring protection of children at risk, and raising awareness through community mobilization and behavior change initiatives. The government also enacted the Child Marriage Restraint Act of 2017, and prepared a National Action Plan (NAP) to End Child Marriage. These efforts contributed to reducing the number of early child marriages. (4.6)

Wash and Girls' Menstrual Hygiene. Progress has been made in this respect, but there is scope of improvement in schools in terms of effective access to WASH. Improvement in this area is necessary to improve school attendance and the quality of learning. Menstrual Hygiene Management (MHM) is another area where educational institutions have more to do. (4.7)

Children with Special Needs. The key element of the principle of inclusive education is that the children with special needs including those differently abled are brought into the ambit of quality education services. (4.8)

BANBEIS statistics 2018 shows that about 46 thousand children with different types of disabilities were enrolled in government primary schools including 21 thousand girls. However, data on access to non-government schools or to secondary or tertiary level education institutions are currently not available. (4.8)

Incentives to Schooling: Stipends, School Feeding, Free Books The government spends a large share of its education development budget for programs such as school feeding, and different kinds of stipends as well as free distribution of textbooks at primary and secondary levels. In recent years, school feeding and stipends respectively have claimed around 10 and 20 percent of the total education sector ADP. (4.9)

With growing household incomes, and need for larger resources in quality enhancing inputs including more and better teachers and better facilities, should the growth trajectory of incentive spending be re-examined and whether incentives should be more specifically targeted to the disadvantaged groups are looming as policy questions. (4.9)

National Indicator Framework (NIF) and Better Monitoring. The National Indicator Framework (NIF) on Education for Bangladesh has been developed by the National Data Technical Committee under the Capacity Development Education (CapED) program with support from UNESCO and UIS. (4.10)

While the NIF is based on existing education plans and programs covering sub-sectors of education and keeping in view the global and thematic indicators of SDG4, there are deficiencies in collecting, recording, and documenting relevant data to meet demands for effective monitoring and evaluation. Consistently collecting, collating and analyzing data in accordance with NIF will be a challenging task which will require policy attention and allocation of resources. It is expected that a National Strategy for Development of Education Statistics and Action Plan (NSDES&AP) will provide necessary guidelines to this end. (4.10)

D) Education Finance, Resources and Their Better Use

This section presents an analysis of the education resources, budgets, their distribution by sub-sector, cost per student for different levels of education, adequacy of resources and issues about mobilization and effective use of education resources. (5)

Stagnant public funding at a low level. Allocations for education sector have nominally increased by four times between 2008-09 and 2019-20. The national budget of the fiscal year (2019-20) allocates over BDT 611 billion for the education sector, which, to be noted, is less than the proportionate increase in the total national budget. Education budget (i.e. budget allocated to MoPME and MOE) has been hovering between 11 to 14 percent of the total national budget. Sector stakeholders argues for a significant increase to ensure that the country has the human resources to cope with the challenge in employment and investment. (5.1)

Over the last decade share of public spending in education has remained around 2 percent of the GDP. The global average for this ratio is above 4 percent. Comparative data show that per student public expenditure at all levels of education has been low in Bangladesh. The price that is being paid for expansion of services at low cost may be in terms of quality learning outcome – resulting in a low-cost and low-yield system. (5.1)

The budget for the current fiscal year (2019-20) allocates over 39 percent of the total to the Ministry of Primary and Mass Education (MoPME); over 48 percent to the Secondary and Higher Education Division; and the remaining 12.5 percent go to the Technical and Madrasah Education Division. The rationale for this distribution and the annual change up or down need to be better spelled out in relation to the overall system objectives of quality, equity and inclusion. (5.1-5.2)

In the national budget for education, operational expenditures have been higher compared to development expenditures. However, a trend of increasing share of development expenditures is visible. There is scope for considering how operational and development heads of budgets are defined and how they complement each other in achieving key policy objectives. Over the last four fiscal years, on an average, external assistance has comprised 11.4 percent of the ADP allocations for the 'Education and Religion' sector. Greater attention is needed to ensuring how external contribution enhances better use of total education resources, complementing domestic resources. (5.1-5.2)

The key areas where investments could have a direct impact on learning outcomes, especially at the basic level, have been identified to be: (i) ensuring that teachers are recruited in sufficient numbers and deployed rationally across schools; (ii) expanding access to quality early childhood development programs to improve school readiness at primary school entry; (iii) enhancing early grade reading and mathematics skills; (iv) strengthening examinations and assessments; (iv) improving teacher training; and (iv) strengthening teacher accountability (Bhatta et al. 2019). (5.1-5.2)

Public expenditure per student is higher for primary level than at secondary level (BDT 11 thousand and BDT 9 thousand respectively). This reflects government commitment to compulsory and free primary education up to grade 5. This commitment has to be reconsidered in the light of SDG4 pledge, hopefully with a much larger education budget, for universal and free secondary education. This will have significant implications for public expenditure in education. (5.1-5.2)

Household expenditures mitigate resource gap. The households themselves in Bangladesh incur a comparable amount of out of pocket expenditure per student as the government. Between FY 2015-16 and FY 2019-20, a total of BDT 4,212 billion has been spent for education and of this amount BDT 2,138 billion has come from the households (i.e. more than 50 percent). (5.3)

It may be argued that government and household expenditure together results in mitigating the effects of low per student primary education expenditure, but it has negative equity consequences. Whether the total expenditure meet the adequacy criterion for education expenditure necessary for acceptable learning outcome is also an important question. Households belonging to the 3rd quintile (i.e. the fifth and sixth income deciles) have been found to be spending the lowest amount per secondary level student per year. This counter-intuitive statistics merit further investigation. (5.4)

Efficiency and effective management of resources. Larger resources and budget provisions for improved school infrastructure, school feeding programs, better learning materials, and more and better paid teachers are expected to result in better learning outcomes. However, the evidence is not unequivocal - it is very much conditional on several factors relating to efficiency of resource use and effective management. It also can be argued that there is a threshold or minimal level of resource inputs that is critical to affect results positively, otherwise the resources and inputs may be wasted (see below). (5.5)

Better finance data. Better education finance data are needed that provide information comprehensively and identify incidences of who pays and who benefits. Solid methodological standards are necessary to ensure their consistency and quality. The National Education Accounts (NEA) methodology is one such approach that may help provide these standards. (5.5)

E) Governance, System Management and Planning

Effective governance is essential to achieve successful outcomes. There are different means of integrating key facets of governance into the development agenda in general and the education agenda in particular. Either way, or a combination of both, must lead to better decisions, must help the government meet its responsibilities and legal obligations, and importantly create an ethical environment for governance.(6)

Specific strategies, objectives and targets on addressing major education governance issues are not necessarily articulated in a comprehensive way in policy statements and development plans, such as, 7FYP. The new 8th Plan (2021-2025), now under preparation, can be an opportunity to articulate goals and objectives for education and skills development as well as to consider the related governance issues in a systematic and purposeful way. (6)

Structural Issues

Major structural and operational issues in education with major governance and management implications, have come to the fore from the discussion above, studies and public discourse. The structural issues, left un-addressed impede operational steps to improve system performance. These include:

- *Resource adequacy*. Very low level of public resources for education by international comparison, lack of criteria and benchmarks for resource allocation (and stagnation of education allocations in real terms as share of GDP) must be addressed;
- *Decentralisation of education governance*. With a highly centralized governance and management structures for the large educational system of the country, decentralization with accountability in educational management at all level needs priority attention;
- *New thinking about teachers*. Insufficient numbers of teachers of required quality standards and inability of system to attract and retain capable people in the teaching profession is a critical concern;
- *Effective skills development*. Supply-driven skills development with low quality and low relevance, and minimal attention to apprenticeship and needs of the informal economy (though it accounts for over 80% of employment) must be addressed;
- *Quality in higher education including degree colleges*. Unacceptably low quality of degree colleges under the National University (with 80 percent of tertiary enrolment in these colleges, which also are the suppliers of primary and secondary teachers) create a vicious create a vicious cycle in the education system and contribute to a low quality workforce;
- *One Ministerial jurisdiction for school education*. School education divided under two ministries (unlike anywhere else in the world) impedes curriculum continuity, student assessment, teacher preparation and supervision; and hampers developing, guiding and implementing an overall quality-with-equity strategy in school education.
- *A comprehensive law for education*. An overall legal framework is needed to facilitate the development of the education system to realize the goals of quality with equity; care is needed to ensure that it does not constrain reforms and their implementation.
- *Supporting development and use of professional capacity*. Human resource management and use in the education system need to nurture competency and professionalism with incentives, rewards, establishment and application of performance standards, and professional network building,
- *Partnership building*. Conditions have to be created for government, non-state actors, civil society, private sector to work together for optimal policy development, governance, resource mobilization and assessment of progress; greater voice of stakeholders at all levels needs to be encouraged.
- *A permanent education commission.* As anticipated in the National Education Policy to keep the policy under continuing review and adaptation, a permanent high-powered and statutory national education commission could help maintain the oversight and guide

coordinated development of education and human resource development; a high level coordination council may be an interim solution for this purpose. (6.1)

Operational Issues

The operational issues arise from the long-standing structural weaknesses and the consequent deficiencies in the governance, management and decision-making process in the education system. Several of these, raised above in the sub-sectoral discussion, are being addressed with varying levels of effort. It is important that these are given attention in a holistic way within a framework of necessary structural changes noted above. These include:

- *Student learning assessment*. Dysfunctional learning assessment with too many public examinations which do not measure competency and lead to distortion of teaching-learning;
- *Harmful political interference*. Criminal elements in political party-affiliated student bodies, particularly in tertiary education, vitiating academic atmosphere is major public concern;
- *Curriculum reform*. Curriculum burden and weak continuity and articulation through grades hampers curriculum implementation;
- *Disadvantaged groups*. Geographical, ethnic, and language-based access deficits; seriously inadequate opportunities for children with disabilities are barriers to inclusive education;
- *School facilities*. School building, premises and play grounds, WASH facilities, and learning facilities such as libraries, laboratories and computer connectivity– which should be built and maintained as a symbol of commitment to education and community pride.
- *Quality control in private and public universities*. Proliferation of private and public universities without essential quality control is counterproductive;
- *Education policy implementation mechanism*. Slow and fragmented approach to Education Policy 2010 implementation has been a set-back;
- *Digital technology*. Use of digital technology is essential for teacher upgrading, enriching student learning resources, efficient management information system, and ensuring wide and affordable access to the Internet for all educational institutions and students in low-income groups.
- *School meal*. School meal for all children, especially at pre-primary and primary level, implemented without burdening teaching personnel and distracting them from classroom instruction has multiple benefits.
- *Corruption*. Controlling corruption, waste, mismanagement and moving away from a culture of tolerance of these destructive practices is critical to better governance. (6.2)

In order to guide educational development to serve national development aspirations, the planning function has to be strengthened in appropriate ways. A panel of education experts with insight and interest in the interface of education planning and program development could contribute to crafting the plan paying attention to structural and operational problems noted above. This panel may be the precursor of the proposed permanent education commission. The plan has to be used as the basis for budgets in the two education ministries, agreeing on a framework of priorities and resource allocation for the education sector in a coordinated way. (6.2)

Systematic steps towards district and upazila level planning, budgets and management of education including progressively greater authority with accountability at institutional level should be the direction to pursue. (6.2)

The concluding section of this report presents a tentative policy-plan matrix, subject to further stakeholder consultation, drawing on the findings and key points from the ESA, as a step towards preparing the education sector plan. (7)

From the consultation of stakeholders held with an initial draft of ESA emerged the overall goal and three main sub-goals for the Education Sector Plan (ESP) based on the ESA. A preliminary policy-and-plan matrix was also proposed. The matrix shows the overall goal, three sub-goals and twelve outcomes related to the three sub-goals – all subject to further refinement and validation. These would serve as the take-off for the work on the education sector plan. (7.1 -- 7.2)

A sector plan provisional outline was also proposed by the participants in the consultation on the ESA as a head-start towards further work on ESP. (7.3).

1. INTRODUCTION

The economy of Bangladesh has enjoyed a steady six percent plus growth rate of GDP in the last decade, which has recently risen to over 8 percent. Per capita income has almost tripled to close to USD 2,000 compared to USD 700 in 2009. Achievements in terms of social indicators have been impressive with continued fall in infant and maternal mortality rates along with highest life expectancy (nearly 73 years) in South Asia (ADB 2019, Rahman 2019).

Improvement in access to education has contributed towards progress in social and economic indicators. There is a clear association between the level of education and poverty as indicated by poverty status and literacy rate. Extreme poverty rate was 15.8 percent and poverty rate 29.5 percent respectively among the illiterate population compared to 7.1percent and 15.1 percent among the literate population according to BBS Household Income and Expenditure Survey 2016.

1.1. SOCIO ECONOMIC CONTEXT AND THE EDUCATION CHALLENGE

Despite overall progress in social and economic progress, there are numerous hurdles to be overcome to attain nationally set development objectives, fulfilling the commitments for sustainable development (SDG 2030), realizing the growth potential of the economy and utilizing the productive potential of the country's youthful workforce.

Table 1.1: Socio-Demographic profile of Bangladesh

	Estimates					Projections	
Indicators	**2001**	**2005**	**2011**	**2015**	**2018**	**2025**	**2030**
Populations (in million)	130.5	137.8	149.7	158.9	164.6	172.4	178.9
Annual growth rate (%)	1.4	1.49	1.37	1.37	1.37	0.92	0.75
Fertility rate	2.6	2.5	2.1	2.1	2.1	1.02	0.93
Sex ratio (males per 100 females)	106	105	104.9	100.3	100.2	101.7	101.3
Population under 15 years (% of total)	37.6	35.8	32.4	29.8	28.1	24.7	22.9
School-Age Population % (5-14 years)	24.6	23.7	22.0	20.2	19.0	16.7	15.6
Population density	981	1068	1147	1200	1240	1324	1375
Urban population (%)	23.8	27.7	28.0	28.4	37.8	42.0	45.6
Literacy rate (7+ years)	46.2	52.1	55.8	63.6	73.2	79.8	87.1
Female Literacy rate (7+ years)	41.8	48.8	53.2	61.6	71.2	78.9	86.7
Poverty rate	48.9	40.0	31.5	24.3	21.8	11.2	3.8

Source: Bangladesh Bureau of Statistics (BBS), United Nations, Department of Economic and Social Affairs, Population Division (2019). World Population Prospects 2019, Online Edition. Rev. 1, and World Urbanization Prospects: The 2018 Revision.

The broad demographic characteristics of the Bangladesh including the youthful population, the compact geography, rapid urbanization, and the pace of poverty reduction and change in quality of human capital, starting from a low base, indicate great opportunities as well as challenges (Table 1.1).

Creating sufficient employment for the youthful workforce of the country is one of the most critical concerns to be addressed, particularly in the context of the changing nature of jobs and employment driven by new technologies. A special focus on the education system and enhancing relevant skills and competencies of people have become an imperative. By one estimate, among 28 countries of the Asia-Pacific region, Bangladesh has the second largest educated unemployment rate (ILO, 2018). The abundant youthful population offers as much the potential

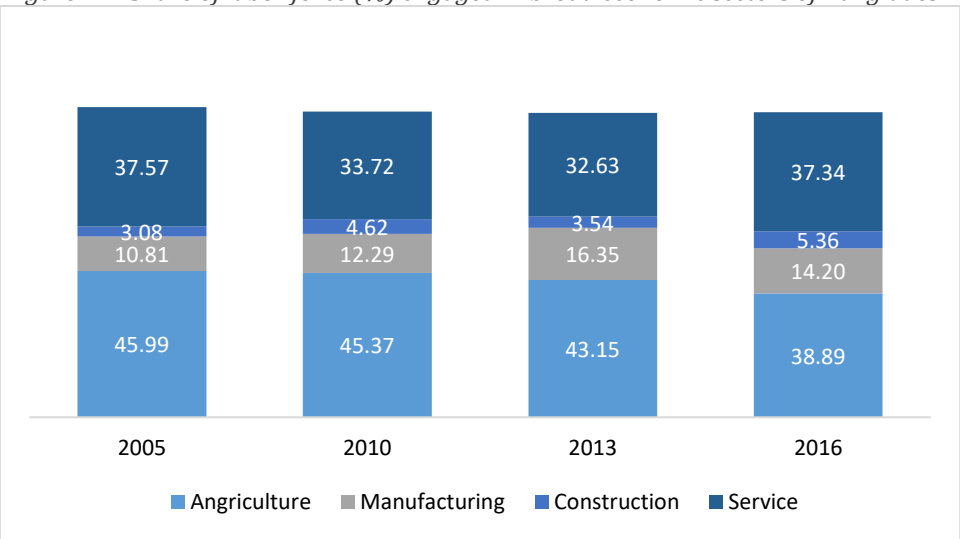
of the demographic dividend as it holds up the Damocles's sword of a potential demographic calamity, unless the opportunities for quality education and effective skills formation for youth can be created.

Bangladesh is committed to the 2030 SDG agenda including SDG4, the overarching education goal. This goal commits the country to "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all." The country -- with two ministries for the education sector, namely, the Ministry of Primary and Mass Education (MoPME) and the Ministry of Education (MoE) -- has one of the largest centralized education systems in the world with roughly 40 million students, 200,000 educational institutions, and a million teachers and other education workforce members. School education, pre-K to pre-tertiary, divided under the jurisdiction of the two ministries in a centralized government structure, presents special governance and management challenges. This is particularly so as the country attempts to move towards greater coherence and set priorities in education and human development in alignment with the SDG targets and development aspirations for an emerging middle income and ultimately a developed country.

Structural change in the economy as the country moves to the middle income status --- with employment and GDP share shifting from farming and agriculture to industry, manufacturing and services -- is changing the composition of employment. This change has significant implications for education and skills development.

The trend of decrease in employment in the agriculture sector (over half at the beginning of the century and under 40 percent 20 years later) and the growth of industries and services employment will continue to accelerate (see Figure 1.1). It is projected that by 2030, the share of labor force engaged even in skilled agriculture and forestry may decrease significantly, and that of managerial/professional/technical jobs in all sectors may increase significantly.

Figure 1.1: Share of labor force (%) engaged in broad economic sectors of Bangladesh



Source: Labor Force Survey (LFS) 2016-17, Bangladesh Bureau of Statistics

A key measure of how the education and skills development sub-sectors of the education system is doing is the situation of employment of workers in productive jobs with at least a living wage. The national average unemployment rate as of 2016 is 4.2 percent, with the rate higher in urban areas (6.7 percent) compared to rural areas (3.1 percent). (BBS, LFS 2016).

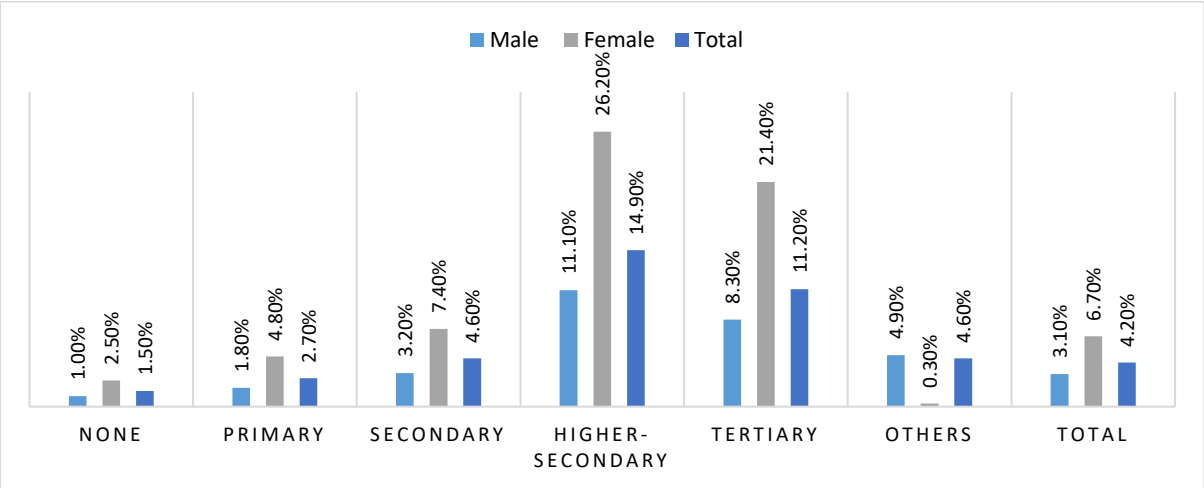
The unemployment rate is not an accurate measure of joblessness because the methodology applied does not necessarily consider everyone of working age who doesn't have a job including those underemployed and marginally attached workers working part time or at a very low wage or discouraged workers who may have given up looking for a job. With the large majority of the working population in the informal economy in Bangladesh, without legal employment contracts

and not regulated by labor rights or work conditions standards, official unemployment rate underestimates significantly the actual situation of unemployment.

The vulnerability of workers in the informal economy was recognized in the Sixth Five Year Plan (6FYP) of Bangladesh (2011-2015). The situation, it said, "calls for changing the structure of employment by withdrawing labor from low productivity agriculture and informal jobs (also known as disguised unemployment) to higher productivity jobs in the manufacturing and formal services" (6FYP document, March 2011, p. 46).

Of particular significance for the purposes of this analysis is the employment situation of the educated young people. As shown in Figure 1.2, the unemployment rates were found the highest for those with higher secondary education (15 percent) and those with tertiary degrees (11 percent).

Figure 1.2: Percentage of Unemployment by sex and education level (as of 2016) in Bangladesh



Source: Labor Force Survey 2016, Bangladesh Bureau of Statistics (BBS)

If the unemployment rate among job-seekers increases with the level of education, what are then the pertinent questions? Is it just a problem of mismatch between the education content and outcome and the labor market needs, which is often given as a stock answer? Even if this is so, there are two sides to the skills and jobs equation; it is necessary to look at both sides – the quality of education/training and nature of the employment market -- to understand the link. But are there other issues, such as, economic investment policies that lead to jobless growth, employment market management, social and cultural attitudes about work, the changing nature of work, and access to information about employment opportunities? The context and complexity of how education and training lead to skill formation and skills turn into productive and decent work opportunities have to be recognized. Even if the mismatch or skills gap hypothesis is given prominence, unpacking this problem and finding solutions take us to the heart of change and reform to be visualized and implemented in the education system and its various sub-systems. (Ahmed, 2016). The continuing struggle obviously is to build an inclusive system of education with quality and equity that serves the vison and aspirations of the nation.

It is appropriate to note at this point that the unexpected Covid-19 pandemic and its health, social and economic impact have brought to the fore the critical importance of emergency preparedness and response capacity and their educational implications. Beyond the emergency dimension of the crisis, its broader and longer term impact, and the role of education in building resilience of people in coping with expected and unexpected hazards, also have to be considered. This general topic is discussed later under cross-cutting issues.

1.2. RATIONALE FOR THE ESA

There is no debate on the proposition that the education sector as a whole requires significant reforms. The ability and willingness of the government and non-government actors to invest in education is increasing along with economic growth. These investments must be planned in a manner that responds to the needs and aspirations of society and individuals. This requires a good understanding and clear articulation of the current challenges.

Each year some 1.5 million new faces join the work force of the country. It is necessary to look at Bangladesh's own experience to seek clues to understanding and solving problems. For example, a survey by Bangladesh Institute of Development Studies (BIDS) shows that 44 percent of private university graduates are employed without a waiting period compared to 32 percent for public e universities (Sujon, 2019). The report notes that the leading private universities, more than the public universities, maintain communication with the industry/employer via initiatives such as job fairs and internship placements. The Labor Force Survey of 2013 by BBS revealed that unemployment rate among youth with TVET diplomas was significantly lower than those with Bachelor's/Master's degree (Rahman, 2017). At the same time, there are questions about the quality and relevance of public and private higher education providers as well as the TVET institutions of different kinds. The positive aspects of the programs and institutions have to be examined along with the limitations from the perspective of the overall objectives of the education system and the component sub-sectors. (See more discussion in the next section.)

A national education policy was adopted in 2010 which indicated the overall objectives and strategies for educational development. There also have been various development programs and plans for sub-sectors of education such as primary education, secondary education, non-formal education and technical and vocational education and training.

The Seventh Five Year Plan (7FYP) 2016-2020 incorporates some of the education reform objectives and indicates directions for capacity development for education. (GED, 2016, Ch.11). The Eighth Five Year Plan for the period 2021-2025 is also in preparation. Meanwhile, in 2015, the SDG2030 agenda including the education priorities of SDG4 have been adopted globally in which Bangladesh is a party. Bangladesh government has indicated its commitment to the SDG agenda and has set up a high level coordination mechanism to work on aligning the SDG goals and targets and the national development plans and programs (including the five-year plans and the sectoral programs).

At this juncture an education sector plan framework based on an objective sector analysis is necessary to support the education sector components of the five year plan, the SDG-related initiatives and the subsector programs. Such a plan framework would contribute significantly to better planning, coordination and implementation of the education programs. This would also be a step towards promoting a holistic view and mitigating various problems of fragmentation in education planning, implementation and governance mechanisms. It is in this context that a process was initiated to conduct a review of the education sector of Bangladesh involving analysis of national policy documents, program components and relevant education statistics as well as consultation with national level stakeholders. A buy-in of the government and citizen stakeholders of this process and its results is essential to avoid this being a paper exercise.

The sector analysis in this report begins, following the introduction (Section 1), with an overview of the policy environment and the gist of policies as stated in various relevant documents (Section 2). This is followed by a broad mapping of the subsectors of the education system (Section 3) and main cross-cutting concerns (Section 4) and governance and system management issues (Section 5). The state of education resources and resource management is discussed next (Section 6). The concluding section envisages a policy and planning matrix and the steps towards the formulation of an education plan framework (Section 7). In the interest of highlighting the main points concisely, some relevant details in each section are placed in Annexes.

2. Policy Environment

The Ministry of Primary and Mass Education (MoPME) oversees pre-primary and primary education (up to class V) and adult and non-formal education. The Ministry of Education (MoE) is responsible for secondary (from class VI to class XII) and tertiary education in both general and madrasah streams, as well as technical and vocational education and training (TVET) and parts of professional education. School education, therefore, is divided under two ministerial jurisdictions creating a special policy context. MoE operates through two divisions, namely: Secondary and Higher Education Division, and Technical and Madrasah Education Division. It should be noted that there is also a distinct madrasa stream known as the *quomi* (national) which is wholly private and does not come under government oversight. In respect of technical and vocational education, over 20 government ministries and agencies are involved in varying degree which has important implications for coordination and policy coherence.

This section presents key elements of the National Education Policy 2010, the overall policy statement that is intended to guide educational development, as well as highlights of key documents related to policies in major sub-sectors. The latter include the Non-Formal Education Policy (2006) and the Non-formal Education Act of 2016, legislation about compulsory primary education of 1990 and evolution of primary education towards a "sector-wide" approach; quality improvement strategies in secondary education and shift towards a sub-sector program; and the National Skill Development Policy 2011 and other related documents.

2.1. National Education Policy 2010

The National Education Policy, approved by the Parliament in 2010, provides a framework for fulfilling the role of the educational system in the nation's human resource development. Its key features include:

- *Universal education up to grade 8*. At least one-year of pre-primary education and primary education (of five years at present), to be extended up to grade 8, should become universal within the decade.
- *The historically evolved reality of diverse provisions in primary and secondary education* – The existence of government, government-assisted, NGO and private sector schools, and the madrasa is recognized. It is agreed that this diversity may continue, but all institutions would follow a common core curriculum and adopt minimum common standards regarding learning provisions.
- *Multiple delivery modes with common core curriculum and standards*. The common core curriculum for all types of secondary level institutions (including madrasa) would include Bangla, English, mathematics, science, Bangladesh studies, and IT, and would be complemented by additional subjects pertinent for each major stream – general, vocational, and madrasa. In addition to the vocational stream in schools, there would be various forms of skill training activities according to graded national skill standards designed to meet skill needs in domestic and overseas employment markets. Instruction in science and IT would be given special attention.
- *Literacy and non-formal education*. A literacy programme to eliminate adult illiteracy by 2014 was proposed. Non-formal education is seen as a means of providing a second chance to those who drop out of formal schools, complementing the "literacy campaign."
- *Quality improvement in tertiary education*. Tertiary education institutions, both public and private, would be encouraged to take responsibility to establish and maintain quality standards within agreed framework. A four-year degree programme should be acceptable higher education qualification for most professional level occupations except for those aiming for teaching, research and other jobs that call for specialized expertise. A three credit English course should be compulsory for all degree students. Various quality-

enhancing investments in facilities and teacher upgrading are proposed. Pedagogic technology such as Internet and education television channels should be supported. Specialized professional education in medicine, agriculture, engineering, law and business should be made more practical and their quality enhanced with closer involvement of the professional bodies.

- *Student assessment to discourage rote learning*. Assessment of learners' achievement should be based on public examinations as well as continuous evaluation by teachers, which should aim at assessing cognitive, affective and reasoning domains.
- *Teachers' status, incentives and training*. Teachers' recruitment, training, professional support and remuneration should be key elements of the strategy for improving quality in education. A Teacher Recruitment and Development Commission should be established to recruit teachers and support their professional development.
- *Governance and management measures*. A consolidated education law should be enacted providing a legal framework for educational governance and management in line with the purposes of the new policy.

It can be seen that the policy recommendations are in the form of normative goals or preferences expressed in general terms. Implementation of the policy called for establishment of mechanisms and processes, preparation of phased operational plans, and reconciliation of differing views and making choices among options on certain issues. With a decade's hindsight, it can be said that major elements of the policy remain to be implemented. Arguably, a concerted and systematic effort based on an operational plan and phasing of priorities was required to be mounted.

The policy placed the goals and strategies under 18 components. Without an overall implementation effort, progress has been made in implementing parts of some components. It would be appropriate to look at the components, assess where progress has been made and where it lagged, and judge their relevance as the sector plan for the next phase of educational development is considered. The components, the goals and the strategies are shown in Annex Table 9.1, Overview of National Education Policy 2010.

2.2. Non-Formal Education Policy and NFE Act 2016

A Non-formal Education (NFE) Policy was adopted in 2006 recognizing the need for expanding opportunities for adult literacy and education as well as providing a second chance through non-formal approaches to children who either did not enter primary education at the appropriate age or dropped out early without completing primary education. The National Education Policy of 2010 also gave priority to serving children, adolescents and youth in order to meet their various learning needs through non-formal means, when they are not served effectively through formal schools (MoPME 2006; MOE 2010).

As a step towards making the Non-formal Education Policy operational, the Non-formal Education Act 2016 was adopted as a legal framework for adult and non-formal education. It was intended to accord priority to non-formal education (NFE) for youth and adults. The Act provided for a statutory non-formal education board which would evaluate NFE activities and facilitate conducting non-formal education examinations, prepare curricula and form improvement plans for the sector. The Bureau of Non-Formal Education (BNFE) would serve as the administrative body for non-formal education under the guidance of the Board (Government of Bangladesh, 2016).

This act defines the scope, extent and desired quality of non-formal education. It also defines the methods, means and the curriculum for delivery of NFE. It outlines the organisation and functions of the Bureau of Non-Formal Education and the Non-Formal Education Board created under this act. It provides for setting up an advisory council to advise the Government on non-formal education.

Despite the adoption of the Act, necessary actions to make the law operational lagged. A systematic implementation effort was necessary to achieve the objectives of the NFE Policy and adult and non-formal education part of the National Education Policy 2010, which had anticipated elimination of illiteracy by 2014. Parts of activities foreseen in the Policy and the Act, in the area of adult literacy and "second chance" non-formal primary education were initiated in recent years. Work was also begun to design a Non-formal Education Development Program (NFEDP), following a sub-sector approach, but it is yet to receive government approval and funding (see below).

There is some concern among policy-makers and education experts about how the quality and efficiency issues of past literacy and non-formal education activities can be handled, how the programmes can be truly responsive to the needs and circumstances of learners, how management and governance can draw effectively on NGOs which have a track record, how the activities can be designed to fit into a lifelong learning perspective, and if substantial investments proposed can be justified by the actual results achieved. The relevance and importance of non-formal and adult learning, however, cannot be ignored in any future education sector plan. The components, objectives and key features of NFEDP as it stands now have to be examined critically in the process of preparing the education sector plan.

2.3 Towards Universal Primary and Pre-primary Education

The Constitution of Bangladesh calls for free and compulsory education (Article 17*): "The State shall adopt effective measures for the purpose of: (a) establishing a uniform, mass-oriented and universal system of education and extending free and compulsory education to all children to such stage as may be determined by law; (b) relating education to the needs of society … and (c) removing illiteracy within such time as may be determined by law"*. The Primary Education (Compulsory) Act (1990) operationalised the constitutional provision by defining the obligations of the state and citizens and introducing necessary regulations (MoPME, 2016b). The National Curriculum and Text-Book Board Ordinance (1983) established the body that prepares the curriculum, defines the learning content and objectives and produces all textbooks for primary and secondary education.

The Bangladesh Vision 2021 was prepared to articulate the Government's vision and reflect the hopes and aspirations of Bangladesh citizens. It identified eight goals and proposed a set of specific measures to be achieved by 2021. The Perspective Plan lists following key objectives regarding primary and mass education:

- Ensuring inclusiveness and access as the duration of primary education is extended from the present grade 5;
- Upgrading the curricula to the need for quality education in a gender-sensitive manner enabling all students to acquire human qualities on one hand and basic skills on the other;
- Decentralizing the administration and management system to develop a good mechanism for the supervision and monitoring through involvement of local citizens in addition to official processes; and
- All illiterate, semi-literate and neo-literate young persons and adults will have access to learning opportunities for basic education, adult literacy, and continuing education, including skills development for jobs or self-employment (MoPME, 2016b).

Reform and improvement of primary education in Bangladesh since the turn of the century has been attempted to be carried out with an integrated approach known as the sector-wide (in

reality a sub-sector) approach named the Primary Education Development Programme (PEDP).This programme is implemented through the Primary Education Directorate of the Ministry of Primary and Mass Education and is supported by multiple development partners.

The Fourth PEDP is intended to support Bangladesh's primary education to become an efficient and effective system that provides quality primary education to all children of Bangladesh. The program builds on the achievements of previous programs with emphasis on strengthening quality of education, improving access to education, and enhancing institutional management through greater decentralization (see below about the status of sub-sectors).

The components and the key features of PEDP4 are shown in Annex (Table 9.2) Overview of the PEDP 4. It may be noted from a policy perspective that the program remains focused on primary education up to grade 5. A plan and strategy to achieve the NEP 2010 objective, and noted in Vision 2021, of extending universal education up to grade 8 are yet to be developed. It is also largely confined to formal primary education under the jurisdiction of the Directorate of Primary Education. The madrasa stream, primary education under private and NGO management and proprietary English medium institutions, which are growing in number, have remained outside the scope of PEDP4. Aspects of its implementation are discussed in the next section.

2.3. Secondary Education Policy Objectives and Development Initiatives

Bangladesh basic education development in recent decades have focused on primary education up to grade 5 aiming to achieve the goal of universal and compulsory primary education. Secondary education (grades 6 to 10) and higher secondary education (grades 11 and 12) have remained mostly a public-private partnership, with the government subsidizing schools for teachers' salary and some other costs, rather than a full public responsibility, as in the case of primary education.

Along with larger outputs from primary education, secondary education also has expanded in recent decades. While expansion of access, quality and equity have remained broad objectives, the sub-sector has not been guided by specific and time-bound targets regarding expansion of access and stronger inclusion and equity – major policy concerns in the context of SDG4 target of universal and free secondary education. Nonetheless, a major achievement in Bangladesh has been the achievement of gender equity in access and participation in secondary education, supported by various proactive policy measures including stipends and tuition exemption for girls.

Secondary level madrasas (other than quomi madrasas), also subsidised by the government, has become a significant component of secondary education as is the vocational/technical stream of secondary education. Since 2018, a separate division has been created to plan qualitative change and better management of madrasas and technical vocational streams of secondary and higher secondary education (see below).

Secondary education sub-sector has so far been characterised by the existence of several discrete projects with insufficient coordination and sometimes duplicative interventions. Unified and more efficient approaches to funding, procurement, monitoring, and auditing with common fiduciary safeguards and standards built into a harmonized program were needed. A harmonized approach is expected to help better coordinate reforms, promoting synergies and strengths. System-wide capacity development and its institutionalization were, therefore, considered necessary (Ministry of Education, Secondary Education Development Program, 2018).

The sub-sector program initiated in 2018 recognizes that quality improvement is neither linear nor simple. It requires interventions on many fronts simultaneously. For example, students' learning motivation and skills cannot be developed without valid and reliable assessment of learning. Standards of teacher performance and training, monitoring, and incentives based on performance standards are as necessary as provision of safe drinking water and toilet facilities in schools.

The sub-sector proposal emphasizes that without qualified and effective teachers and sound pedagogy in the classroom, efforts to improve quality can yield little result. Provisioning adequate subject teachers with appropriate subject background, paying careful attention to teacher development through well-designed pre-service and in-service training programs, providing a career path for teachers, effective and standards-based teacher performance monitoring, providing opportunities for mentoring, and ensuring their regular presence in the classroom are seen as critical to improving teaching and learning.

International experience suggests that orienting talented young people to teaching as an occupation, education should become a discipline in the regular undergraduate tertiary education along with measures for ensuring status, rewards and a career path in the teaching profession. The quality of the academic programme and facilities in these tertiary institutions must be maintained to achieve the results (discussed further under cross-cutting issues).

It is worth-noting from a policy perspective that the sub-sector development program does not directly address some national policy objectives, such as, extending universal and compulsory education up to grade eight, universal quality secondary education for all by 2030, a stated target of SDG4; and instituting a common core curriculum for all secondary level institutions, anticipated in Education policy 2010.

Three major components, viz., quality and relevance of secondary education; access and participation in it; and governance, financing and management of SEDP are elaborated under 16 anticipated goals of the program. These and key features of the program are presented in the Annex (Table 9.3), Overview of SEDP 2018.

2.4. SDG4 Strategic Framework for Bangladesh

The SDG4 Strategic Framework has been prepared under the auspices of the SDG coordination unit at the Prime Minister's Office and with involvement of the General Economics Division of the Planning Commission as well as major stakeholders such as MOE and MoPME. This has been undertaken as a part of formulating an overall SDG Strategic Framework for the country. It provides a general analysis of each SDG4 target in terms of progress made against each target along with issues and challenges and recommended strategic directions. This analysis suggests that there are significant elements in present provisions and policy discourses that support and complement SDG4 targets and indicators. The framework document affirms that there is high access in primary and secondary education in Bangladesh. However, there are challenges in many areas. (See SDG4 Strategic Framework, 2019)

How the education system serves the objective of enhancing skills and competencies of young workers, especially the new entrants to the workforce, has been a particular area of emphasis in the SDG4 strategy framework. Although access to TVET has increased substantially in recent years, (from around 2 percent of all secondary level enrollment to over 16 percent in a decade), it is still regarded low in relation to the employment market needs and learning opportunities both at secondary and post-secondary levels (see below).

Regarding equity and inclusiveness in education services, the range, as presented in the SDG4 Strategic Framework, is from low to medium in different sub-sectors. Only primary and secondary education assessed at medium level in terms of various aspects of equity and inclusion. TVET and tertiary education remain at the low end of the spectrum in this regard. All four main sub-sectors – primary, secondary, tertiary and technical-vocational -- are perceived as falling in the low category in respect of quality attributes, such as, student learning outcome, lifelong learning opportunities and serving sustainable development objectives. This means that these three aspects of quality in the education system must be aggressively addressed at all levels and for all types of education. The key features of the SDG4 strategic framework including components, challenges and strategic directions are shown in Annex Table 9.4,: Components, challenges and strategic directions highlighted in the SDG4 Strategic Framework.

SDG4 strategy framework suggests, and would logically call for, substantial rethinking in the objectives, priorities and organizational structures of the sub-sectors of education. How these relate to and shape various current sub-sectoral plans and programmes and are reflective of NEP2010, the official overall policy statement, remain a moot point. It may be argued that there is a degree of disconnection between ongoing educational development plans and targets, on one hand, and SDG4 strategy and objectives, on the other. How these can be reconciled is a continuing concern.

The organizational structure and governance mechanism of the education system that exist now need to be looked at from the point of view of how these fit the new conditions and needs of the system. Do they fit the broader purposes of the skills and capacity development of people and the more specific targets, objectives and priorities of the subsectors of the education system? The structure, largely inherited from the colonial time and modified somewhat at the post-colonial (post-partition) period before emergence of Bangladesh was designed for another era and in a different context of national development aspirations. The global environment that existed then also has changed in significant ways.

Looking to the future, governance and system management issues need to be re-examined. Cases in point are school education management split under two Ministries, growth of a faith-based parallel system of education (a post-1975 phenomenon), demand for universalization of education up to secondary and higher secondary level (rather than only primary), reshaping education with the lifelong learning perspective, new skill development needs for work in the future, and so on. These questions deserve due consideration as the plan for the future is formulated.

The brief review of the policy environment, by and large, indicates that certain priorities have been stated largely in aspirational terms. Effective strategies, operational plans and implementation mechanisms and means have to be worked out on some of the policy objectives. Where actions have been taken and progress has been made and where progress has lagged in different sub-sectors of the education sector are discussed in the next section. This assessment of subsectors provides an overview of the current status of each including the scope of services, key actors, challenges, and priorities and prospects for the future.

3. Sub-sectors Status and Key Issues

This section presents the current overall status of the sub-sectors of education: pre-primary and primary, secondary including higher secondary, TVET, non-formal including adult education, and tertiary education. Key aspects analyzed here are: 1) Access (enrollment, number of institutions), 2) Internal Efficiency (cycle completion, dropout, repetition rates), and 3) Quality (quality input indicated by teachers' number and characteristics and learning outcome indicated by available assessment data).

3.1. Early Childhood Development and Pre-Primary Education

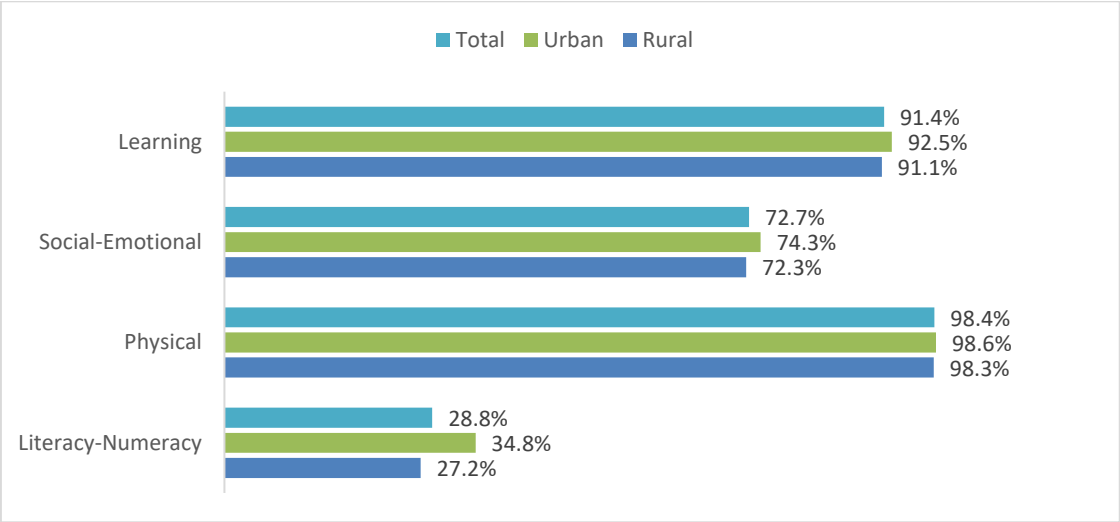
One-year of pre-primary education (PPE) starting at age 5-plus has become widely available over the last decade. Every government primary school is required to operate a pre-primary class, though attendance of the age-group is still not mandatory. From 2010 to 2017 enrolment in pre-school increased dramatically by three times, rising to 3.2 million in 2017. The percentage of Grade 1 students who had attended PPE increased from 50% in 2012 to 93% in 2018 according to DPE as reported in Annual Sector Performance Report of 2019. Multiple Indicators Cluster Survey (MICS) carried out by BBS indicated that 73% of first grade students had attended PPE. There may be a difference in the methodology between school-based and household-based data gathering, but the latter is still a creditable achievement.

Progress has been made in preparing the curriculum, teaching learning materials, teacher recruitment and training and providing for dedicated classrooms. There are still gaps in facilities and quality of services. Due to shortage of classrooms in the school, a dedicated classroom for PPE does not exist in many schools. Classrooms are not attractive for young children in many schools, where children's work are not displayed on the wall in the absence of a dedicated PPE room. There is a shortage of trained PPE teachers, especially in recently nationalized primary schools. Less than satisfactory student teacher ratio and the number of well-trained dedicated teachers in PPE impair quality of instruction. A weak area in PPE is monitoring, supervision and professional support, though collaboration with NGOs in this respect was anticipated in a GO-NGO cooperation guideline approved by MoPME (MoPME, 2008; DPE, 2016; Bhatta et al, 2020).

The SDG4 Strategic Document for Bangladesh highlights the increasing public interest in ECD, especially pre-primary education. A key decision under consideration by the government is the gradual extension of the current one year of pre-primary education to two years, starting at 4+ and greater parental involvement. A pilot project is likely to begin selectively in schools in each upazila. There is little debate that such a move can enhance children's physical and cognitive development, their social and emotional growth, their school readiness and their subsequent continuation and performance in school. The objectives can be realized to the extent the activities are carried out maintaining acceptable quality. The first important step would be to ensure that the weaknesses in the present one-year programme are addressed and not reproduced in the extended programme. In this regard, the Early Learning and Development Standards (ELDS) developed under the auspices of MOWCA provide quality guideline.

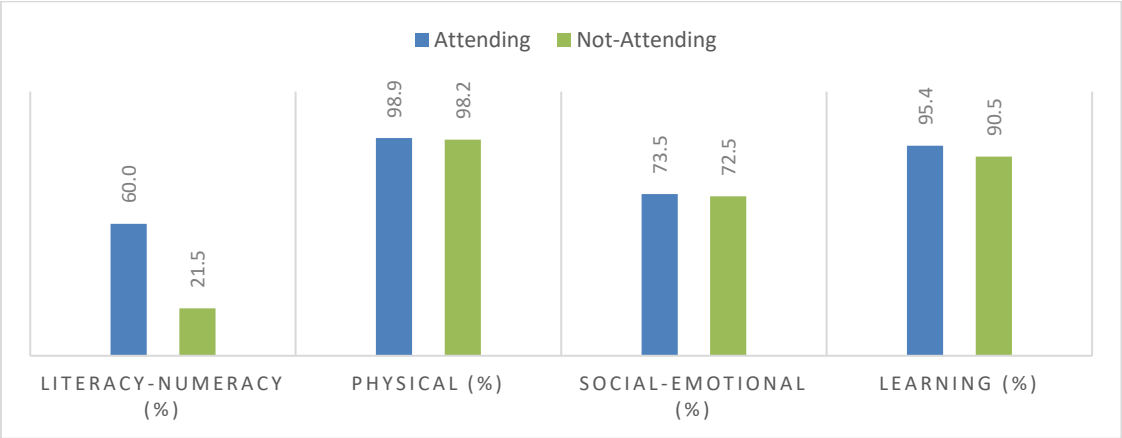
Apart from one year of pre-primary schooling available in government primary schools, (and potentially a two-year PPE), public provision of ECD programs is limited in Bangladesh (Dev, et al. 2018; 2020). The latest Multiple Indicator Cluster Survey (2019) revealed that only 19% of children in the age of 36 to 59 months attended some form of organized early childhood development activity such as a day-care center, community-based child development centre or a privately operated nursery.

Figure 3-1: Share (%) of children aged 3-4 years who are developmentally on track in terms of indicated ECD domains



Source: Multiple Indicator Cluster Survey (MICS) 2019, BBS

Figure 3-2: Share (%) of children aged 3-4 years who are developmentally on track in indicated ECD domains (by attendance in Early Childhood Education)



Source: Multiple Indicator Cluster Survey (MICS) 2019, BBS

It is interesting that MICS (Figure 3-1 and Figure 3-2) show most children do well in physical and cognitive development; and there is no major difference in being developmentally on track between those benefiting from ECD services and those not benefiting. MICS reports that 3-4 year olds are doing reasonably well with or without ECD services in physical and cognitive development, moderately well in social-emotional development, but poorly in literacy-numeracy. This raises questions about the quality of the ECD services; in any event a very small proportion of young children can participate in organised ECD activities, since a substantial public sector program for such services do not exist. Another question is what literacy-numeracy domain skills 3-4 year olds are actually expected to acquire.

Besides good progress in pre-primary education, coverage of under-fives in any type of organized educational activities remains low. There is ample evidence that lack of access to quality early learning services means that children will be ill-prepared for schooling, leading to poor performance and a proportion dropping out from school (*Lancet*, 2016).

Early childhood development, care and education for young children before they enter school is an area of responsibility outside the remit of the education sector. A policy for comprehensive early childhood care and development has been adopted in 2013 with Ministry of Women and Children Affairs (MOWCA) as the responsible Ministry for overseeing its implementation. Progress has been slow, but the inclusion of early childhood development as an SDG target (SDG4.2) is expected to generate a momentum. There is clearly need and opportunity to collaborate among the Ministries in this respect to mutual benefit.

To sum up, in addition to extending the duration of good quality pre-primary education, there is clearly a need for a more systematic and comprehensive approach for participation in organized ECD activities for children below pre-primary stage, as anticipated in SDG4 indicators for early childhood development. Inter-institutional collaboration of GO-NGO would be a significant enabler for effective implementation of such an initiative.

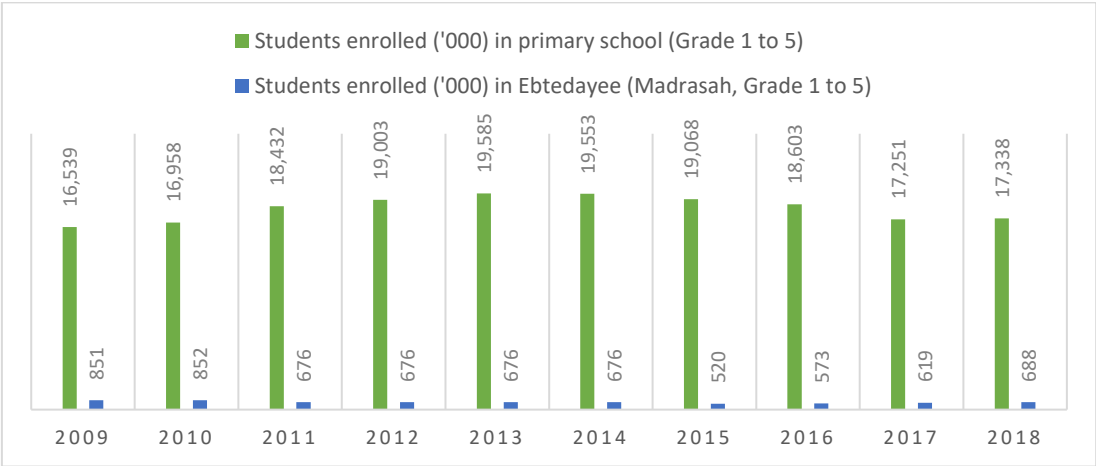
3.2. Primary Education (including Ebtedayee Madrasa)

Bangladesh has achieved near universal enrolment of primary education with gender parity. However, quality remains the central issue. The SDG4 Strategic Framework emphasizes the need for steady progress in ensuring quality of education by improving the learning outcomes for all children (SDG4 Strategic Framework for Bangladesh) This will require going beyond mere continuation of plans already adopted, but much re-shaping based on the SDG strategy framework.

Access and Equity

As of 2018, almost 18 million students were enrolled in primary level across the country, including 688 thousand in Ebtedayee Madrasahs. The madrasah enrollment shows a declining trend during the recent decade (Figure 3.3).

Figure 3.3: Students enrolled in primary level (Grade 1 to 5) in Primary Schools and in Ebtedayee Madrasahs



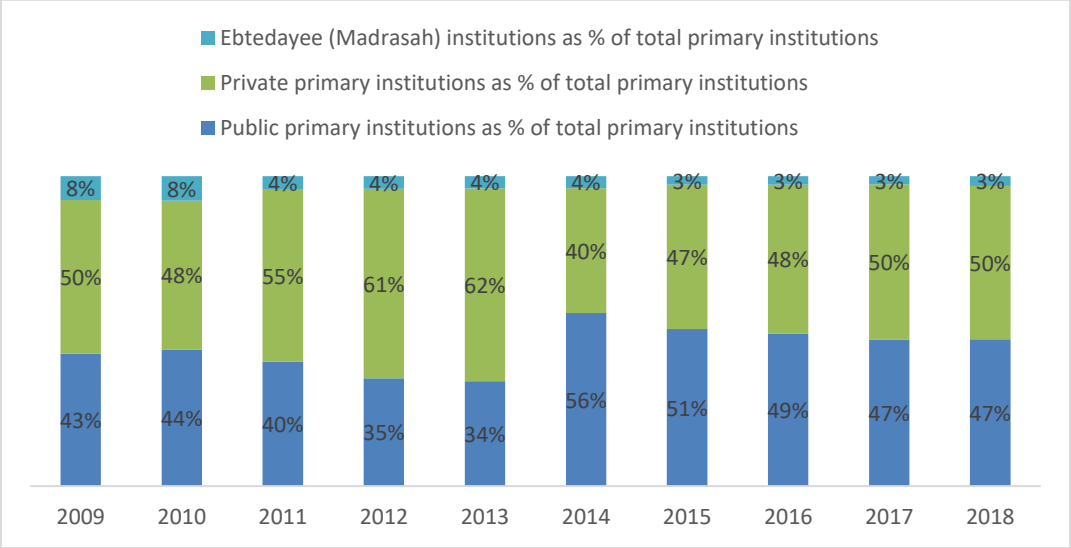
Source: Bangladesh Education Statistics 2018, BANBEIS

As of 2018, share of girls in general primary schools was 50.7 percent and that in Ebtedayee Madrasahs was 50.0 percent (BANBEIS, 2018).

Of the total primary education institutions, a little over half (53 percent) are managed publicly, rivately, while the rest are managed privately. (See Figure 3.4.) However, in respect of enrollment, two-thirds of the students were in government schools in 2018.

There has been a decline of non-government institutions since 2014, when the erstwhile category of registered non-government primary schools were nationalized (brought under government management). However, there appears to be a recent trend of increase of non-government providers, apparently because of a rise in numbers of proprietary kindergartens. The kindergartens with play-groups, pre-primary and primary classes, run on a commercial basis, are being increasingly patronized by parents even in rural areas, who can afford the fees.

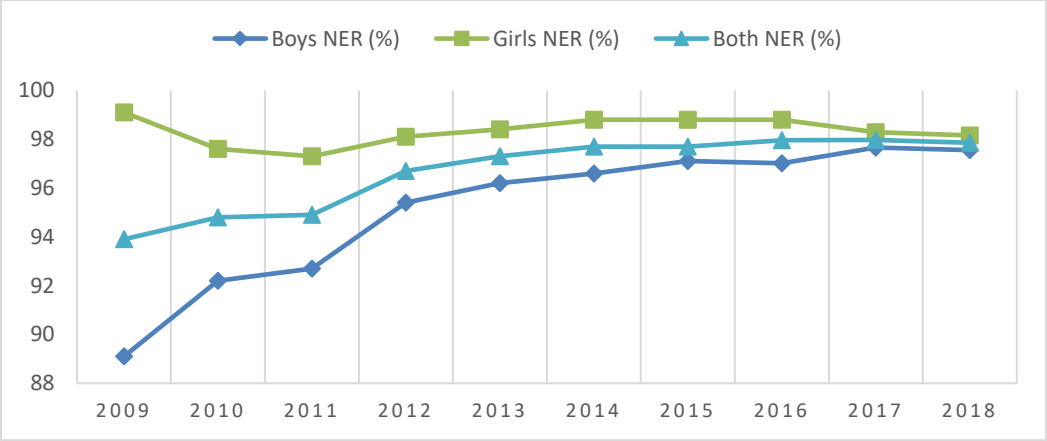
Figure 3.4: Distribution of types of primary education institutions



Source: Bangladesh Education Statistics 2018, BANBEIS

Net Enrollment Ratios (NER) for boys and girls have converged towards parity between 2009 and 2018. In 2009, NER for boys in primary school was just over 89 percent, compared to over 99 percent for girls. These two have converged to a national average of 98 percent as of 2018. (see Figure 3.5)

Figure 3.5: Net Enrollment Ratio (NER) at Primary Level (including Ebtedayee Madrasah)

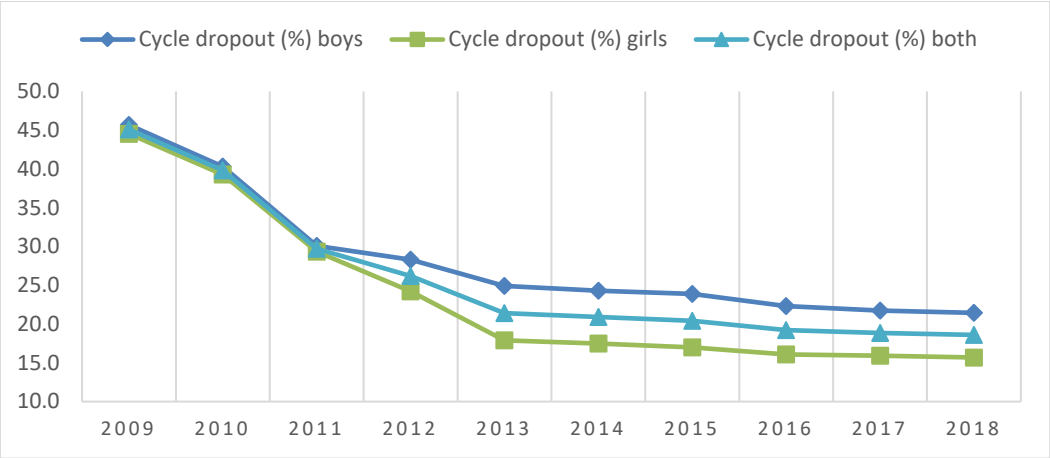


Source: Bangladesh Education Statistics 2018, BANBEIS

Internal Efficiency

Cycle dropout rate for primary level has declined from over 45 percent in 2009 to below 19 percent in 2018. However, the dropout rate is higher for boys (21.4 percent) than for girls (15.7 percent) (see Figure 3.6).

Figure 3.6: Cycle dropout rate (%) for Primary level (including Ebtedayee Madrasah)



Source: Bangladesh Education Statistics 2018, BANBEIS

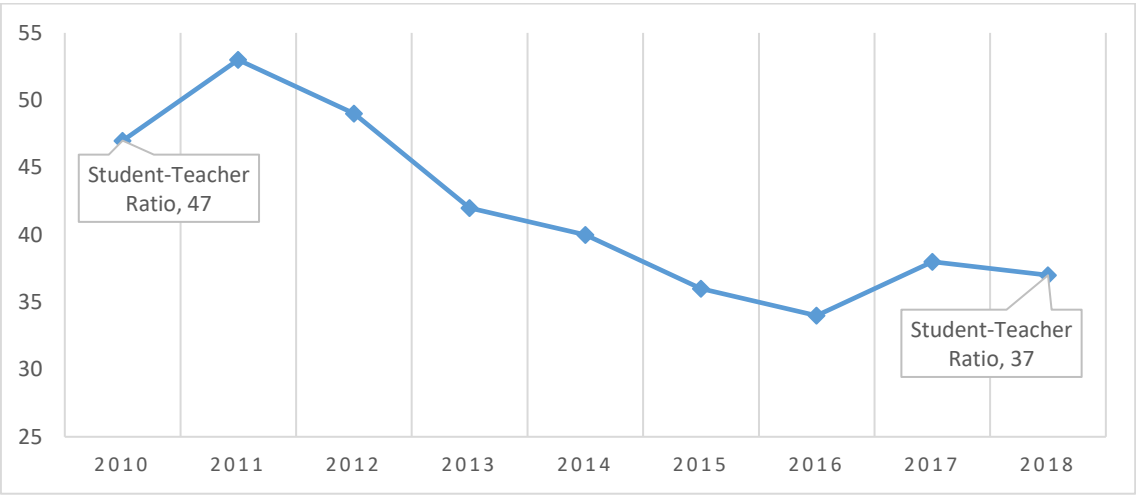
As of 2018, repetition rate is also higher for boys (5.8 percent) compared to that for girls (5.0 percent). The overall repetition rate has come down significantly from 12.1 percent in 2009 to 5.4 percent in 2018 (BANBEIS, 2018).

Quality-related inputs and outcomes

Quality of education can be meaningfully discussed by taking into account the essential inputs for carrying out teaching and learning and the learning outcomes – what the learners achieve by way of leaning. Among various inputs – physical facilities, learning materials and equipment, the education workforce and the management of the inputs -- the key quality-related input is the teacher. The number of teachers and their skills, capabilities and motivation determine how the system can perform.

The number of teachers in primary education increased by over 90 percent in the decade since 2009; as of 2018, there were 685 thousand teachers in primary schools (BANBEIS, 2018). Growth in enrolment has been slower during this period due to lowering population growth. The overall student-teacher ratio has thus improved from 47 to 37(Figure 3.7). The share of female teachers in primary level has also increased, and currently (as of 2018) over 60 percent of the primary teachers are female (BANBEIS, 2018)).

Figure 3.7: Student-Teacher Ratio (STR) at Primary level



Source: Annual Primary School Census 2018

The overall improvement in student-teacher ratio is commendable; however, it is still considerably higher than what is required to maintain a class size of no more than 30 students with a teacher in charge. An effective student-teacher ratio in many Bangladesh primary schools is considerably higher than a gross ratio of 37 may suggest. Teachers away from classroom due to leave of absence, maternity leave for women teachers, teachers being sent for training, teachers engaged in non-teaching work, and difficulty of deploying teachers in remote areas result in class sizes in some cases up to a hundred students or one teacher trying to teach more than a class simultaneously.

Mere physical presence of teachers in the classroom does not guarantee effective teaching-learning. Professional skills and competence of teachers, their professional commitment, and professional support and supervision for them determine how teachers and students perform. These issues, a concern across the board in all education sub-sectors, are discussed later.

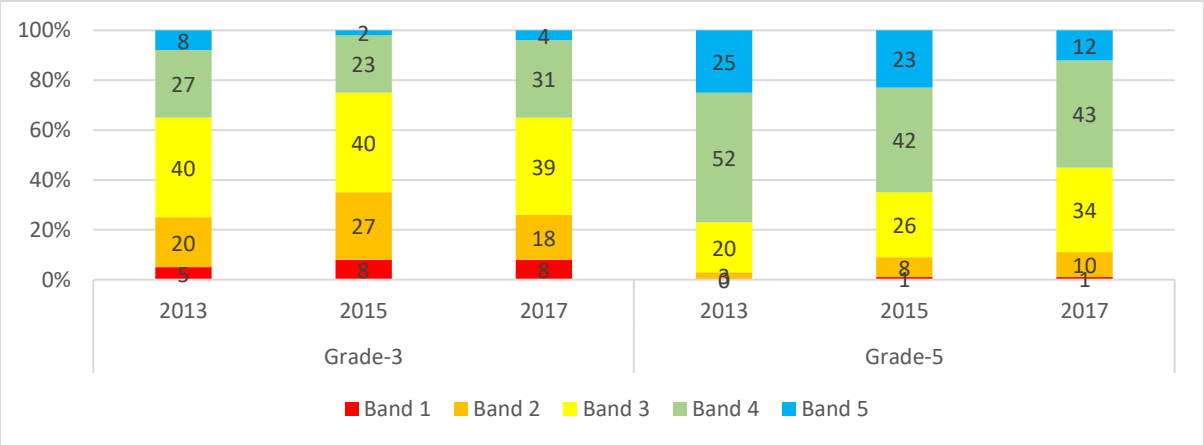
The learning achievement of students, the most important measure of quality, is usually gauged by examination results of students and by surveys of learning assessment conducted independently of examinations. The Primary Education Completion Examination (PECE) has been introduced in 2010 and is conducted at the end of grade 5 as a national examination throughout the country. A National Student Assessment has been conducted on a nationwide sample every two years since 2011. PECE and NSA as outcome measures provide useful data and raise various issues regarding quality improvement of the system.

National Student Assessment (NSA) and Primary Education Completion Exam (PECE)

National Student Assessment (NSA) under the auspices of DPE has been applied to representative samples of students in Grades 3 and 5, every two years since 2011 in the main school types to assess achievements of students in Bangla and Arithmetic. The samples in the recent rounds have exceeded 20,000 students for each of Grades 3 and 5, selected from 1400 primary schools (DPE 2018).

Interpretation of the NSA outcomes is a complex exercise. For each subject, the NSA generated a scale representing a continuum of skills and understandings of the subject based on the test items in order of increasing difficulty. The performance of students was reported in five bands: band 1 (students working well below Grade 3 level), Band 2 (students working below Grade 3 level), Band 3 (students working at Grade 3 level), Band 4 (students working above Grade 3 level), and Band 5 (students working at Grade 5 level). For Grade 3, students at Bands 1 or 2 were deemed to be "below grade"; students at Bands 3 – 5 were "at or above grade". For Grade 5, students at Bands 1 – 4 were "below grade"; students at Band 5 were "at or above grade".

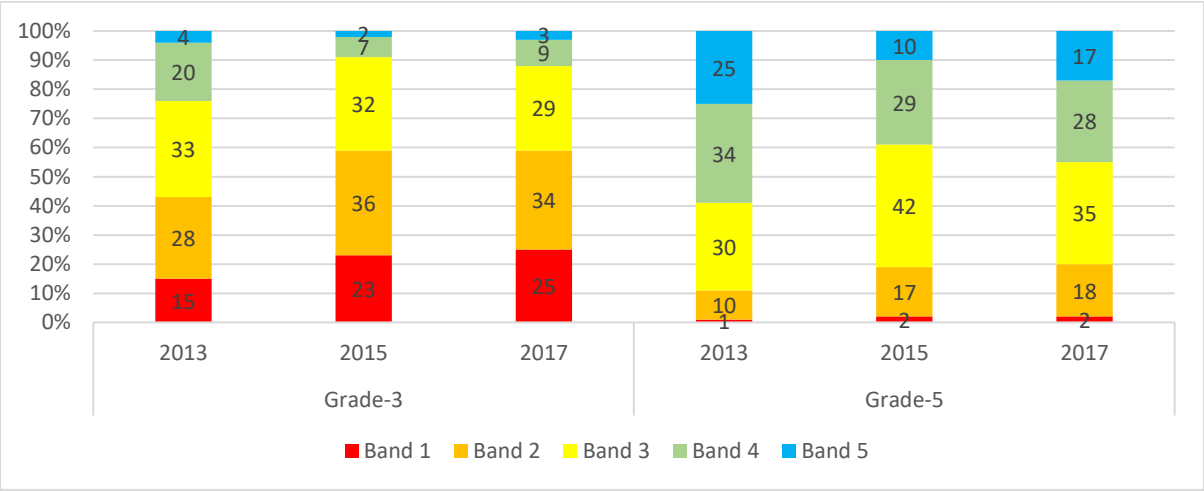
Figure 3.8: Student performance in Bangla language by performance band (% of students belonging to each band) based on the NSA 2013, 2015 and 2017



Source: NSA 2013, 2015 and 2017

Figure 3.8 shows that performance of the students in Bangla language in terms of percentage share of students belonging to different bands (1 being the lowest and 5 being the highest) have not changed significantly between 2013, 2015 and 2017, except for somewhat lower performance at grade level for grade 5 students. A similar pattern of no or limited improvement can be seen in math performance also (Figure 3.9).

Figure 3.9: Student performance in mathematics by performance band (% of students belonging to each band) based on the NSA 2013, 2015 and 2017



Source: NSA 2013, 2015 and 2017

The stated purpose of NSA is to provide relevant information to support policy and planning, enhance teacher capability, and improve student learning by improving classroom instruction (DPE 2018, 11). The NSA results also allow comparison of performance among school types. In Table 3.1, showing results for Grade 3 Bangla, school types are ranked by share of sampled students by performance standards in Bangla reading. Kindergarten schools (low-fee private schools) rank highest, followed by BRAC NGO schools, and primary schools attached to secondary schools. Government primary schools rank fourth, newly nationalized primary schools, fifth. Madrassas and schools targeting out-of-school children rank respectively sixth and seventh.

Table 3.1: National Student Assessment, Bangladesh – Distribution of student performance in Reading, Grade 3, by School Type, using "grade-level performance standards", 2017

Types of schools	Below basic	Basic	Proficient	Advanced
	(percent)			
Kindergarten (low-fee private schools)	10	26	52	12
BRAC (NGO schools)	10	31	47	13
Primary school linked with secondary school	15	29	43	13
Government primary school	21	34	37	9
Newly nationalized primary school	24	36	34	6
Reaching out-of-school children	22	39	34	5
Madrassas	27	36	31	6

Source: Government of Bangladesh (2018, 43)

Bangladesh has, since 2009, conducted at Grade 5 the Primary Education Completion Examination (PECE). Students and their parents regard it as a high-stake examination because admission to secondary school of choice and awarding of scholarships are dependent on the results. Examinations are held on all the six main subjects taught in primary school and the test items closely reflect the content in the textbooks for the respective subjects.

In contrast to NSA results, over 95% of the PECE examinees have consistently obtained at least a basic pass (a minimum 30% score: GPA of 2 or higher). Student scores are converted to grade point averages, from GPA 1 to 5. Of the 2.6 million students who wrote the 2018 PECE examination, over 97% received a pass; of these, 14% obtained GPA 5, equivalent to a score of 70% or higher (*Daily Star*, 2018). The stark difference in results between PECE and NSA makes comparison problematic. Both are supposed to be assessments of student competency in cognitive skills.

In line with assessment of basic competencies in many countries, NSA focuses on first language and mathematics; PECE emphasizes the entire school syllabus. Prior to 2009, student evaluation was made at the school level. The shift to the high profile national public examination at the end of Grade 5 has raised many questions about its value, technical validity, and reliability. The negative effects of PECE (and of the Junior Secondary Certificate examination at the end of Grade 8, introduced in 2011) have figured prominently in the national education discourse over the last decade; for example, in a detailed report by CAMPE (2015). The negative effects are multiple: undue anxiety and pressure on students and parents, increased reliance on private tutoring, memorizing (as opposed to learning) the content of exam guides and notebooks, incentive to leak questions, and incentive for corruption in marking PECE scripts. Finally, there is the opportunity cost: preparation for PECE distracts teachers, and school administrators from teaching and students from learning.

The 2015 NSA report states that, "There are important differences between what was measured on the NSA 2015 as compared to the PECE, with a greater focus on cognitively more challenging test items on the former" (DPE 2016, 10). If the NSA is assessing essential grade level skills in the first language and basic mathematics, a legitimate question is what PECE is measuring. The 2017 NSA report observes, "Motivation among schools, teachers, and students to participate on a low-stake assessment such as the NSA has been noted to be somewhat low, especially in Grade 5 where there is a greater need for more rigorous attention to the high-stake national primary education completion examinations" (DPE 2018, 11).

Pre-primary and Primary Education – Key Subsector Issues

In case of primary education, the government has zeroed in on the access issue, but formidable challenges remain on the quality front. The SDG4 Strategic Framework and other studies have pointed at two major obstacles to quality education: deficiencies in the ability and motivation of teachers and absence at school of a conducive learning environment for all.

The education authorities emphasize the development of the creative and critical thinking ability of students. The intention needs to be followed up with necessary action. Many ongoing practices, particularly, student assessment through public examinations at an early stage is counterproductive, but there is reluctance to change it. The widespread availability of guidebooks in the market and dependence on these as well as the culture of private tutoring are symptoms of deeper problems. Education Watch reports and other studies indicate that these problems relate to the inadequacy in number and quality of skilled and professionally motivated teachers and the too early and too frequent high stake public examinations with their negative backwash effects on teaching-learning practices. The assessment approach itself has become a hindrance to improving quality of instruction and learning outcome (CAMPE, 2016; CAMPE, 2014).

Initiatives towards removing these obstacles include competitive and transparent recruitment of teachers, better incentives and higher qualification requirements along with improved teacher education. There may be need for more basic change in the way teaching as a profession is perceived, as discussed in the next section. Changes in learning assessment are required including reconsideration of the value of the current form of subject-based public examinations at grade 5 and 8 and the need to accord greater importance to school-based formative assessment need due policy level attention.

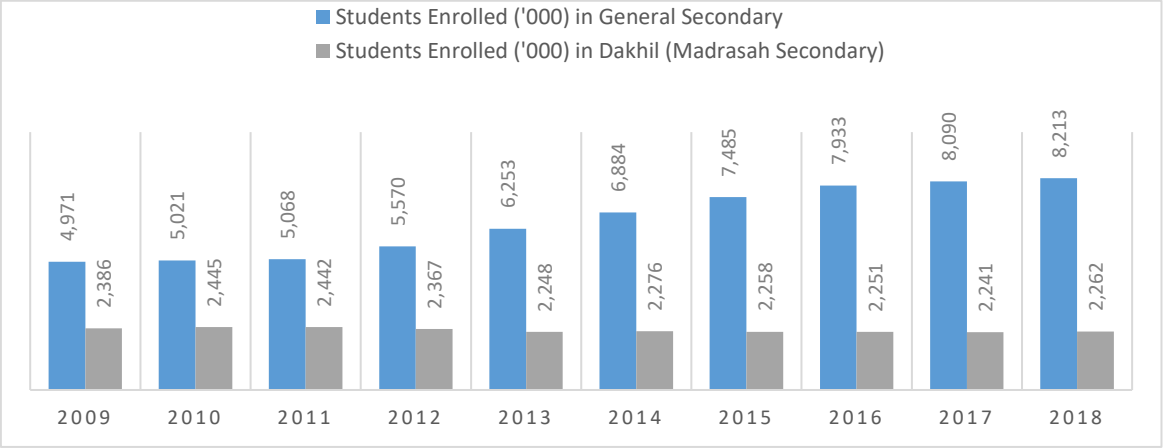
3.3. Secondary Education (Including Dakhil Madrasah)

There has been substantial improvement in enrolment of girls and boys in secondary education. However, acceptable rates of completion are yet to be achieved. Moreover, low skills and competencies achieved by students, and the apparent disconnect of school experience with the transition from education to work, have resulted in large numbers of unemployed and underemployed youth (SDG4 Strategic Framework for Bangladesh).

Access and Equity

The transition rate from primary level completion to secondary level entry has remained high at over 95 percent over the last decade. The total number of students enrolled in secondary level (including Dakhil Madrasa) increased from 7.4 million in 2009 to 10.4 million in 2018. Despite high transition rate form primary to secondary, the net enrollment rate was roughly two-thirds of the secondary age group in 2018 according to BANBEIS data.

Figure 3.10: Number of students (in thousand) enrolled in general Secondary and Dakhil (Madrasah Secondary)

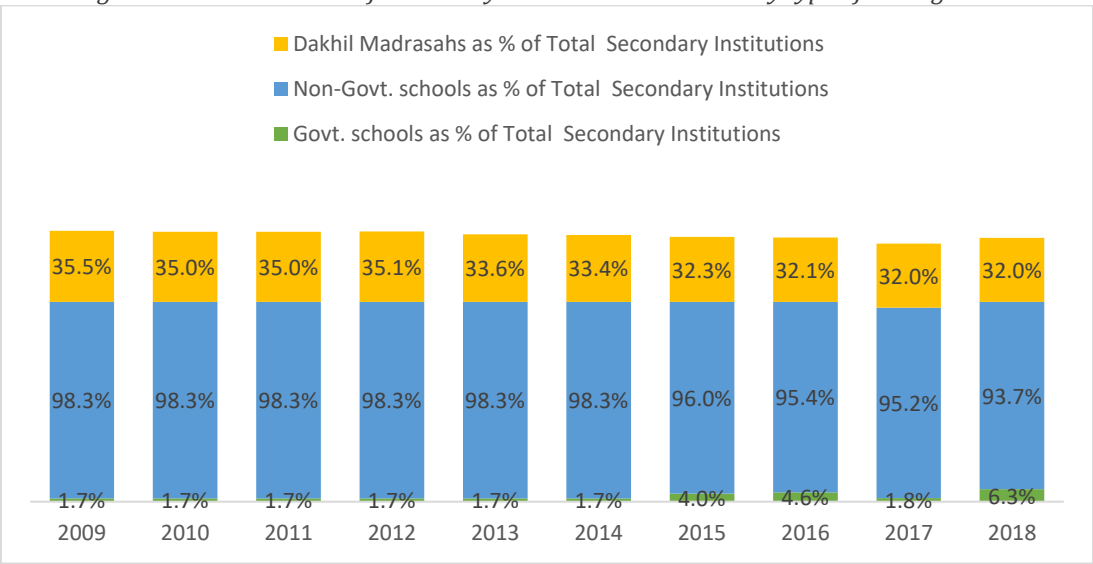


Source: Bangladesh Education Statistics 2018, BANBEIS

The share of students enrolled in Dakhil (Madrasa) in total secondary level enrollment has declined from almost one-third in 2009 to just over one-fifth in 2018 (Figure 3.10). In secondary education enrollment girls outnumbered boys totaling 54 percent..

Secondary education is dominated by government-subsidized non-government institutions. As of 2018, the share of government secondary schools has increased from 1.7 percent in 2009 to 6.3 percent in 2018. It should be noted that the vast majority of non-government institutions receive substantial government subvention in the form of basic salary for teachers (through Monthly Pay Order) and additional support for capital and some operational expenditure. These schools are also subject to a regime of regulations regarding curriculum implementation and student assessment including public examinations at the end of grade 8, 10 and 12. Consequently, it is a misnomer to describe these schools as private. The government schools are fully supported from public funds. (See Figure 3.11.)

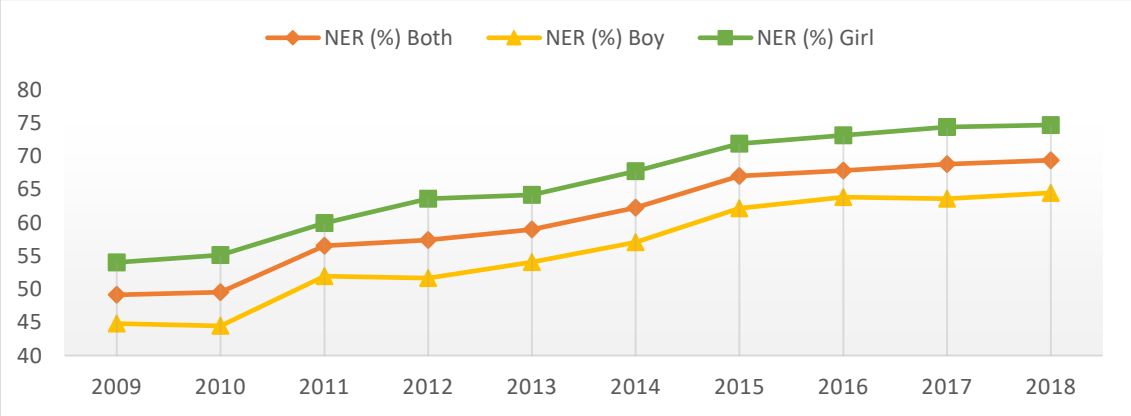
Figure 3.11: Distribution of Secondary Education Institutions by type of management



Source: Bangladesh Education Statistics 2018, BANBEIS

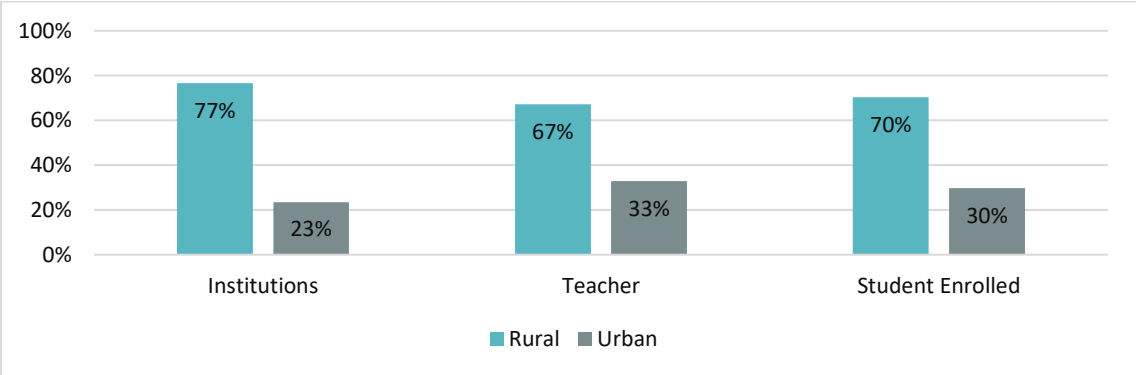
Net Enrollment Ratio (NER) for secondary education has improved significantly from 49 percent in 2009 to 66 percent in 2018 (see Figure 3.12). NER for girls have remained higher compared to that of boys throughout this period. The government funded stipend programs and tuition waiver for girl students have played an important role in this respect.

Figure 3.12: Net Enrollment Ratios (%) for boys, girls and combined in Secondary Education



Source: Bangladesh Education Statistics 2018, BANBEIS

Figure 3.13: Ratio of institutions, teachers and students enrolled by area (rural vs. urban) in Secondary Education



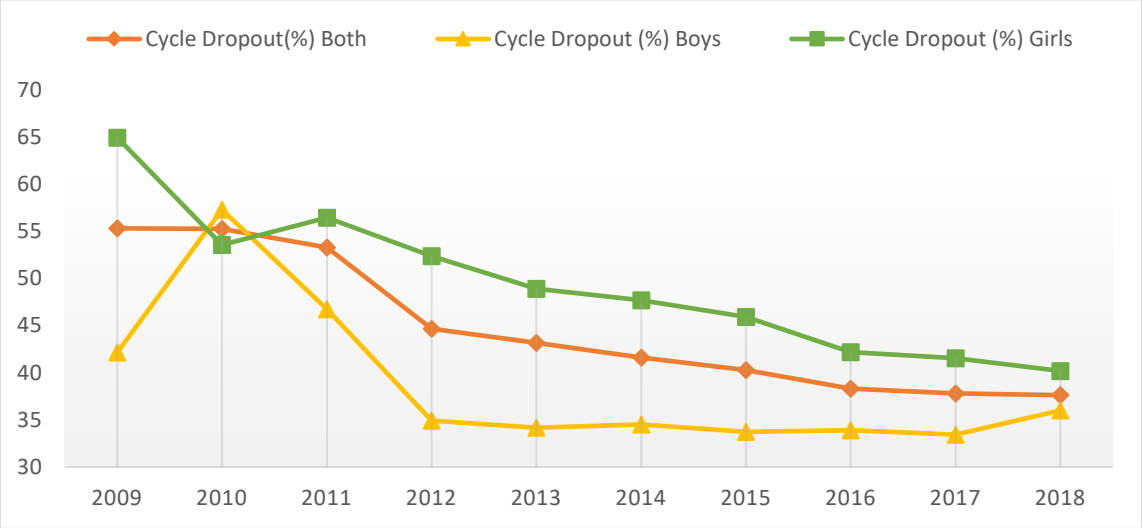
Source: Bangladesh Education Statistics 2018, BANBEIS

Urban-rural distribution of schools – 77 percent of the institutions, 70 percent of the students and 67 percent of the teachers being in rural areas – is roughly in line with needs, considering the fact that rural habitations are more dispersed than in cities and towns (Figure 3.13). However, there is disparity in the quality of the provisions and staffing quality, placing rural areas at a disadvantage.

Internal Efficiency

The cycle dropout rate for secondary education has decreased from over 55 percent in 2009 to below 37 percent in 2018 (see Figure 3.14). While the dropout rate for girls have been higher than for boys over the years, these two are converging.

Figure 3.14: Cycle dropout rate in secondary level (for boys, for girls and for both combined)



Source: Bangladesh Education Statistics 2018, BANBEIS

Quality inputs and Learning outcome

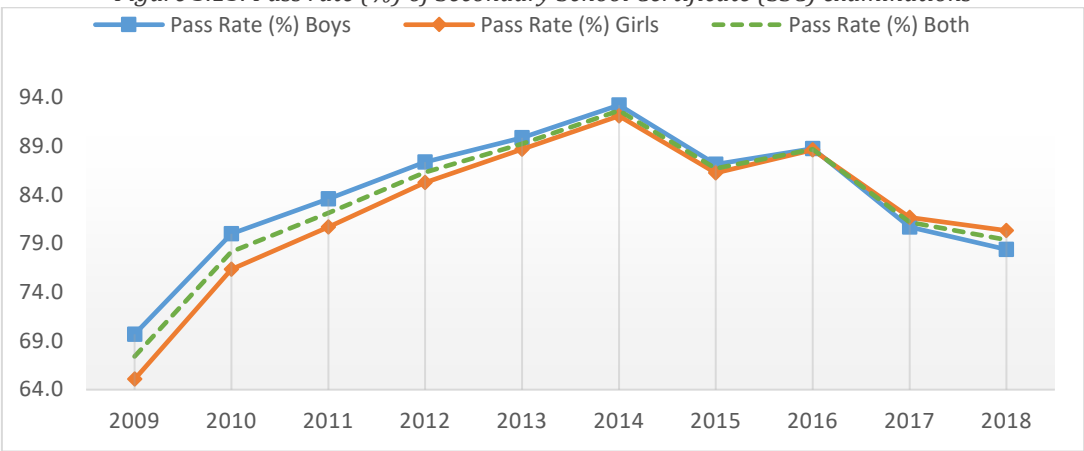
Between 2009 and 2018, on an average 2,300 teachers have joined annually to teach in secondary level institutions. The total number of teachers as of 2018 was 234 thousand. While the share of female teachers have increased at this level gradually, it is still just over one-fourth of the total. The net addition of teachers after annual turnover, the student teacher ratio, effective class size, and actual learning time per day and in a year are relevant concerns. At the secondary level, need for subject teachers adds to the complexity of managing student-teacher ratio and class size.

The average pass rate for Junior School Certificate (JSC) examination during the period between 2009 and 2018 was about 89 percent. On an average, over 9 percent of the students passing JSC scored GPA 5 (the highest possible score).

The average pass rate for Junior Dakhil Certificate (JDC) examination was slightly higher at 91 percent – with 3 percent of the students scoring the highest score of GPA 5 (Bangladesh Education Statistics 2018, BANBEIS).

The average pass rate for Secondary School Certificate (SSC) examination during the period between 2009 and 2018 was over 83 percent. The rate was slightly higher for girl students (see Figure 3.15). On an average, about 9 percent of the students passing SSC scored GPA 5.

Figure 3.15: Pass rate (%) of Secondary School Certificate (SSC) examinations



Source: Bangladesh Education Statistics 2018, BANBEIS

The average pass rate for Dakhil (Madrasah) examination during the period between 2009 and 2018 is close to 85 percent, with about 6 percent of the students securing GPA 5.

Student learning assessment comparable to NSA at the primary level described above has not been undertaken at the secondary level. Learning Assessment of Secondary Institutions (LASI) conducted in 2015 with a sample of grade six students (the first year of the secondary stage) indicates the baseline of competence in Bangla and mathematics of secondary students.

Analyzing nationally representative data from the Learning Assessment of Secondary Institutions (LASI 2015), Bhatta et al. (2019) have pointed out that learning outcomes at junior secondary level leaves much room for improvement. The LASI data show that in 2015, around 24 percent, 30 percent, and 7 percent of grade 6 students performed at below grade level in math, English, and Bangla, respectively. It has been observed that student effort and regular student attendance make differences in learning at the junior secondary level. Key factors that are affecting quality of instruction at this level have been identified to be:

- School quality (overall learning environment at the school) matters. LASI shows that outcome vary significantly across schools of the country.
- Teacher adequacy is also a major factor that contributes towards learning outcomes. Schools having adequate number of teacher assigned for subjects have done better.
- Home factors such as reading habit at home also affect learning outcomes to a significant extent (Bhatta, et al, 2019).

There are no learning assessment results for grade 10 and 12 students which could be compared with SSC and HSC results. It is likely that major gaps would be found between the high SC and HSC scores based on curricular content and textbooks (arguably dependent on memorizing texts) and assessment based on essential competencies in language and math.

Building upon the experience gained from conducting the NSA and LASI rounds, Bangladesh may consider participating in an appropriate way in the international assessments such as the Program for International Student Assessment (PISA), Trends in International Mathematics and Science Study (TIMSS) and Progress in International Reading Literacy Study (PIRLS) in the future. In the meantime, NSA and LASI could be adapted to the international assessment methodology and test items in order eventually to better judge where Bangladesh stood vis-a-vis its own learning objectives and other countries. More important, however, is to analyze the assessment results and use these to identify the weaknesses in the system and take remedial measures (discussed further below).

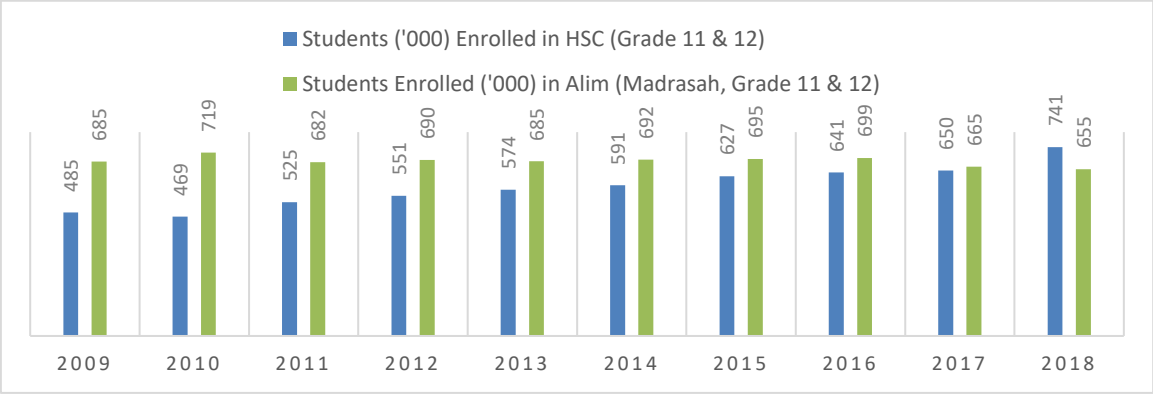
3.4. Higher Secondary Education (Including Alim Madrasah)

Considerable expansion in higher secondary education has been achieved; but much more needs to be done to make this stage of education more market relevant. The overwhelming majority of the higher secondary level courses are offered in non-government colleges, some of which are attached to secondary schools and others are part of degree level tertiary institutions. As in the case of secondary schools, the non-government colleges receive government subsidies for teacher's salary and capital investments

Access and Equity

The number enrolled in general higher secondary has increased from 485 thousand in 2009 to 741 thousand in 2018. Students enrolled in Alim (Madrasah higher secondary) has decreased from 685 to 655 thousand during this period (see Figure 3.16) – a reduction from 59 percent to 47 percent of the total.

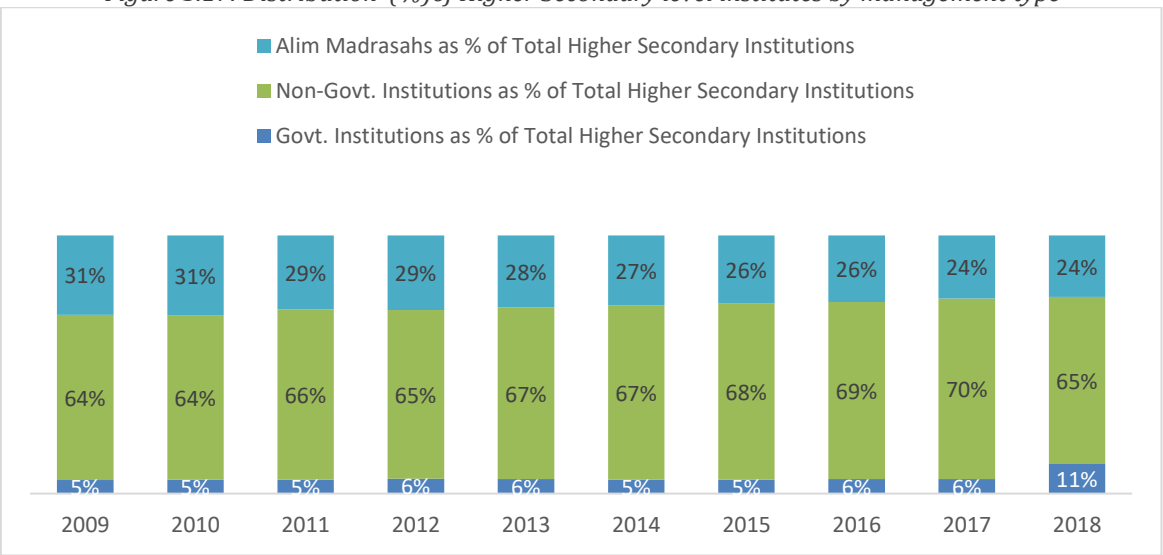
Figure 3.16: Number of students enrolled in colleges (HSC, Grade 11 & 12) and in Alim (Madrasah, Grade 11 & 12)



Source: Bangladesh Education Statistics 2018, BANBEIS

During the period from 2009 to 2018, the ratio of students enrolled in non-government institutions has remained over 90 percent; though, as of 2018, about two-thirds of the institutions were non-government. (See Figure 3.17.)

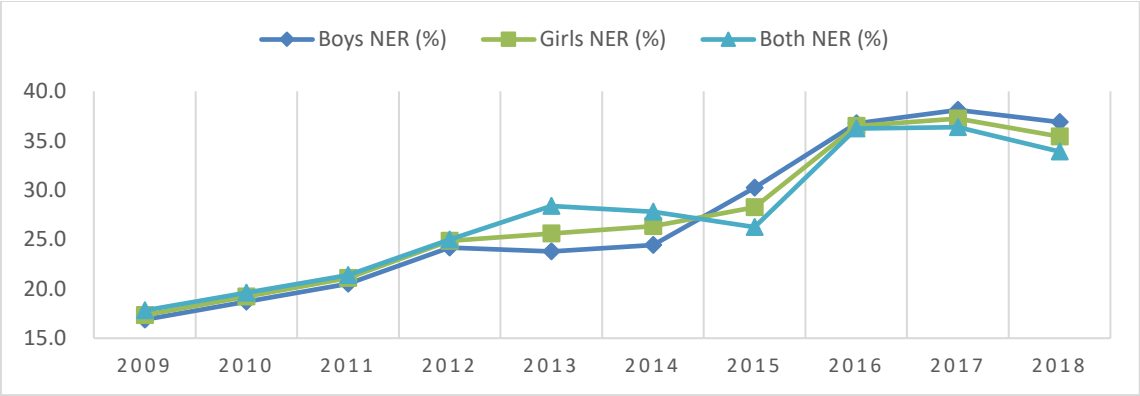
Figure 3.17: Distribution (%)of Higher Secondary level institutes by management type



Source: Bangladesh Education Statistics 2018, BANBEIS

The net enrollment ratio (NER) for higher secondary level has significantly improved from 18 percent to 34 percent between 2009 and 2018 of the designated age group of 16-17 years (see Figure 3.18). However, the NER for girls was slightly lower, in contrast to the situation at the secondary level.

Figure 3.18: Net Enrollment Ratio (NER) for Higher Secondary Level



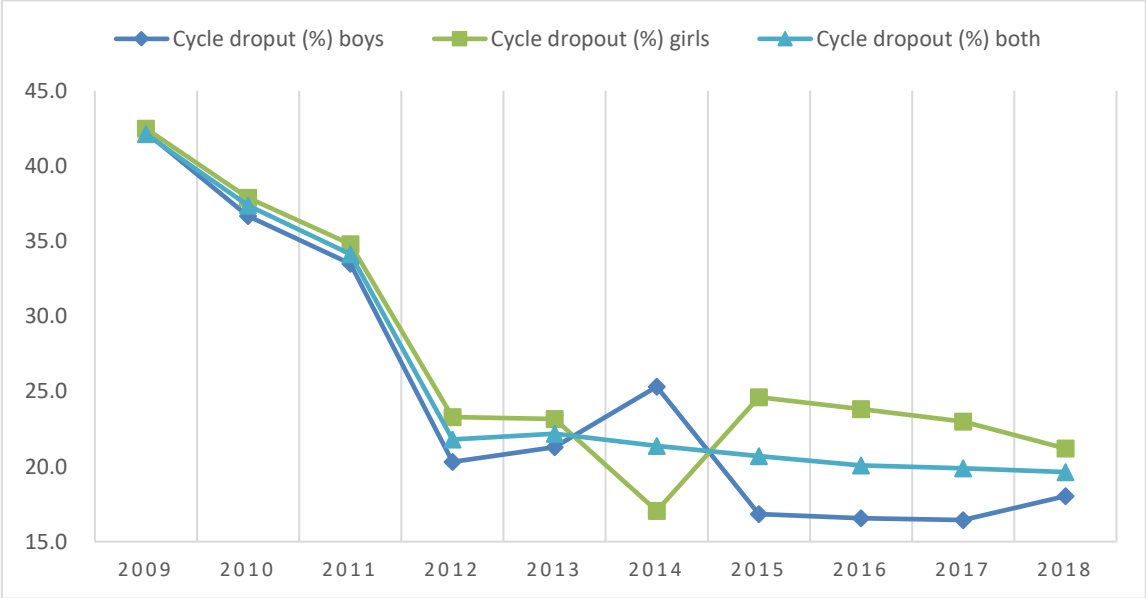
Source: Bangladesh Education Statistics 2018, BANBEIS

As of 2018, rural areas had 58 percent of the higher secondary education institutions, 52 percent of the teachers and 45 percent of the students (BANBEIS, 2019). This is not entirely in line with urban-rural population distribution (about 70 percent living in rural areas). However, this may be explained by the fact that more of the higher secondary and tertiary level students are concentrated in urban locations and the larger catchment areas of these institutions require them to be placed in a central location. Arguably, the number and distribution of the institutions are less of a problem than disparity in the quality of the provisions and facilities among institutions both in larger urban centers and smaller towns.

Internal Efficiency

The cycle dropout rate for higher secondary level has declined significantly from 42 percent in 2009 to below 20 percent in in 2018 (see Figure 3.19). The dropout rate for girls is higher, but the gap is closing gradually.

Figure 3.19: Cycle dropout rate (%) for Higher Secondary Level

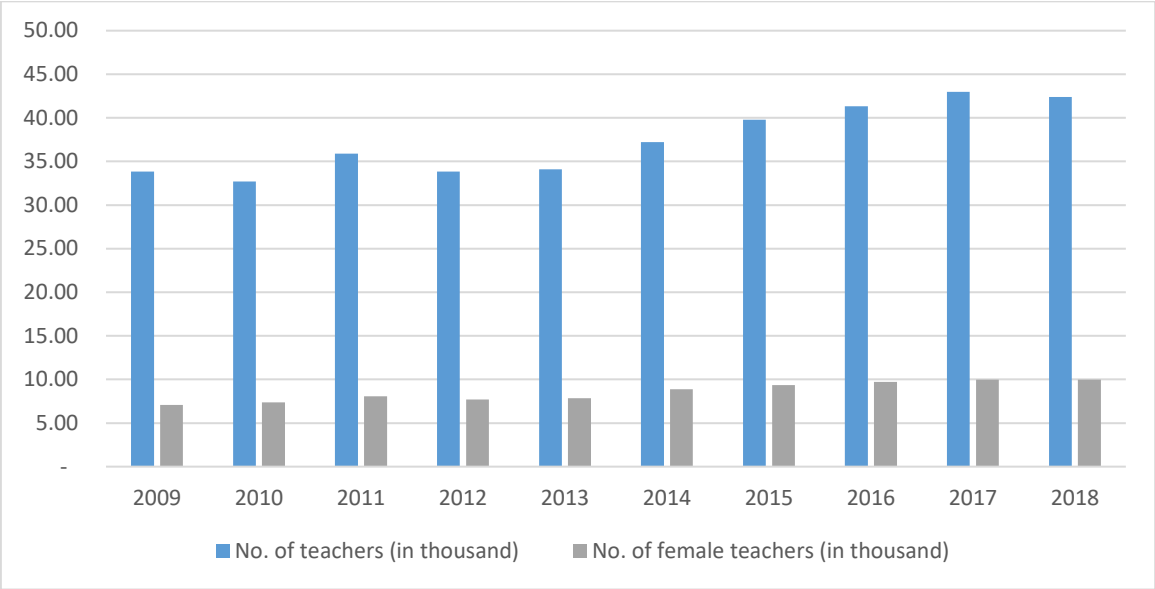


Source: Bangladesh Education Statistics 2018, BANBEIS

Quality inputs and outcomes

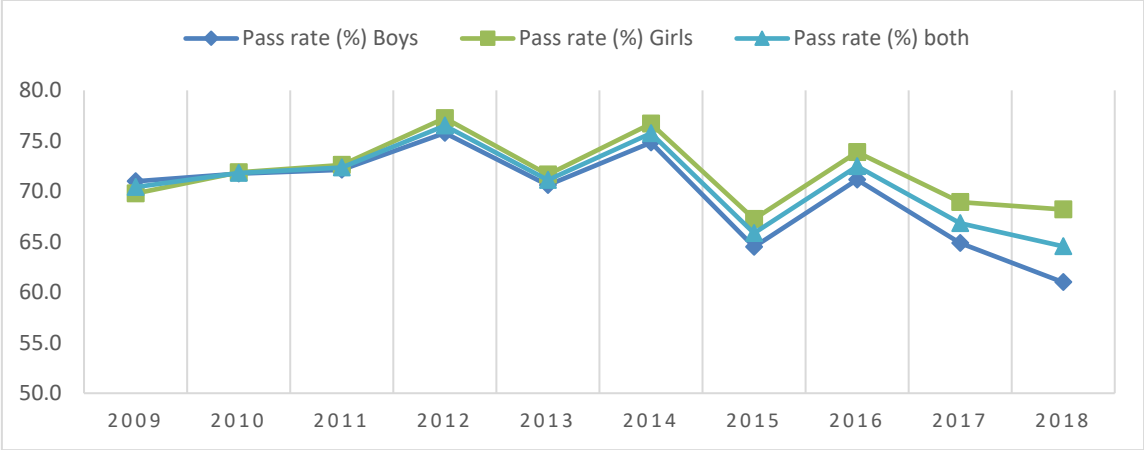
On an average one thousand teachers annually have joined the higher secondary level between 2009 and 2018, and the total number of teachers stood at over 42 thousand in 2018 (see Figure 3.20). The proportion of female teachers remains at only a quarter of the total. Effective student teacher ratio in classrooms, because of the need for subject-specific teachers, and the professional competence and dedication of teachers are arguably even a more serious problem at this level than at the secondary level.

Figure 3.20: Total number of teachers and number of female teachers over the years in HSC level



Source: Bangladesh Education Statistics 2018, BANBEIS

Figure 3.21: Pass rate (%) of Higher Secondary Certificate (HSC) examinations



Source: Bangladesh Education Statistics 2018, BANBEIS

Pass rate for Higher Secondary Certificate (HSC) examination shows a slight declining trend and a widening gender gap favoring girls at least since 2012. The significance of this is not clear and merits further investigation. On an average 71 percent students have passed the HSC

examinations during the period from 2009 to 2018. The average pass rate for girl students was 72 percent (see Figure 3.21). On an average 7 percent of the students passing HSC have scored GPA 5.

Pass rate for Alim (Madrasah Higher Secondary) also shows a declining rate in the said period. On an average, the pass rate is 87 percent, which is still higher than that of HSC. Five percent of the students passing Alim examination between 2009 and 2018 have on average scored GPA 5 (BANBEIS Education Statistics 2018).

SDG4 strategic framework for Bangladesh noted that over 90 percent of the students at higher secondary level are enrolled in non-government institutions, which constitute 65 percent of the total institutions. The government institutions, serving 10 percent of the students, are more competitive in respect of admission and their personnel provisions and facilities are better compared to non-government institutions.

As noted, transition from primary to secondary has been high and the net enrollment ratio in the designated age- group has improved over the last decade, but it still remains low. At the secondary level, about two thirds of the age-group (11-15 years) were enrolled in school in 2018. Less than 20 per cent of adolescents between the ages of 16--17 years are attending grades 11 and 12. Males are more likely to be enrolled in higher secondary and tertiary education than females, in contrast to primary and secondary level. Families show a preference for investing in higher education for male children (Al-Zayed, et al., 2018). Early marriage of girls under age 18 remains at around 60 percent of married women and a contributing factor to lower girls' participation in education. (See further discussion later).

Secondary and Higher Secondary Education – Key Sub-sector Issues

While enrollment rate in secondary and higher secondary education has increased over the last decade, there is still room for major improvement. The cycle dropout rates for these levels have decreased significantly over the last decade. Yet it remains above 35 percent implying significant need for improvement. There is also the need to improve the share of female teachers in these institutions from the current proportion of just over one-fourth.

The nature of challenges related to quality is aggravated in secondary education due to two factors. Firstly, often the primary education completers do not have the pre-requisite entry level competencies for secondary education. Secondly, the increase in subjects in the curriculum compared to the primary stage, and its discipline-based structure, require that the teachers at the secondary and higher secondary levels are qualified and trained in specific subjects. Inadequate number of subject teachers, especially in key subjects as math, science, English and computer skills, impact negatively the quality of learning. The Secondary Education Development Program (SEDP) has identified a number of areas for quality improvement including: i. Curriculum reform; ii. Teacher quality, capacity, and management; iii. Examinations and assessments; and iv. Better teaching-learning in key content areas -- Bangla, English, Mathematics, Science and ICT (SDG4 Strategic Framework for Bangladesh).

Policymakers often emphasize that vocationalization of secondary education can have a positive impact on completion, particularly that of girls. Despite an upward trend, not enough girls are enrolling in technical and science subjects beyond the secondary level. What kind of vocationalization and how that responds to employment market; what choices are attractive to students; how vocational streams in general secondary/higher secondary and in the polytechnics relate to and complement each other, and how these can be delivered effectively are open questions. Experience of secondary vocational stream needs to be critically examined including tracking of the completers. The issue of technical and vocational education is discussed further below.

Testing is obviously not a substitute for good teaching. School-based formative assessment of learners appears to be undermined by the emphasis placed on the public examinations, SSC and HSC. The

assessment of system, school and teacher performance can be better done through an adaptation of the NSA approach, without putting young children in tough competition with their peers.

In today's global world, Bangladesh has to compete in the world market and be at par in skills and competencies with other countries. Up to 700,000 young workers, almost half of all new entrants to the workforce every year, go abroad as migrant workers. These individuals as well as those staying at home must acquire the skills and capabilities necessary to adapt to the changing needs of the global market.

A question that merit serious consideration is whether Bangladesh should join OECD's Programme for International Student Assessment for Development (PISA-D). It is a pilot project that aims to make cross-country assessment more accessible and relevant to a wider range of countries. PISA measures key knowledge and skills that are essential to function in modern societies across countries.

Cambodia, a country facing quality issues similar to Bangladesh, has joined PISA-D in its bid to improve student learning and assessment capacity. Its focus is on equipping young learners with 21st century skills that are in demand globally. Cambodia is being assisted by UNICEF-sponsored Southeast Asia Programme on Learning Metric (SEA-PLM). Bangladesh may benefit greatly by joining PISA-D (OECD, 2018; Islam, 2020).

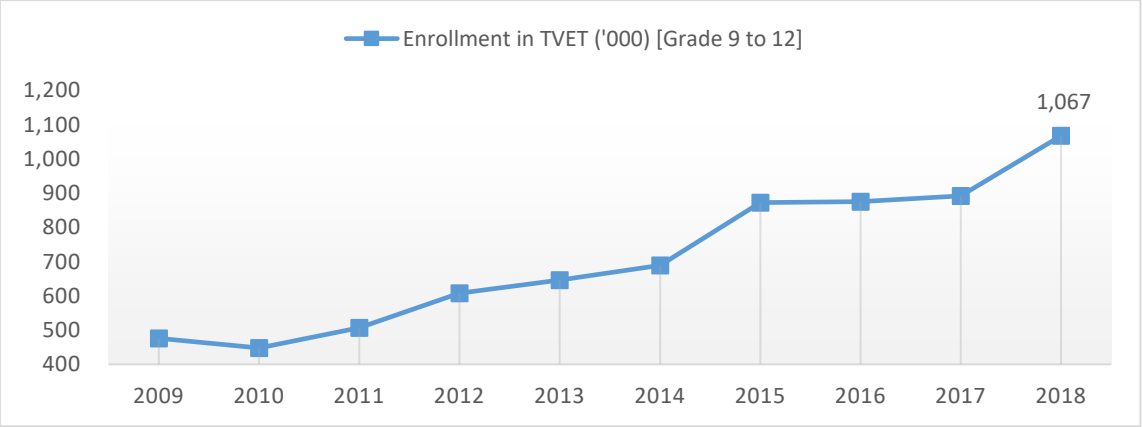
A move has been taken to follow a common integrated curriculum up to grade ten and delay streaming of students into disciplinary areas (science, humanities, business, etc.) until grade 11, rather than grade 9 at present. This is a positive step towards building a common foundation of basic competencies for all students and not forcing young people to make a future career choice too early. The success of this measure will depend on adequate provisions for qualified subject teachers especially for science, math and English, as noted, and in which student performance has remained deficient.

3.5. Technical & Vocational Education, TVET (Grade 09 to 12)

The TVET system has the task of equipping some 1.5 million young people seeking to enter the world of work every year with market responsive skills for gainful employment or self-employment. A total of 22 ministries, each providing diverse skills without effective coordination points to the need for a coordinated approach and mitigating fragmentation of the system. Following the introduction of a skills development policy in 2011 and the recent establishment of the National Skills Development Authority (NSDA) the basis for an integrated planning and management of TVET has been created (SDG4 Strategic Framework for Bangladesh).

Access and Equity

Figure 3.22: Number (in thousand) of students enrolled in TVET (grade 9 to 12)



Source: Bangladesh Education Statistics 2018, BANBEIS

Key facts about access and equity in TVET include:

- The number of students enrolled in TVET (grade 9 to 12) increased from 476 thousand in 2009 to 1.07 million in 2018. The share of girls remained low at a quarter of enrollment in 2018 (See Figure 3.23 and Table 3.2.)

- As of 2018, over 69 percent of the students in TVET (grade 9 to 12) were enrolled in non-government institutions, which were 87 percent of all institutions, implying non-government dominance in this sub-sector (BANBEIS 2018). The non-government institutions registered the Directorate of Secondary and Higher Education or with the Technical Education Board, a large majority of the institutions, received government subvention.

- As of 2018, there was a total of 4,733 Non-government secondary level institutions that included 2,491 SSC (Voc), 1,732 HSC (Voc. and Business), and 294 Dakhil (Voc) institutions. In addition, there were 1,179 Polytechnic (Diploma) institutions, 2,653 VTI (Basic trade), and 384 other institutions. The vocational stream of secondary schools (SSC and HSC) drove the expansion of TVET enrollment.

- The government is keen to develop a sub-sector program approach for TVET with the following elements;
  - A Skills Development SWAP with strong leadership from the government to carry forward the sector-wide approach in technical education and skills development.
  - Eighth Plan Priority - the upcoming five-year plan will place greater emphasis on TVET.
  - Ensuring acceptability of skills certification within and beyond Bangladesh through mutual agreement (ILO, 2019).

Table 3.2: TVET Enrolment in Bangladesh (c. 2018)

Type of Institutions	Total enrollment	Percentage of the total enrolled	Girls enrollment	% of girls enrollment
Polytechnic Institute	250,770	23.5%	41,614	16.6%
Technical School & College	92,406	8.7%	18,992	20.55%
Technical Training Centre	38,297	3.6%	12,700	33.2%
Textile Institute	10,143	0.1%	795	7.8%
Textile Vocational	7,767	0.7%	1,815	23.4%
Agriculture Training Institute	30,165	2.8%	6,587	21.8%
S.S.C Vocational (Ind.)	7,410	0.7%	7,410	27.9%
HSC Voc/B. Mgmt (Ind.)	166,870	15.6%	49,167	29.5%
Medical Technology	14,860	1.4%	5,638	37.9%
Medical Assistant Training (MATS)	26,608	2.5%	11,199	42.1%
SSC Vocational (attached)	230,395	21.6%	58,174	25.3%
HSC Voc/B. Mgmt (attached)	168,355	15.8%	49,861	29.6%
Misc.	4,257	0.4%	310	7.3%
Total	1,067,484	100%	264,262	24.8%

Source: Data from Directorate of Technical Education Board.

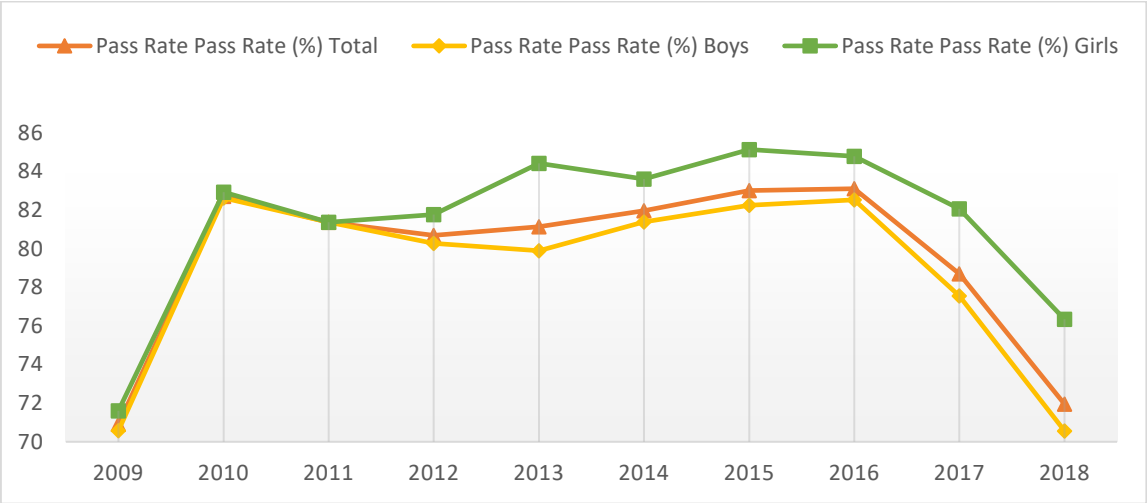
Note: Basic Trade courses (360 hours) and short-term courses under 3 months approved by the Technical Education Board were not included in the above table.

Quality input and outcome

The number of TVET teachers increased to 50,900 in 2018, indicating increased emphasis on this sub-sector. During the said period the share of female teachers in the total number of teachers engaged in TVET (grade 9 to 12) has been around 20 percent.

On an average, 80 percent of the students appearing for the SSC (vocational) examination have passed between 2009 and 2018. The inverted U pattern of results merits investigation. The ratio is slightly higher for girls compared to boys (see Figure 3.23), though enrolment share of girls remain lower. Of all the students appearing in these examinations 5 percent (on an average) have scored GPA 5 (highest possible score).

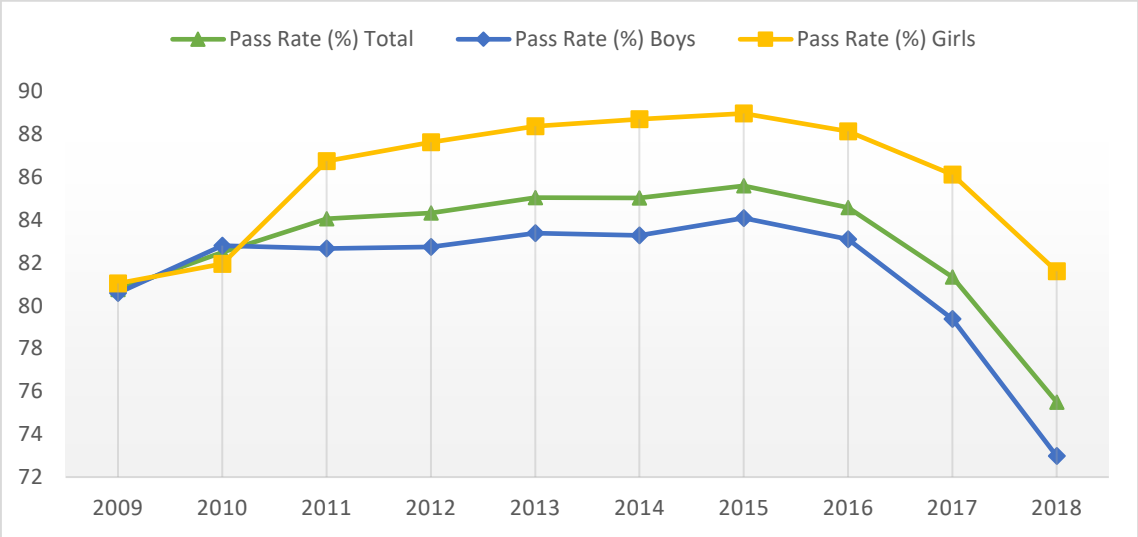
Figure 3.23: Pass rate (%) for SSC (Vocational) examinations



Source: Bangladesh Education Statistics 2018, BANBEIS

At the HSC (Vocational) level, on an average, 83 percent of the students passed between 2009 and 2018. Over the years, there has been an increase in pass rate, which then declined, which merits to be examined. The ratio of pass has been higher for girls compared to boys (Figure 3.24), but as at SSC level, their enrollment ratio has been lower. Of all the students appearing in these examinations 4 percent, on average, scored GPA 5 (the highest possible score).

Figure 3.24: Pass rate (%) for HSC (BM) examinations



Source: Bangladesh Education Statistics 2018, BANBEIS

The proof of quality and relevance of TVET has to be demonstrated by how the graduates do in the job market. A way of assessing the marketability of the trainees is to track the situation of the trainees in the job market. A tracer study of training course completers in polytechnics indicated that 30 percent were employed (in wage or self-employment and in casual work), 19 percent were unemployed, 38 percent were in further education or training, and 13 percent were idle or home-maker. (World Bank Discussion Paper, 2015). It is clearly necessary to systematically track the training outcome and ensure that the expected results are realized.

TVET – Key Sub-sector Issues

The priority for the government is to increase in a major way TVET enrollment in the secondary education age group in which progress has been achieved. The bulk of expansion has been through the vocational courses in secondary and higher secondary institutions at SSC and HSC levels. There is a need for systematic evaluation of how this has worked out in respect of achieving the key objectives of imparting relevant skills for the graduates to enter the job market or continue successfully at the next stage of education. The skills and competencies acquired and the quality and market-relevance of the skills are important issues. Anecdotal evidence suggests that this track is not as popular an option for young people as might be expected. The general perception is that it is for those who may not be capable of continuing in the general stream, that the teachers lack adequate practical experience and skills, and that it does not necessarily lead to gainful employment. These concerns have to be effectively addressed; mere expansion of the program as it exists now may not help realize the purposes of TVET expansion.

The government of Bangladesh has adopted a plan to establish one Technical School and College (TSC) in every Upazila and ensure girls' hostel for 200 students in the each TSC. There is plan also to establish one Engineering College for Girls in each of eight divisions. The intention of this initiative is laudable. Its success will depend on paying due attention to the quality and relevance concerns of on-going TVET by effectively overcoming the deficiencies of existing institutions.

The job market and the nature of work and skills are rapidly changing to which the skills development strategies and programs have to respond. It is crucial for Bangladesh to adapt the TVET curricular content and training approach to incorporate skills for work in the future, so that TVET can prepare workers capable of adapting to change and acquiring new skills as needed.

The three concerns that call for particular attention are:

A. **Preparing for the Future of Work:** With advances in technology (such as the demands of the fourth industrial revolution), as routine tasks become automated, employers across industries are increasingly interested in hiring youth with soft skills, critical thinking skills, capabilities in ethics and values, leadership skills, and 21st-century skills, especially, being adaptive to change;
B. **Applying the National Technical and Vocational Qualifications Framework (NTVQF):** NTVQF, designed to ensure that TVET education is relevant to the world of work, has to be implemented across the board in skill training, including the recognition of prior learning form experience of workers; and
C. **Promoting career development and practical learning opportunities:** TVET institutions have limited capacity to offer career development and job placement services. In addition, education programs are often limited to theoretical and rote learning rather than practical on-the-job training, such as apprenticeship opportunities.

A National Strategy for Promotion of Gender Equality in TVET was formulated in 2012 by the National Skills Development Council (NSDC) in collaboration with the ILO TVET reform project. It aimed to increase participation of women in TVET to 40 percent by the end of 2020. The gender

equality framework has to be effectively implemented to achieve the intended results (NSDC, 2012).

NSDC identified seven broad barriers to the entry of women into TVET. These include perceptions and trends in community thinking regarding gender roles, distance from home of institutions and lack of hostel accommodation for girls, lack of support for women such as occupational and academic counseling and maternity and daycare services, lack of transportation facilities, lack of job-placement services, and absence of community support and outreach programs.

Many different ministries and national bodies are involved besides many non-government organizations (NGOs) and local communities with small-scale and scattered programs. There are literacy programs that include elements of life skills and livelihood skills. These initiatives are project based and are therefore for limited duration. This raises issues about their institutionalization and the development of a sustainable national system for lifelong education.

There is a long-standing NGO presence in technical and vocational education and training but often with a weak market orientation, with some exceptions. Their trainees are often unable to translate acquired skills into better paid employment, a situation analogous to many of the public nstitutions. However, despite the weaknesses of some of the NGOs, the diversity of their experience makes them potential providers of skills training at the grassroots level, especially for the informal economy.

There are many actors in TVET besides MOE institutions. A total picture, with relationships, purposes and extent of services of different actors is needed. How the diverse initiatives, activities and projects under many different auspices are coordinated and directed towards addressing the persistent skills gap issues are the major continuing challenges in TVET and the broader skills development arena. The newly established National Skills Development Authority is mandated to address this challenge. It still has to establish itself and find its bearing.

3.6. Non-Formal Education

Non-formal education, because of its flexibility and its opportunity-based and need-based character, is carried out by different organizations. A full picture of its scope and extent is difficult to construct. At least four government agencies carry out publicly funded non-formal education interventions across the country. These are: 1) Bureau of Non-formal Education, 2) Directorate of Youth Development, 3) Department of Social Services, and 4) Bangladesh Computer Council with government support. It should be noted that NGOs and the private sector also provide non-formal education for youth and adults, but reliable data on this have been scarce. Also necessary to note that non-formal youth and adult education overlaps to some extent with skills training carried out by some TVET institutions.

Bureau of Non-Formal Education (BNFE)

The achievements of Bureau of Non-formal Education in terms of Key Performance Indicators (KPIs) for FY 2017-18 and FY 2018-19 and its mid-term targets (i.e. projections for three fiscal years) are shown in Table 3.3..

Between FY 2017-18 and FY 2020-21, the Bureau of Non-formal Education has plans to cover over 0.9 million persons across 64 districts with its 'Basic Literacy Scheme'. Within the proposed Non-formal Education Development Program, over 5 thousand Community Learning Centers (CLCs) and 64 Life Skills Training Institutes in 64 districts were to be established in order to initiate a nationwide non-formal and lifelong learning programme. However, as noted, the proposal is yet to receive official approval.

Directorate of Youth Development

The Directorate of Youth Development through the training courses for the youth suitable for domestic and overseas employment plans to cover a total of 1.7 million young people. Its capacity to train youth through these training courses is expected to grow somewhat during this period. The directorate also intends to train another 517 thousand unemployed youth and create temporary employment opportunities under the National Service Scheme – a government program to provide temporary employment to educated youth. (See Table 3.3).

Department of Social Services

The Department of Social Services has plans to provide vocational and skill development training to a total of 347 thousand persons between FY 2017-18 and FY 2021-22. The department also provides different short training to special groups, such as, distressed and orphan children, persons with disabilities, vagrants and beggars, and girls in social disadvantage. (See Table 3.3).

Bangladesh Computer Council

Bangladesh Computer Council provides ICT related non-formal training serving 39 thousand persons between FY 2017-18 and FY 2021-22. It also provides funds and technical assistance to start-ups under its Innovation Planning and Entrepreneurship Development Academy (Table 3.3). In addition, Bangladesh Hi-Tech Park Authority, a body that facilitates establishment of technology-based enterprises, intends to provide training on IT skill/free lancing to 62 thousand persons by the end of FY 2021-22, according to budgetary data (Finance Division, 2019).

Table 3.3: Non-formal education activities of four public-sector or supported agencies

Agency and Nature of Activity	Number of Participants (FY 2018-19)	Planned Annual Participants (up to FY 2021-22)
BNFE		
Adult Literacy Program in 64 districts (6 months)	2,300,000	2,000,000
Department of Youth		
a. Short Skill Training	310,000	400,000
b. Short Training for National Service Recruits	121,000	100,000
Dept. of Social Services		
a. Short Vocational Training	60,000	80,000
b. Orphans and Disadvantaged Children	29,000	32,000
c. Children with Disabilities	4,400	5,000
d. Vagrants and Beggars	2,000	2,000
Bangladesh Computer Council		
a. Short Computer Use Training	4,500	5,000 to 6,000
b. Conduct Certification Examination for ICT Professionals	750	800
c. Support to Start-ups	50	60

Source: Medium Term Budget Framework 2019-20 to 2021-22, Finance Division, Ministry of Finance, Government of the People's Republic of Bangladesh

The numbers of participants and the type of courses above are based on budget information. Quality and effectiveness of these activities are expected to vary a great deal. The largest number is served by the literacy project which appears to be run as a traditional adult literacy course of a fixed duration, the efficacy of which has remained debatable.

Findings from the Multiple Indicator Cluster Survey 2019 (MICS 2019) by Bangladesh Bureau of Statistics show a significant share of school age children still remaining out of school. At the

primary level over 8 percent of school age children were reported out of school by this survey. The ratio is higher for rural areas compared to urban areas. The disadvantages are correlated with income level of families in the poorest and the richest quintiles, with small differences among the middle quintiles. (See Table 3.4).

Table 3.4: Share (%) of out of school children at primary level by income group and by sex

Wealth index quintile	Male	Female	Both
Poorest	11.7%	6.3%	9.1%
Second	8.2%	5.6%	6.9%
Middle	7.3%	3.5%	5.4%
Fourth	8.0%	4.1%	6.1%
Richest	4.4%	2.7%	3.6%

Source: Multiple Indicator Cluster Survey 2019, BBS

The income disadvantage is even higher at the secondary and higher secondary level according to MICS 2019 data in respect of being out-of- school. The overall proportions out-of-school were reported to be 18 percent at lower secondary level and 36 percent at the upper secondary level for the respective age groups. There is clearly a need to expand education opportunities for the young people through NFE programs that are responsive to their needs and citcumstances.

Recent data suggest that gender gap has narrowed in adult literacy rate -- about 30 percent of adult males and females remain non-literate. But a substantial rural-urban gap continues -- some 45 percent of rural women are still illiterate (BNFE, 2019).

NFE – Key Sub-sector Issues

The stated purposes of non-formal education interventions are to implement basic literacy programs through development of Community Learning Centers (CLCs) as hubs of lifelong learning, imparting life skills training, and skill training for suitable employment, especially in the informal economy -- the source of most jobs in the country. The Bureau of Non-Formal Education (BNFE) sub-sector program proposal emphasizes partnership with efficient NGOs with proven track record, priority to construction of CLCs, coordination of actors, realistic planning and effective monitoring as pivotal to attain the non-formal education related targets (BNFE, 2019).

As noted, the NFE sub-sector program is yet to receive high level approval. Only a small fraction of at least 32.5 million adolescents and adults estimated to be non-literate has been enrolled in a literacy project, but how effectively this is being carried out remains debatable. An aspiring middle income country cannot have a huge number of youth and adults non-literate, unskilled occupationally, and deprived of opportunities to participate in learning to fulfil their own goals.

A significant proportion of young children remains deprived of primary education, because they are not enrolled in primary school, drop out early, or do not achieve basic skills in literacy and numeracy even after five years of primary education. UNESCO Statistics Institute estimates that some 10 million children in the 6-14 age group in Bangladesh are out-of-school. The way has to be found to bring them within the ambit of education, largely through the non-formal approach, since the large majority of them consists of drop-out from formal schools.

To sum up the state of non-formal and adult education, two points need to be emphasized particularly.

First, non-formal alternatives for out-of-school children need to be funded and implemented effectively. A second chance program of sufficient scale and quality must be a part of the main strategy for inclusive quality primary education in order to serve all who are left out of the main stream – dropouts, working children, those in remote areas and those in other special circumstances. This can work only through effective partnerships built with NGOs which have

proven their commitment and capacity to deliver. The second chance option will also be needed for secondary level education, as this stage becomes an accepted part of compulsory and universal basic general education as anticipated in SDG4.

Second, a lifelong learning approach must be adopted as a key operating principle in the entire education sector, but must be reflected strongly in non-formal and adult education. To make lifelong learning a reality, opportunities for functional literacy for youth and adults must be a first step. A network of community learning centres (CLCs) offering a menu of relevant learning activities and supported by essential resources, complementing formal education, must be built up. ICT-based learning opportunities including self-learning for personal and occupational development need to be a strong element of the lifelong learning approach. Tentative steps have been taken in this direction but a "sector-wide approach" anticipated in this regard has yet to be given government approval.

3.7. Tertiary Education

Tertiary education is currently at a critical juncture. On the one hand, there is demand from the employers for professionals to serve the growing industrial and service sectors. On the other hand, tertiary institutions are not able to produce adequate numbers of employable graduates to meet the demands of the job market, while large numbers of graduates remain without a job. (Rahman, et. al. 2019).

Access and Equity

The important development in tertiary education is the growth of both private and public institutions over the last two decades often compromising quality standards and quality requirements, and the relevance of the outputs for the employment market.

It is a diverse and complex system. There are 45 public and close to 100 private universities officially established, of which some 34 and 86 respectively were functioning in 2018. They enrolled a total of 3.5 million students in 2016, including students in the affiliated colleges of some public universities and the Open University. The affiliating universities are the National University and the Islamic University, (UGC, 2017; Abed, 2018).

Excluding the affiliating universities and the Open University, the enrolment in public universities was 260,084 in 2016, which is a more meaningful number to compare with that of private universities. The comparable number for private university enrolment was 337,000. The mainstream universities, therefore, had around 600,000 students – and there were just under 3 million students in other general tertiary institutions -- the National University colleges (2.3 million), Islamic University institutions (240,000), and the Open University (256,000) as of 2016. The major components of the higher education system as of 2016 are shown in Table 3.5. (UGC, 2017).

Table 3.5: Components of Higher Education in Bangladesh (c.2016)

Universities	Affiliated Institutions	Students	(Female)
Mainstream Public Universities (34 functioning, with 11 general and 23 specialized universities)	319 (Medical/Health technology and others)	264,084 (11.2%) (8.4% excluding affiliated institutions)	(86,294)
National University	3,081 colleges	2,300,053 (73.0%)	(1,064,170)
Open University	--	256,304 (8.1%)	(100,647)
Islamic Arabic University	1,247 madrasas	77,247[1] (2.5%)	(30,899)

Universities	Affiliated Institutions	Students	(Female)
Islamic University	--	162, 998[1] (5.2%)	(62,791)
Total Public	**4,647 affiliated institutions**	**3,150,409[2] (100%)**	**(1,393,082)**
Private Universities (86 functioning)	--	337,157	(92,237)
Grand Total	**4,647 affiliated institutions**	**3,487, 566**	**(1,485,319)**

[1] Islamic Arabic University, launched in 2015 as an affiliating university for Madrasas, is in the process of bringing under it institutions formerly under Islamic University.

[2] Number does not add up due to incomplete data for component categories.

Source: UGC, 2017. Report of the University Grants Commission, 2016.

Some features of the tertiary education system can be seen from Table 3.5:

- Of about 5,000 tertiary-level institutions, around 120 are functioning mainstream universities. These exclude the Quomi stream faith-based institutions, which have been given recognition by the Government without exercising any regulatory authority and are not included in this discussion. There are also specialized institutions for higher level professional education and training outside the mainstream university system. (See below.)
- University students (other than for affiliated colleges), public and private, make up under one-fifth of general tertiary students. Among them, about 8 per cent go to public universities and 10 per cent to private universities.
- About one-third (32%) of mainstream public university and just over a quarter (27%) of private university student bodies are female.

The colleges under the National University are the workhorses of the higher education system. They supply the bulk of mid-level personnel for both the public and the private sector as well as teachers for the K-12 school education system. It can therefore be said that the quality of the National University colleges determines the quality of the large majority of educated human resources in the country and thus affects how efficiently the country functions. Evidence indicates that this large segment of the tertiary education system remains particularly weak in its provision of facilities and faculty and in the quality of graduates produced (Abed, 2018).

The Open University helps to expand the opportunities for higher education in a flexible way, serving the objective of equity and taking pressure off mainstream universities. There is potential for making good use of digital technology and open source educational content freely available to a large body of our learners with the mediation of and necessary language adaptation by the Open University.

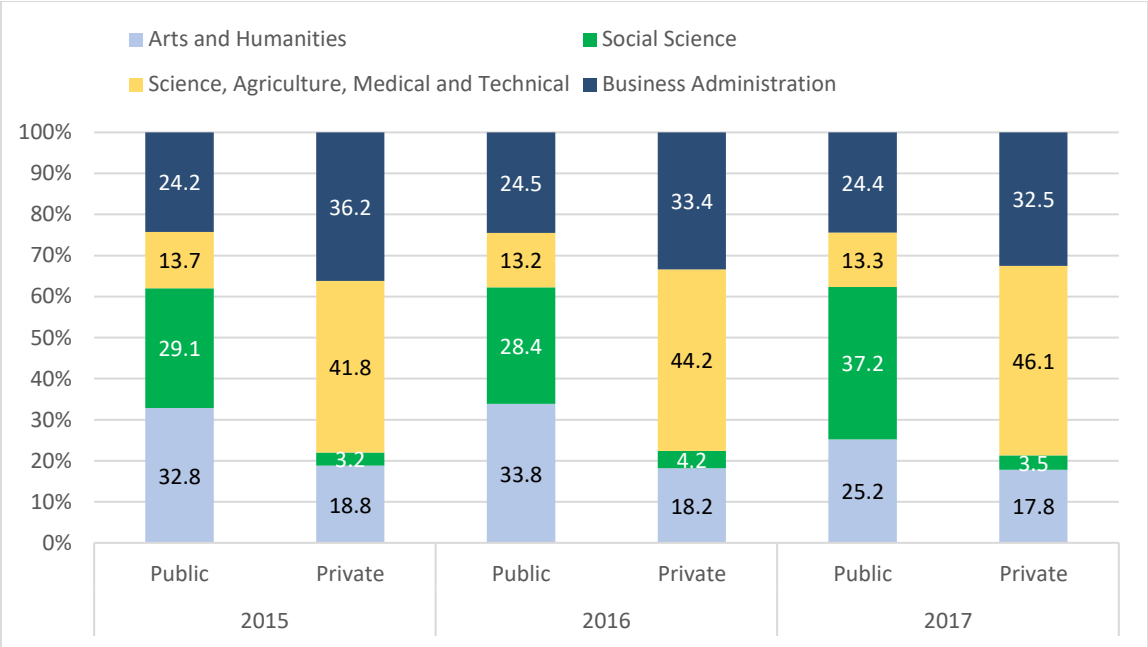
By developing human resources in specialised professional areas, the professional institutions relieve the burden on the mainstream universities, leaving them free to engage in basic and applied research and interdisciplinary areas of higher education. Universities have a special role to play in the creation, evaluation, maintenance and dissemination of knowledge. A relevant question is how closely the university, as a centre for research, knowledge production and dissemination, should be directly tied to the job market when other institutions of higher learning are directly and specifically involved in this task.

It is essential to look at higher education development as part of the total education system. The total higher education system consists of distinct components which have different roles and contributions to make. They complement each other and are inter-dependent. Faculty for all components of higher education generally come from the mainstream universities.

There are two direct links between higher education and the rest of the system. First, the school system provides and prepares students for higher education. How schools do their job determines what tertiary institutions can do and whether they can succeed. Secondly, tertiary institutions supply the teachers for schools. It is a cyclic relationship but making it a virtuous cycle is a challenge.

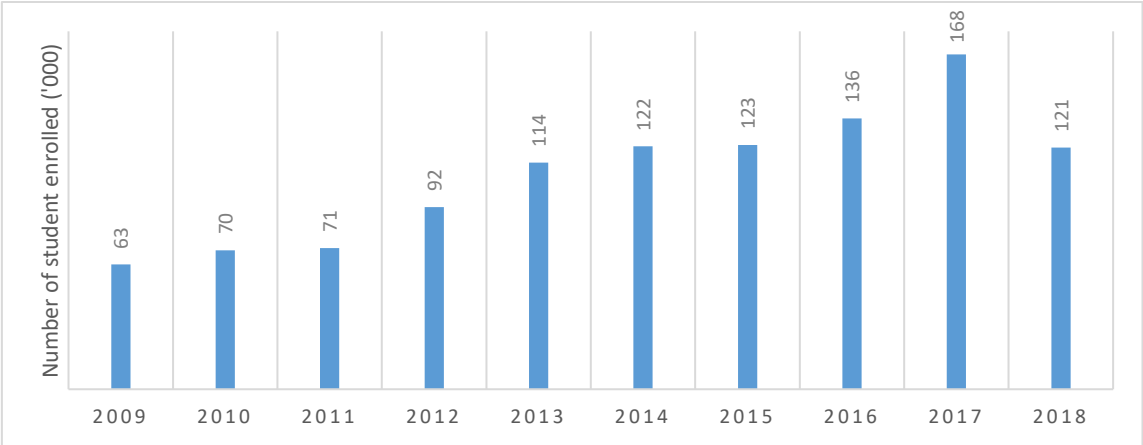
Figure 3.25 shows that the distribution of students in tertiary education across disciplines, but it does not present a consistent pattern from year to year. They vary significantly, though there is an overall dominance of business studies and Arts and Humanities including Social Sciences. This inconsistency arises from definition of the disciplinary categories and the reporting of data from individual institutions. However, this suggests deeper problems of curriculum planning, offering of courses and their relevance to demands in the employment market for university graduates. (See Figure 3.25).

Figure 3.25: Share (%) of students enrolled in different streams of Tertiary education



Source: 42nd, 43rd, and 44th Annual Report, Bangladesh University Grants Commission

Figure 3.26: Enrollment of students in Tertiary (professional) education institutes*



*medical, dental, nursing, textile technology, agriculture, art, law college

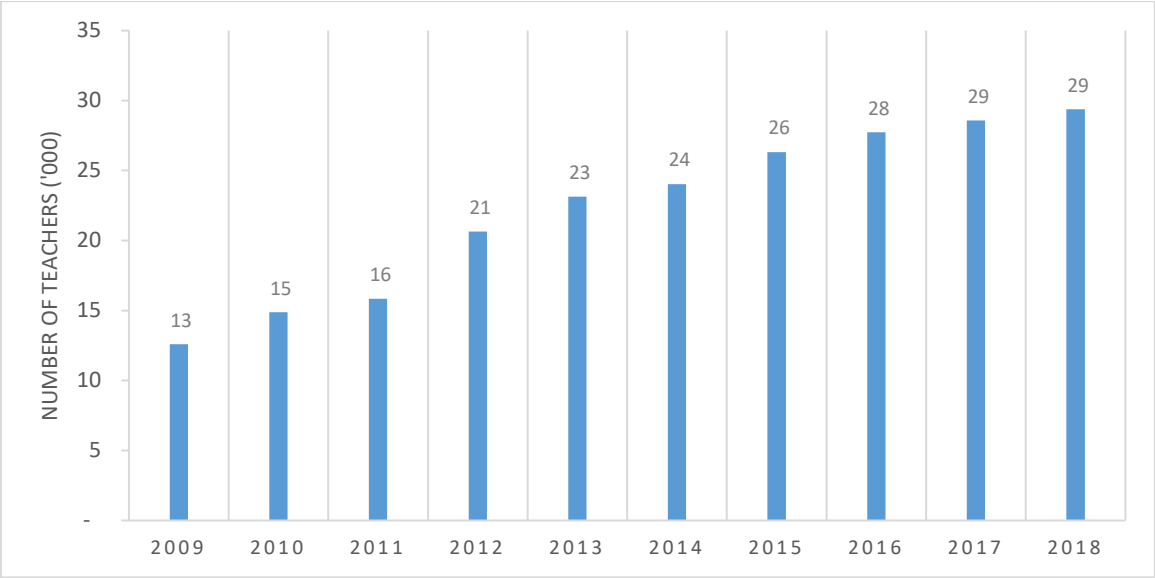
Source: Bangladesh Education Statistics 2018, BANBEIS

Enrollment in specialized professional tertiary education institutions, public and non-government, have almost doubled between 2009 and 2018 to 121 thousand (Figure 3.26). Participation of females also increased from about 35 percent to 46 percent during this period. About 80 percent of these institutions were reported to be privately managed. (BANBEIS, 2019).

Quality input and outcome

The total number of teachers have increased from 13 thousand to 29 thousand between 2009 and 2018 in mainstream universities. Of these teachers (other than affiliated colleges and specialized professional institutions), 53 percent served in privately managed universities, in line with their higher enrolment.

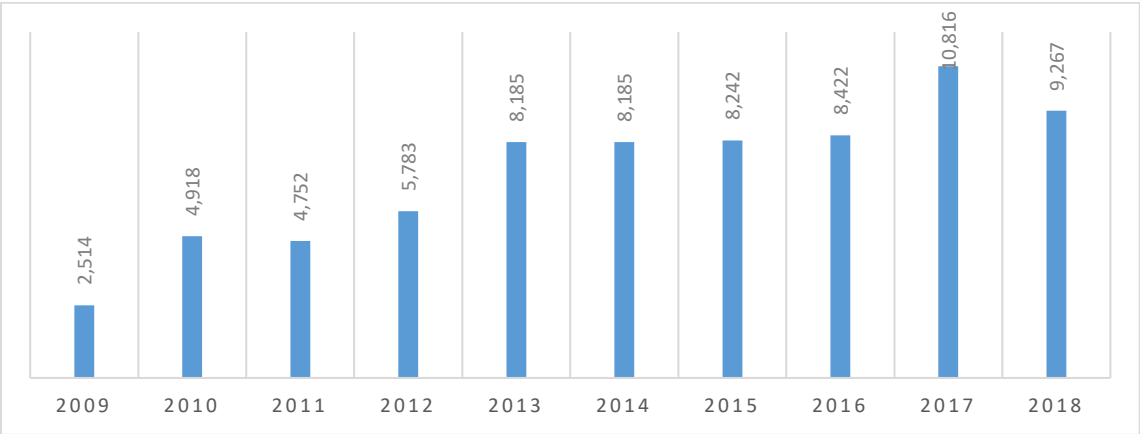
Figure 3.27: Number of teachers (in thousands) in Universities (Public and Private)



Source: Bangladesh Education Statistics 2018, BANBEIS

As of 2018, the total number of teachers in specialized professional institutions was over 9 thousand (see Figure 3.28). A little over 56 percent of these teachers were in the privately managed institutions, though 80 percent of the students were enrolled in private institutions, which suggests inadequacy in number and quality.

*Figure 3.28: Teaching Personnel in Specialised Tertiary Education Institutions**



*Medical, dental, nursing, textile technology, agriculture, art, law college

Source: Bangladesh Education Statistics 2018, BANBEIS

A quality assurance step for universities has been taken by passing the Bangladesh Accreditation Council Act in 2017. Several of the private and some of the public universities set up internal quality assurance mechanisms by setting up professional development activities and centres to support faculty professional enhancement. They have developed learning modules or have established training centers within the institutions aiming ultimately to enhance faculty skills to help improve cognitive and soft skills of students. These efforts are still lacking in many universities and remain at a nascent stage at others (Rahman et al. 2019).

The overall quality of learning in tertiary institutions is suffering from large student-teacher ratios especially in public universities. Quality teaching-learning is challenging in all institutions due to inadequate provisions of modern learning facilities. For example, the quality of internet connectivity and adequacy of computer facilities remain deficient for many of them. A recent World Bank report indicated that private universities in Bangladesh on average have 383 computers per institution, and one internet-connected computer for every 49 students (ibid). These are not all functional with adequate connectivity. The situation is public universities is not likely to be any better. There is need for activities and efforts to improve generic people and soft skills beyond cognitive and technical skills of graduates in both public and private tertiary education institutions.

Preparing students for the job market for professional and technical functions is a prime objective of tertiary education both from a personal and societal point of view. In this respect, tertiary education is seen to be failing in its mission. As noted earlier, unemployment is more prevalent among youth with higher degrees. This has been found to be especially true for those obtaining a higher degree from the network of colleges under the National University, which cater to 80 percent of students enrolled in higher education. After graduation from these colleges, according to one study, 46 percent of the students have to wait for three years or longer to get employed (Tazmeem, 2019; Ministry of Education, 2020). Another tracking of National University college graduates showed that after three years of graduation, close to half of the graduates were still unemployed (World Bank, 2019). The methodology and accuracy of these findings may be debated, but they do point to need for looking at quality and relevance of education and training at the tertiary level.

Tertiary Education – Key Sub-sector Issues

Tertiary education enrollment is growing rapidly, and private education providers are playing an increasingly larger role. Access to tertiary education is not equitable across gender both in public and private universities. Public universities remaining extremely selective and high-fee private universities bearing much of the burden of tertiary education expansion, the system is inherently inequitable for aspirants of higher education from the lower socio-economic strata. Very limited scholarships or bursaries and lack of a system of education loans do not mitigate the prevailing inequities.

The distribution of curricular offerings and absence of planning and strategies for improving market relevance particularly in the public sector have given rise to several concerns. These concerns are about "graduate unemployment," oversupply of graduates in humanities and skills shortage for technology and engineering jobs, and uneconomic investment of public and private resources in tertiary education with poor pay-off.

Adoption of the Academic Accreditation Council Act in 2017 is the right step, but it has to be made operational across the board in tertiary institutions. While some initiatives for quality assurance, particularly in respect of teacher performance standards and professional development, are being taken in some of the universities, it is largely missing in the tertiary colleges and specialized professional institutions.

Weak management and governance leading to poor accountability and transparency about decision making and their implementation are major concerns. Complaints about irregularities in key areas, including teacher recruitment, student enrollments, student assessments, and student welfare including residential accommodation are frequent in all types of tertiary institutions.

A critical role of higher education is to supply teachers for the school system – in adequate number and quality. It is generally agreed that a major obstacle to achieving quality with equity in the education system is the professional and personal capabilities and attributes of teachers. A vicious cycle -- of teachers with limited capability and poor motivation producing students from primary and secondary schools who are ill-prepared for higher education -- is at work. Many, in turn, become low-capability teachers, thus perpetuating the cycle. A way has to be found to break this cycle and attract the "best and the brightest" of young graduates into teaching and retain them in the profession. Global experience of addressing this challenge suggests possibilities from which it is necessary to learn. This is discussed further below.

4. Cross-Cutting Issues in Educational Development

The sub-sectors of education – problems of access and equity, quality inputs and outcomes and key sub-sectoral issues -- have been discussed above. In this section, main cross-cutting issues, which present special difficulties as well as potentials for the sub-sectors in varying degree and for the sector as a whole, are briefly noted. The topics discussed are: teacher number and quality; climate change and natural and man-made emergencies including the forcibly displaced Rohingyas; ICT for and in education; implications of 21st century skills and the Fourth Industrial Revolution; access to WASH and girls' menstrual hygiene; children with special needs; incentives – stipends, mid-day meal, and free books; and SDG National Indicator Framework and monitoring.

4.1. Teacher Number, Quality and Professional Development

Policies, strategies and plans for teacher professional development, teacher motivation, as well as for teacher recruitment and deployment in Bangladesh are emphasized in various policies and plans such as the 7th Five Year Plan, Education Policy 2010 and education sub-sector programs. However, a coherent and holistic teacher policy and teacher development master plan which creates a conducive overall policy environment is lacking. A national teacher policy and a teacher professional development master plan, covering teachers at all education levels including non-formal education and TVET is needed in the light of national education targets and SDG4 (SDG4 Strategic Framework for Bangladesh).

Bangladesh Primary Education Annual Sector Performance Report 2017 (ASPR 2017) states that as of 2016, the percentage of teachers who meet minimum professional qualifications (at least having a C-in-Ed degree) was over 94 percent. However the report also reveals that there are still substantial numbers of vacancies in primary schools across Bangladesh, while student-teacher ratio remains high and total learning time low. For example, over one-fourth (27 percent) of the head teacher posts were found to be vacant in 2016. Even higher vacancy ratios were found in primary education administration. Twenty-eight percent of the District Primary Education Officer (DPEO) posts were vacant and 32 percent of the Assistant District Primary Education Officer (ADPEO) posts were also vacant. ASPR acknowledged that the impact of teacher training on student achievement and learning outcome is an area of concern and recommended further investigation into this.

The Education Watch report of 2018-19 focused on quality aspects of secondary level teachers. It revealed that in terms of self-perceived competency of teachers, over 17 percent of the secondary teachers consider themselves to be below average performers. More than 22 percent of them reported being engaged in private tutoring. Male teachers working in urban areas and relatively younger in terms of service length have been found to be more likely to engage in private tutoring. Less than half of the teachers (43%) in non-government schools (the pre-dominant category at the secondary level) reported to have utilized multimedia in class room teaching, Other key findings, based on self-reporting by teachers, are:

- Only 43.7 percent teachers reported that they prepared the question papers for terminal and annual examinations of their students themselves. More than a third, 36.8 percent, bought the question papers from teachers' associations, another 14.4 percent teachers bought question papers from the open market (sold by guidebook publishers).
- More than one-third of the teachers used guidebooks to teach in classrooms and one-way lecture as the main method of teaching in the classroom.
- A large proportion, 41 percent, of the institutions did not have multimedia classrooms or computer labs. Among the teachers who used multimedia, two-thirds mentioned many difficulties in using the technology including power failure, lack of adequate training, defective equipment and inappropriate content material.

SDG4 Strategic Framework for Bangladesh identifies the quality of teachers and their motivation and application of teaching skills as key ingredients for improving the quality of education. There has been various efforts to strengthen the National Academy of Primary Education (NAPE) as the apex body to guide and support professional development of primary teachers. However, the need for further strengthening of the capacity of NAPE to contribute to teacher's development is well-recognised. For the secondary level, the role and capacity of the National Academy of Education Management (NAEM) also seen in need of strengthening.

Longstanding problems related to teachers' incentives linking this with career development, performance standards and professional support and supervision remain a concern, though various initiatives have been taken in this regard. In the case of primary education teachers, the qualification requirement and their salary including subsidies for non-government schools have been raised. However, clear career pathways are yet to be established. This would help attract bright aspirants, and provide them incentives to perform better and to remain within the system.

The need to think afresh about attracting and keeping talented people in the teaching profession has been raised frequently in education discourse in Bangladesh and is recognized as a major challenge for improving education system performance. Bangladesh along with countries in South Asia, unlike other regions of the world, does not have a well-established and widely used pre-service teacher education program, although school teaching is the single largest field of employment for college graduates The common practice is to recruit general education graduates as primary and secondary teachers and then send them for one-year to 18-month pedagogy training To place only a qualified and certified teacher in a classroom in front of students as a standard requirement has not been established. Since school teaching is not the first choice as a career for higher education graduates, especially the talented ones, it ends up attracting the "bottom of the barrel" of the graduates. A concurrent professional teacher development approach, combining general education and pedagogy in the four-year degree program, instead of the present sequential model, along with measures regarding career path, incentives and social status, have been suggested as the approach to break the vicious cycle of poor teacher quality and poor student learning (Ahmed, 2015; Ahmed, 2018).

In order to move towards a teacher development approach to fit the 21st century needs a longer term plan has to be adopted. A national teacher development initiative, a master plan, has to be undertaken to begin to orient and prepare, emotionally and intellectually, bright young people after higher secondary for teaching as a noble and rewarding profession. This will have to include several key steps:

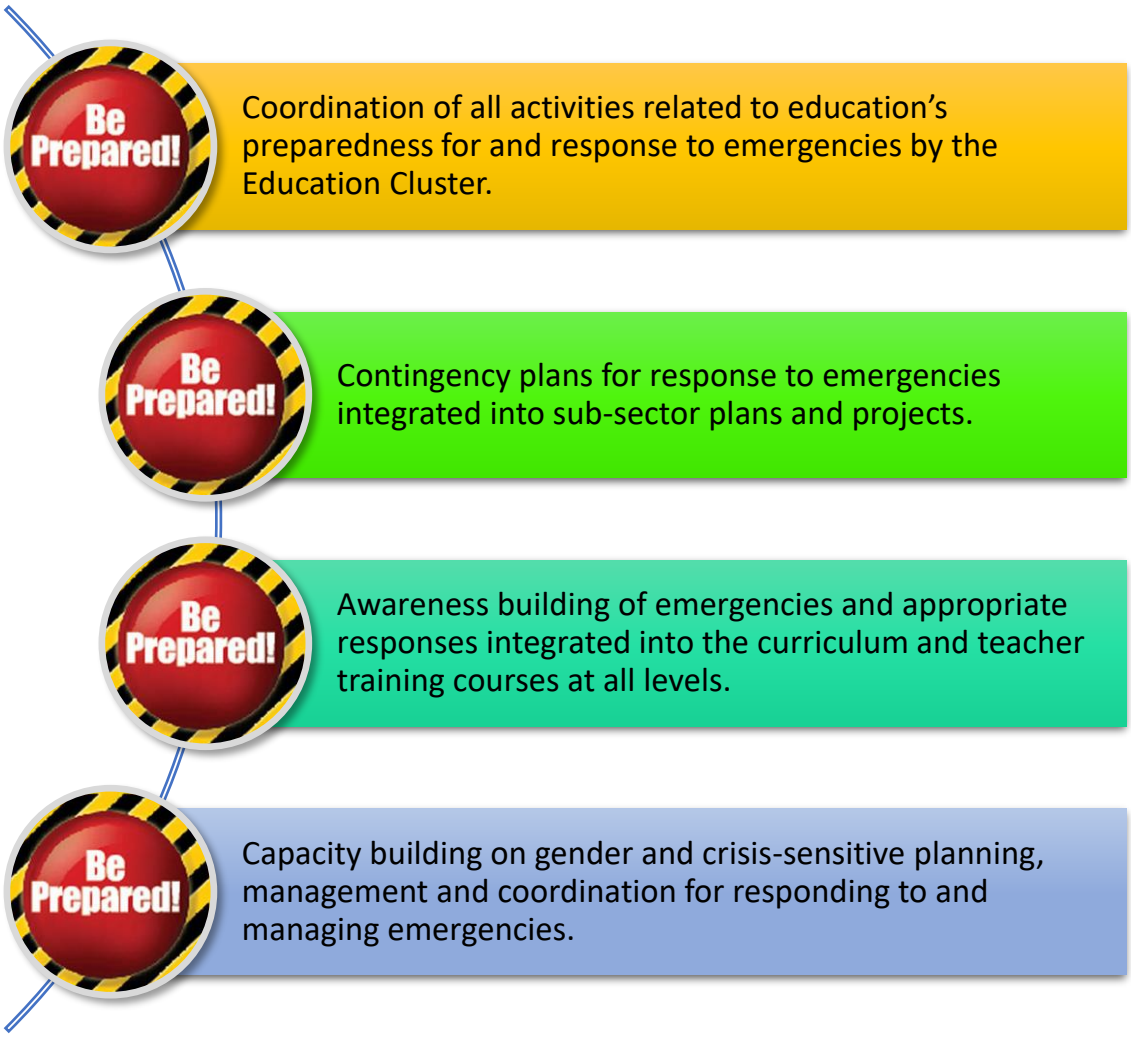
- A pre-service teacher preparation programme can be incorporated into the undergraduate degree programme with education as a subject in one or two Government colleges in every district under the National University. Students will receive a BA or BSc degree, depending on the combination of other subjects taken along with Education as the core subject, in addition to a teaching certificate on completion of required practicum.
- Academic and other quality standards required by the National University and UGC (hardly enforced at present) have to be strictly enforced in selected colleges for this initiative. Financial and personnel provisions have to be made for this purpose under a special project.
- Establishing a National Teaching Service Corps (NTSC), with attractive remuneration and status, will create a national cadre of teachers who, in a few years' time, will form a nucleus of quality education personnel in schools and bring about a qualitative change in teaching and learning.

A beneficial fallout of this initiative, if properly implemented, would be to show the way for a qualitative change in the colleges under the National University (Ibid.).

4.2. Climate Change, Natural and Man-made Emergencies, and the Rohingya Crisis

Bangladesh is one of countries most seriously impacted by climate change. It is one of the most disaster prone countries in the world and this is being exacerbated by climate change. The Government of Bangladesh is committed to both being prepared for emergencies and to responding appropriately, quickly and effectively to all emergencies (SDG4 Strategic Framework for Bangladesh). The strategic approach to ensure "Preparedness for and provision of education in emergency" is seen in the diagram below (Figure 4.1):

Figure 4.1: Strategic approach to ensure preparedness and provision of education in emergency



Source: SDG4 Strategic Framework for Bangladesh

The framework document also emphasizes on sensitizing the children about climate change and identifies households affected by climate change (especially those belonging to the lower income groups) as 'vulnerable groups' that require particular attention. A large share of children from lower income households are exposed to different types of hazards. And these are likely to increase in frequency and magnitude in future due to climate change.

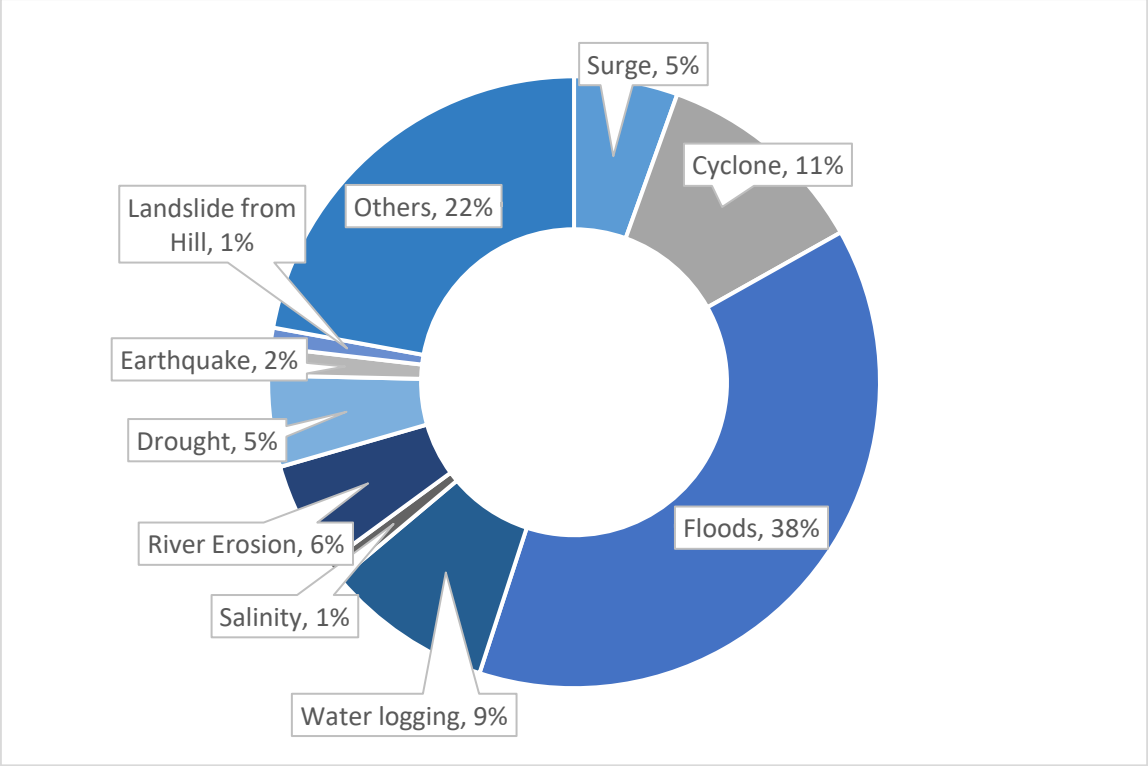
As per the latest data (2018) the major types of disasters that affect education institutions are: cyclones, floods, waterlogging, river erosion, droughts, and tidal surge. In 2018, of all the

education institutions affected by natural disasters, over one-third (38 percent) has been affected by floods. Cyclones in the coastal area have affected 11 percent, and river erosion affected 6 percent. Waterlogging, droughts and surges have also affected significant share of education institutions across the country (Figure 4.2).

The level of resilience of the primary education system is low. This is because of the poverty, livelihood dependent on natural resources and inadequate climate responsive curricula, awareness and training at primary education system. This makes the children vulnerable to disasters which will intensify in future due to climate change (Das, 2010).

The 2015 Bangladesh Minimum Standards for Education in Emergencies indicated necessary actions for disaster-risk reduction and management at the school level. One important dimension relates to community participation. The standards required that the School Management Committee consult representatives groups to conduct a community disaster-risk assessment that should inform the design of a school-based disaster risk-reduction action plan. The standards also highlight the important role of teachers in disaster-risk reduction, as they can educate students on how to reduce their risk of disaster at school and at home (INEE, 2015).

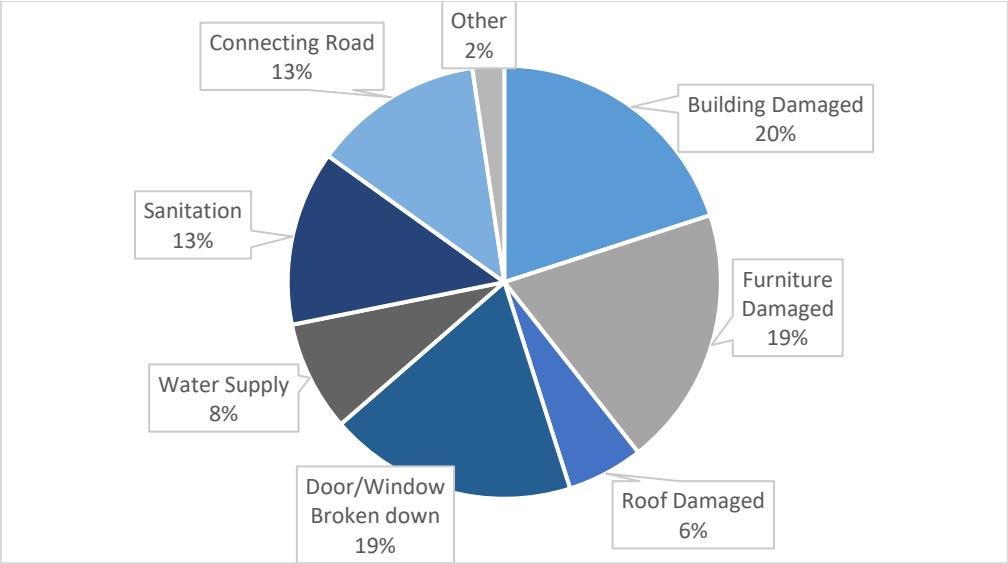
Figure 4.2: Distribution (%) of education institutions affected by different types of natural disasters in 2018



Source: Bangladesh Education Statistics 2018, BANBEIS. Note: Institutions may be affected by multiple hazards simultaneously.

Figure 4.3 shows that many institutions in the country were affected by multiple disasters, often simultaneously, impeding and disrupting children's learning and even placing them in danger. Of all the education institutions experiencing damage due to natural disasters, 20 percent experienced significant damage to buildings. About the same proportion experienced damage to furniture and broken doors/windows. Connecting roads were damaged, which hindered accessibility for 13 percent of the institutions and 8 percent had their water supply disrupted due to natural disasters.

Figure 4.3: Type of damages to education institutions in 2018



Source: Bangladesh Education Statistics 2018, BANBEIS

Note: Institutions are often affected by multiple types of hazards.

The Covid-19 pandemic has created a global havoc, disrupting societies and economies and creating largescale hazard for life and wellbeing of people. Schools have been shut down and children and families have been placed in unprecedented anxiety and uncertainty. As in all emergencies, children from lower income families and socio-cultural disadvantages are more vulnerable than others. The priority in this instance is to keep children engaged in learning activities at home with use of ICT and reaching out to parents and families with assurance and support. The scale and intensity of the pandemic point to the importance of considering longer term implications for education systems of hazards with major societal disruption which may very well recur (UNESCO, 2020)

All educational institutions in Bangladesh has been shut down for a month since 14 March due to the pandemic; the closure is likely to be extended. The education authorities have taken steps to broadcast primary and secondary school lessons by a TV channel used to broadcast national parliament proceedings. This channel does not reach all parts of the country; moreover, it is estimated that only half of the households with children have a TV according to MICS 2019 (Daily Star, 6 April, 2020). Other means of digital communication are even more limited (see below). Nonetheless, TV broadcast of lessons is a positive move. There are lessons to be learned about how digital and distance means of learning can be made a regular feature of school education more effectively to improve teaching-learning and enhance the resilience of students and the school community. Better delineation of geographical locations and populations affected relatively more severely by climate change and natural disasters is needed. A map based on data derived from different sources shows a broad depiction of climate risks and disaster prone areas (see Annex 6). These comprise southern coastal and low-lying areas, the eastern hill areas, the north-eastern *haor* areas (submerged under water for a major part of the year) as well as the areas along the large rivers (large sandbanks and shoals created by shifting rivers, where people settle down seeking opportunities for farming, fishing and animal raising). These add up to half the districts of the country. These circumstances affecting a large proportion of households and children need to figure prominently as an essential element in educational development priorities, operational plans and programs. More specific breakdown of vulnerabilities within districts is needed to assess situations and plan accordingly. The geography-based and population group vulnerabilities also are a strong argument for decentralized planning, management and response mechanisms for education programs within an overall policy and strategy framework.

4.3. EDUCATION RESPONSE TO THE ROHINGYA CRISIS

More than 700,000 ethnic Rohingya fled to Bangladesh in 2017, being displaced by force, after Myanmar's military carried out a series of operations against the Rohingyas in the Rakhine province, allegedly for violence by Rohingyas demanding citizenship rights. The new upsurge of refugees brought the total displaced Rohingyas in Bangladesh, added to previous fleeing Rohingyas, to over a million. (Ahmed, 2020)

A critical concern facing the Rohingyas in Bangladesh is the future of their children. Fifty-five percent of the camp residents are children under 18. As children, they are claimants to specific rights of safety, protection, wellbeing and education under international treaties, such as the UN Convention on the Rights of the Child.

Aid groups have set up more than 2,000 'learning centers' for young children (3 to 5 years) in which instruction has mostly been limited to playtime, or basic reading and numeracy. These classes did not reach a third of the roughly 416,000 school-age children, according to UNICEF, which coordinates the camps' education services with other aid-providers. The Bangladesh government's policy response so far was, instead of a systematic education program spanning pre-primary to secondary, offering only an "informal" education program which aid agencies were permitted to manage.

Anxious parents and educated people among the refugees, including teachers, tried to fill the gap by opening their own "unofficial" schools in the tents where they lived. The teachers included some who had Bachelor of Education degrees and were high-school headmasters and teachers in Myanmar.

The schools taught subjects like English, Burmese, mathematics, and history. Some taught science and social science subjects to older students. The teachers said they tried to follow the Myanmar curriculum in the hope of helping students keep up with schooling back home. But only a small proportion of the children, under 10,000, were beneficiaries of the makeshift schools.

Rohingya parents noted the contrast between the authorized NGO learning centers and the refugee-run classrooms. They would rather send their children to proper schools where the children would be taught the subjects taught in a school.

Alice Albright, Executive Director of the Global Partnership for Education, visited the Rohingya camps in September, 2019. In a meeting with the Ministry of Primary and Mass Education on September 12, she praised the humanitarian response of Bangladesh government and the host communities. She also warned about "a lost generation of children without education opportunities, without hope, and without a pathway to the future." (Ahmed 2019).

The Bangladesh Government now, as of January 2020, has lifted the restriction on organized school-level education for older children up to age 14. In line with the government's decision, the education sector for the humanitarian response in Cox's Bazar now plans to pilot the introduction of the Myanmar curriculum in the Rohingya refugee camps starting in April, initially targeting 10,000 Rohingya students in grades six to nine. The use of the Myanmar curriculum will be expanded to other grades in a phased manner.

Activists and the UN and humanitarian community praised the decision as a positive step and an indication of the commitment by the government of Bangladesh to ensure access to learning for Rohingya children and adolescents. This would help equip them with the skills and capacities for their future and return to Myanmar when the conditions permit.

Sayedollah, an activist with the camp-based youth group Rohingya Students Network, was happy with the government decision. "Thanks a zillion to the government of Bangladesh for agreeing to care for the future of Rohingya," he said. (K. Ahmed, 2020)

Khin Maung, head of the Rohingya Youth Association, said he appreciated the government's steps but hoped they would also consider allowing education for Rohingya over age 14. Khin had finished high school before being forced to come to Bangladesh and had planned to study law. He asked that they be allowed to study in private universities or higher education facilities could be set up near the camps that would serve both refugees and local people. "I want to study law, but I'm losing hope. What's the future for me? We can build ourselves up, but we need permission from the government." (Ibid.)

Education opportunities for the Rohingya children need not be seen as an obstacle to whatever geo-political resolution that may be struck eventually. Proper education is the least that can be done for the children traumatised and deprived of their basic rights. It would enhance Bangladesh's image as a humane nation. The children of the host communities who are paying a high price due to the refugee crisis should also benefit from the education services for children, both in the camps and in the local communities (Ahmed 2019).

4.4. ICT IN AND FOR EDUCATION

Government of Bangladesh, as per its "Vision 2021" is committed to ensure application of Information and Communication Technologies (ICT) in all spheres of development. To this end, the Ministry of Education (MoE) put forward the Master Plan for ICT in Education in Bangladesh (2012-2021) with the intention of "modernizing and revolutionizing Bangladesh's education system through the use of ICT, promoting technology-based teaching and learning as a strategic lever to achieving Bangladesh's Vision 2021" (MoE, 2019). The latest progress report regarding implementation of the said master plan has pointed out key achievements, as presented below:

Table 4.1: Achievements in implementing the Master Plan for ICT in Education in Bangladesh (2012-2021)

ICT aspect	Achievements in Brief
ICT-enabled teaching-learning environment	Progress has been made in enhancing the teaching and learning environment by using ICT in classrooms (one laptop and one projector per classroom). In addition, a limited number of teaching institutions have been equipped with computer labs.
Recognition of ICT professionals	At the secondary level, an official curriculum has been issued by the Ministry of Education to recognize professional degrees in ICT. This is expected to eventually ensure that education institutions recruit ICT trained professionals as teachers.
Dissemination of quality learning material using ICT	Awareness raising campaigns are to be initiated to spread information about the digital portal developed as part of the Access to Information (A2I) Programme as well as about the digital content developed by the National Curriculum and Textbook Board (NCTB).
Rural-urban disparities in ICT capacity and awareness	Limitations faced by learners and teachers in semi-urban and rural areas due to lack of infrastructure facilities as well as due to inadequacy in terms of internet connectivity have been identified.
ICT role in monitoring and reporting capacity	Need for improving the monitoring and reporting capacities of education managers have been mapped and directives to strengthen accountability and transparency have been put forward.

Source: Ministry of Education, 2019

With schools shut down all over the country due to the Covid-19 situation and students confined to their homes, education authorities have initiated broadcasting of school lessons through the

public TV channel used for broadcasting national parliament sessions. Limited access to the internet and even smart mobile phone with wi-fi connectivity for the average student has stymied a broader range of ICT-based education activities. The pandemic has brought out the difficulties and constraints regarding effective use of technology in education.

The major challenges in enhancing utilization of ICT in education (as identified in the latest progress report on implementation of the said master plan) are:

1) inadequacy in terms of infrastructure,
2) lack of proper internet connectivity,
3) lack of access to electricity,
4) availability and maintenance of equipment,
5) need for further sensitization,
6) ensuring quality of the services delivered,
7) capacity constraints of the human resources, and
8) need for improving monitoring and reporting practices.

Physical structures of education institutions in many rural and urban slum areas are in dilapidated conditions. From the primary to higher secondary level, classrooms sometimes have shortages of basic needs such as sufficient chairs and benches for all learners and an appropriate physical environment for learning

Most education institutions rely on mobile network-based Internet services which are slow and expensive. While schools in urban areas use broadband Internet and pay according to Internet speed with unlimited data, schools in rural areas, particularly in coastal area, hill tracts and hoar areas, have to pay for each MB of mobile data. As a result, teachers in rural areas are less inclined to use the Internet to share digital content in multimedia classrooms. According to the BANBEIS statistics, around 2,650 secondary level educational institutions did not have electricity at their premises, accounting for about ten percent of secondary level educational institutions.

Due to a number of Government initiatives rural electrification is improving and more institutions are getting access to electricity. However, in order to accelerate the use of ICT, it is still necessary to distribute rechargeable multimedia projectors and laptops in schools without or with limited access to electricity.

ICT resources provided to educational institutions need to be maintained properly. The Union Digital Center (UDC) under the auspices of the Local Government structure could be used as the hub to provide technical support within the union. Learners and teachers are not often aware of educational portals and digital content developed by the Access to Information (A2I) Program and other agencies.

Awareness need to be focused on all education actors. Parents often are concerned about bad influences arising from the use of Internet and mobile phones. Learners and parents need to be guided in the appropriate use of technology. There is a need to develop class-based and subject-based quality learning materials (including self-learning and supplementary materials) for both teachers and students.

ICT capacity development of teachers, trainers, curriculum developers, and education managers needs to be improved and be part of an ongoing capacity building program. Knowledge acquired by training attendees, after they returned to their educational institutes, needs to be better shared with colleagues

With the spread of ICT resources, real-time monitoring, feedback, and reporting mechanisms can be introduced in education institutions as an education management information system (EMIS). Recording and reporting burden of management related information and data can be reduced with e-filing at the institutional level. Training and orientation are needed for this purpose of education managers at institutional and higher levels.

4.5. 21ST CENTURY SKILLS AND THE 4TH INDUSTRIAL REVOLUTION

Closely related to the challenges and potentials presented by ICT are questions about the educational responses to the imperatives of two interconnected concepts – the 21st century skills and the 4th Industrial Revolution.

Prime Minister Sheikh Hasina recently said, "It is not only Bangladesh, the whole world will need skilled manpower… and for that we have reformed our education system, giving priority to vocational training." She was speaking at the international conference on "Skills Readiness for Achieving SDG and Adopting Industrial Revolution 4.0" on February 2, 2020. The event was organised by the Institute of Diploma Engineers Bangladesh (IDEB) and the Colombo Plan Staff College in Manila, Philippines.

The Prime Minister indicated an important priority for national education development. The question is: how are buzzwords such as the "21st century skills" and the "Fourth Industrial Revolution" understood by the education stake holders and what is happening on the ground in the thousands of institutions at all levels across the country?

Klaus Schwab, the founder of the World Economic Forum and the organiser of the annual Davos Summit, is credited with popularising this term. As Schwab explains, the First Industrial Revolution started in the 1760s, using water and steam power to mechanise production. The second, beginning in the 1870s, used electric power to create assembly lines and mass production. The third, starting from the 1960s, used electronics and information technology, also known as digital technology, to automate production. The Fourth Industrial Revolution (4IR) now builds on the digital revolution (Schwab, 2016)

The latest industrial revolution blurs the lines between the physical, digital and biological spheres in an unprecedented way. The 4IR is radically different, since it is more than only a technological shift in economic production, as the previous three were. Through the potential combination of physical, digital and biological technologies, it opens unlimited possibilities for addressing critical challenges of poverty, inequality and sustainable development. However, beyond the hype surrounding 4IR, the potentials and challenges have to be seen from the perspective of the real world, especially from the point of view of low income countries like Bangladesh where the majority of the world's people still live. The prospects and problems are spectacularly different for most people in these countries when compared to those in wealthier countries.

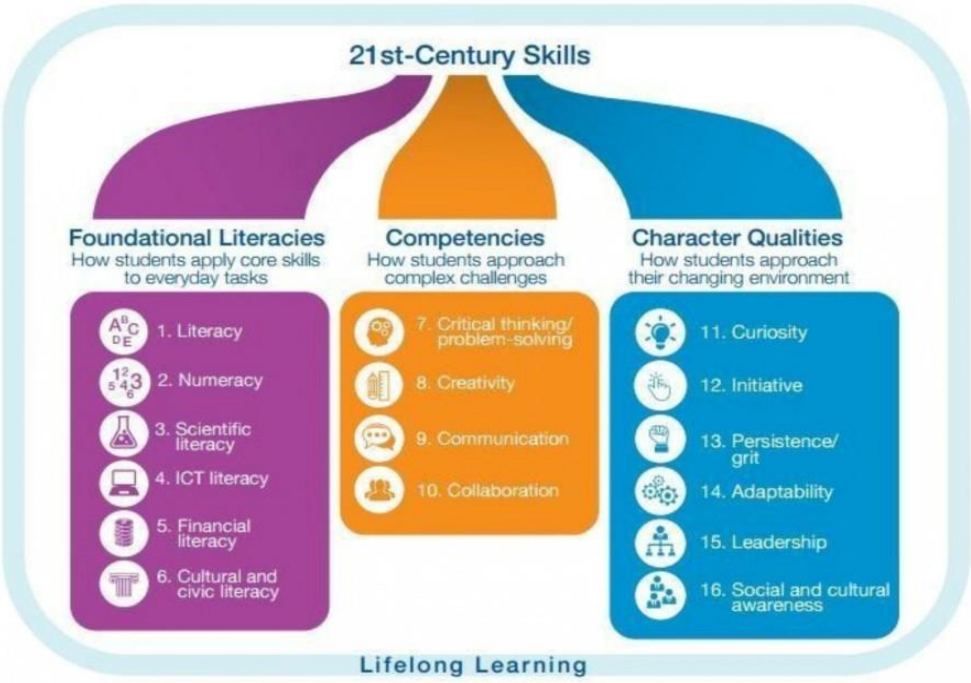
Over 80 percent of the Bangladesh workforce are employed in the informal economy, which is not regulated by worker welfare and rights standards. A third of the workforce has no education, 26 percent have only primary education and 31 percent have only up to secondary education, according to a 2017 Labour Force Survey. Over 40 percent of workers are engaged in the low-skill and low-wage agricultural sector. The concept note for the Eighth Five Year Plan (FY2021-25) that is under preparation says that the overall quality of the labour force is much below the level that is needed to achieve the planned 15 percent growth in manufacturing, to expand the organised service sector, and to facilitate the transition to an upper middle income country (Ahmed, 2020)

Life and the livelihoods of the majority of people in Bangladesh are largely characterised by the use of the second or even the first Industrial Revolution technologies. At the same time, ironically, most people are also touched by the third Industrial Revolution through the penetration of mobile

phone technology. The features of 4IR can be found in some of the activities of a handful of the better educated and privileged population who benefit from or contribute to its development at home or abroad. What this means is that simultaneously, technologies and people's skills, as well as their attitudes and aspirations, have to be lifted across the board in all phases of industrial revolutions, starting from wherever the people are on this spectrum. This is where skills formation, the role of the education system and the relevance of 21st century skills come in.

What are called the 21st century skills are not necessarily all novel, nor do they mark a clean break from what were important in the 20th century or the 19th century. There are common and timeless elements of quality and relevance for learners and the whole of society in any system of education. Education systems have always struggled to achieve and maintain these essential elements, and they have not become invalid in the 21st century (Ibid.).

Exhibit 1: Students require 16 skills for the 21st century



Note: ICT stands for information and communications technology.

Source: World Economic Forum, ""What are the 21st Century Skills Every Student Needs?" 2016.

The World Economic Forum formulation of 21st century skills recognises the value of the foundational skills of multiple literacies, the essential tools for learning. This is the base on which the higher order skills of solving problems and thinking critically are built. Young people also have to be helped with social and emotional maturity and acquiring moral and ethical values—the qualities of character. A lifelong learning approach has to be adopted for this. As in the case of technology adoption and adaptation, skills development and education also need to consider the perennial basic and essential elements that can respond to the diverse phases of technology, production, consumption, lifestyle and expectations in which people find themselves (Soffel, 2016).

The education authorities— the Ministry of Primary and Mass Education and the two divisions of the Ministry of Education and the National Curriculum and Textbook Board—are all engaged in a review of school curricula in the context of 21st century challenges. What is more important than formulating the curriculum is to find effective ways of implementing the curriculum. Teachers—their skills, professionalism and motivations—are the key here. So is the way students' learning is assessed which profoundly influences what happens in classrooms and what attract students' and teachers' attention. Look at the negative backwash effects of the current public

examinations—too early and too frequent; many questions on what they actually assess; and the resulting distortion of the teaching-learning process in schools.

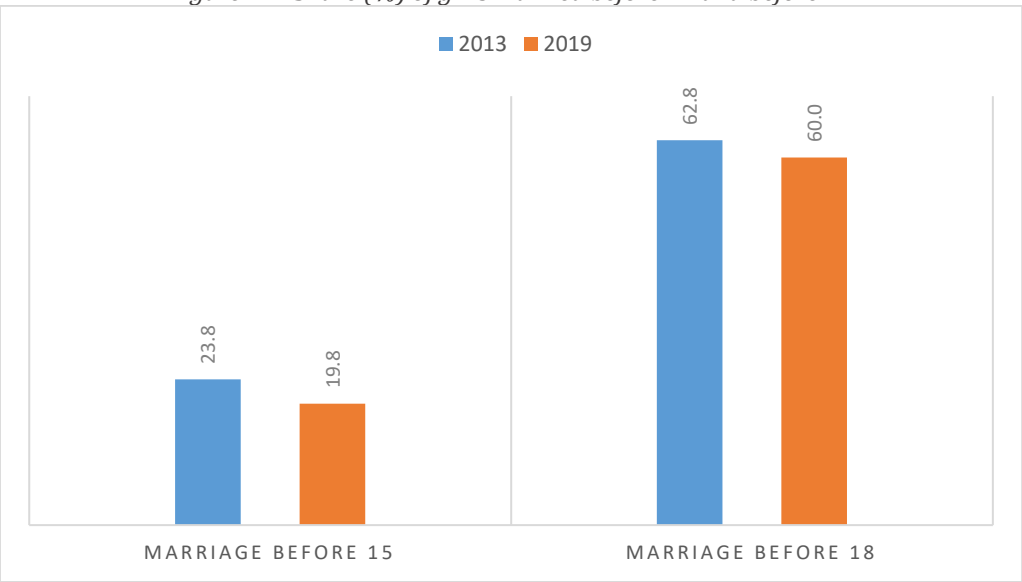
A good move is to start streaming students to different tracks from 11th grade rather than 9th grade, something which is under consideration now. The aim is to build a common foundation of competencies for all, and not force young people to foreclose their life options early.

Klaus Schwab had warned that we face the danger of a job market that is increasingly segregated into "low-skill/low-pay" and "high-skill/high-pay" segments, giving rise to growing social tensions. Coping with the implications of this danger for education and skill development is a continuing concern. Numerous structural and operational obstacles to necessary reforms in education and skills formation and how to deal with these have to be addressed. (See below the discussion on governance and management.) (M. Ahmed, 2020).

4.6. Dealing with Child Marriage

Ending Child Marriage is one of the long-standing challenges for Bangladesh and continues to be a crucial constraint in the fulfillment of girls' and women's rights. The government accepts the idea that ending child marriage is strongly correlated with participation of girl children in education. That is, more girls engaged in education means less child marriage, and less child marriage means more girls staying in school.

Figure 4.4: Share (%) of girls married before 15 and before 18



Source: Multiple Indicator Cluster Survey 2012-2013 and 2019

MICS 2019 reveals that sixty percent of women get married before age 18, and one-fifth of them are married before the age of 15. At present, 3.8 million women aged 20-24 years, were married before age 18, with almost 0.7 million married before age 15 (MICS, 2019; Figure 4.4). Moreover, with a teenage pregnancy rate of 31 per cent, nearly a third of all women become mothers by the time they are 18.

Various government initiatives encourage girls to stay in school, empower adolescent girls and boys through provision of life skills-based education, transfer cash to vulnerable families with adolescent girls, ensure protection of children at risk, and raise awareness through community mobilization and behavior change activities. The government also enacted global comparison, the

new Child Marriage Restraint Act in 2017, and prepared a National Action Plan (NAP) to End Child Marriage. These efforts are intended to reduce the number of child marriages.

Bangladesh still has, by international comparison, one of the highest prevalence rates of child marriage and early childbearing (UNICEF 2014). Child marriage clearly affects young girls more than young boys, disrupting a girls' educational and economic opportunities, raising her chances of exposure to violence and abuse and threatening her health and the health of her children.

4.7. Clean water, Sanitation and Girls' Menstrual Hygiene

As per the report of the Bangladesh National Hygiene Baseline Survey, 2014, schools in Bangladesh have a high student to toilet ratio. On average there is one toilet for every 187 students. There is no water or soap in nearly two-thirds of the toilets. Most often these toilets have small windows allowing little light and ventilation.

The government is committed to ensuring safe environment and prevention of disease transmission by promoting personal hygiene practices in school. Yet, water, sanitation and hygiene (WASH) situation at schools is not satisfactory (Wateraid, 2015). Overall, according to a 2014 survey, 12 percent of the schools in the country do not have any kind of hand washing locations within the school compound, and 15 percent of schools do not have hand washing locations with access to water. Twenty percent of these schools do not have access to improved functional water source, and strikingly less than half of these schools have water available near or inside the toilet (Table 4.2).

Table 4.2 : WASH situation in schools of Bangladesh

WASH Indicators	Overall (%)	Primary (%)	Secondary (%)
Handwashing locations available (within the school compound)	88	85	98
Handwashing locations with water available	85	81	97
Students' hands appeared clean	35	27	49
Functional improved toilet facilities available at schools	84	80	98
Water available inside or near toilet	45	41	57
Improved functional water source	80	76	94

Source: Bangladesh National Hygiene Baseline Survey, 2014

Recent infrastructure projects are likely to have improved the situation somewhat, but the inference that can be drawn is that there is significant scope of improvement in schools in the country in terms of access to WASH.

Menstrual Hygiene Management (MHM) is another area where educational institutions have a lot of scope for improvement. Bangladesh National Hygiene Baseline Survey 2014 reveals that average age of first menstruation for girls in Bangladesh to be 12 years (the age when a girl is expected to be in the secondary school). The survey showed that:

- 25 percent of female students did not go to schools during menstruation.
- 33 percent of female students reported disruption in school performance due to menstruation.

- Only 10 percent of the female students used disposable pads, whereas 86 percent used old cloth.

Ensuring adequate MHM is still a challenge for the large majority of schools in the country. Relevant data in this respect are not recorded as required to track progress. Having initiatives to improve MHM in schools and the right mechanism in place to monitor those initiatives will be critical in protecting the health and wellbeing of girls and improving their performance in school.

4.8. Children with Special Needs

The key element of the principle of inclusive education is that the children with special needs including those differently abled are brought into the ambit of quality education services.

Children with disabilities are amongst the most marginalised at all levels of education. Only a fraction of children with even moderate to mild disabilities are enrolled in mainstream schools. Inclusive education concepts and practice are at a nascent stage of development in the country. Awareness and understanding of inclusive education is often limited, with education for children with disabilities such as sight and hearing impairment segregated in a small number of special schools under the Ministry of Social Welfare rather than as part of an integrated system under MOPME and MOE. This underscores the persistent overall "welfare approach" to children with disabilities. Children with disabilities make up a disproportionate number of out of school children at all levels.

A comprehensive data base from national surveys have not provided the state of access to education for children with disabilities. BANBEIS data show that in 2018, about 46 thousand children with different types of disabilities were enrolled in government primary schools. Of these around 21 thousand were girls. However, no data on access to non-government schools or to secondary or tertiary level education institutions are currently recorded (Table 4.3).

Table 4.3: Children with disabilities enrolled in government primary schools

Type of Disabilities	Boy	Girl	Total
Physical Handicap	8,940	6,614	15,554
Poor Eyesight	3,351	2,809	6,160
Short of Hearing	703	700	1,403
Problem in Speech	4,291	3,940	8,231
Intellectual/ Mental	6,640	5,787	12,427
Autistics	742	511	1,253
Others	508	441	949
Total	25,175	20,802	45,977

Source: Bangladesh Education Statistics 2018, BANBEIS

No reliable information on the share of students with disabilities remaining out of the education system is available. Common causes of non-enrollment of students with disabilities have been found to be the school environment and teaching-learning not adaptive to children's needs, no or low scope of personal assistance, absence of accessible transportation, and inaccessible infrastructure and environment. Clearly, greater and systematic effort is needed to implement stated national policies, and to combat negative attitude of the family, teachers and community (Choudhury et al. 2011).

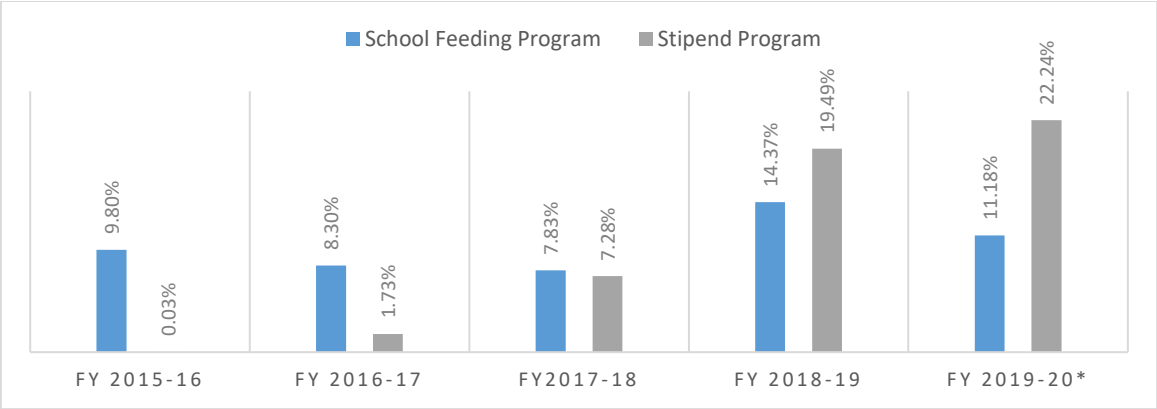
Acknowledging the importance of children having access to education in their respective mother tongues, the Government of Bangladesh has declared multi-lingual education (MLE) in the early grades of primary education for ethnic children followed by transition to instruction in the national language as the mainstream approach. In the beginning of the 2017 academic year, it distributed 52 thousand books among 25 thousand children from indigenous communities. There is a National Steering Committee on Multilingual Education as well as an MLE Technical

Committee. The technical committee is responsible for developing implementation guidelines, curriculum and materials and text books in five ethnic languages (Save the Children, 2018). While these indicate policy intentions on the part of the Government of Bangladesh, national education related monitoring does not provide updated data for of progress to this end. Keeping track of such interventions through monitoring as well as impact assessment is necessary for ensuring access to education in mother tongue for the indigenous communities in Bangladesh.

4.9. Incentives to Schooling: Stipends, School Feeding, Free Books

As necessary incentives to participation in schooling (primary and secondary), the Government spends a large share of its education development budget for programs such as school feeding, and different kinds of stipends as well as free distribution of textbooks. These measures have helped raise the education development indicators.

Figure 4.5: Share (%) of education development budget going to school feeding and stipend programs in fiscal years.2015/16 to 2019/20



Source: Budget Documents, Ministry of Finance, GoB

Review of education development budget (i.e. allocations in the Annual Development Program for education) show that in recent years, school feeding and stipends respectively have grown and claimed around 10 and 20 percent respectively of the total education sector ADP (Figure 4.5). In absolute amounts, the allocation for school feeding programs have increased from BDT 17 billion in FY 2015-16 to over BDT 33 billion in FY 2019-20. During the same period, allocations for different stipend programs have increased from BDT 0.05 billion to over BDT 66 billion.

Stipends for the majority of primary school students, for almost all girls in secondary education, and a proportion of boys, are, as noted, a significant share of the public education budget and is seen as a key element of achieving access, equity and inclusion in basic education.

Support for primary school students from poor families began in 1993 with an innovative Food for Education (FFE) program, a monthly ration of rice or wheat to poor families if their children attended primary school. The goals, following the launch of compulsory primary education, were to increase primary school enrollment, promote attendance, reduce dropout rates, and enhance the quality of education. An evaluation by the International Food Policy Research Institute (IFPRI) found that the program largely fulfilled its objectives of increasing enrollment, promoting attendance, and preventing dropouts, but there was no significant impact on quality of education. There were also problems about targeting the right beneficiaries and managing distribution of grain. Food for education was replaced in 2002 by cash for education, a monthly stipend for over 5 million students from poor families in rural areas on condition that the students attend at least 85 percent of the classes and obtain 50 percent marks in the school examinations.

The stipends were considered a success, though there were logistical problems about actually delivering the payments including some misappropriation. In June 2017, the government took a creative step to transfer the stipends, by now to nearly 13 million children, directly to the mobile banking accounts of their nearly 10 million mothers. This turned out to be a dramatic improvement in the efficiency of program implementation through digitization of the stipend payments, leveraging the spread of mobile phone based financial transaction in Bangladesh over

The Female Stipend Program (FSP) was begun in 1982 as a pilot to help increase the enrolment and retention of girls in rural secondary schools. A tuition waiver for the girls was part of the program with schools compensated by the government. The program was considered successful enough to be expanded significantly in 1994. It was seen as the way to achieve gender parity in enrolment and retention of girls, delaying their marriage and motherhood, and increasing their income-earning potential. An early evaluation found that FSP clearly had a positive impact on increasing enrolment and achieving gender parity in access, but not enough was known about its impact beyond access and gender parity for lack of rigorous impact assessment for the other objectives. The study also identified shortcomings in meeting the needs of the poorest girls – the stipend not quite compensating for multiple disadvantages of the poorest households. (Raynor and Wesson, 2006). Policy makers, parents and development partners found it worthwhile to continue and its scope was expanded to include a proportion of boys and urban girls. Thus stipend has become a key public policy strategy for supporting education.

With growing household incomes in Bangladesh, and need for larger resources in quality enhancing inputs including more and better teachers and better facilities, should the growth trajectory of incentive spending be re-examined and whether incentives provided should be more specifically targeted to the disadvantaged groups are looming as policy questions. Arguably, the continuing need for incentives to attract students to school has passed especially at the primary level where enrollment is near universal. With growth of enrolment at the secondary level and the competing demands for direct investment in quality-enhancing inputs in schools, the sustainability and cost-effectiveness of cash incentives for participation to students, especially in the medium and longer term, merit serious re-consideration.

The government acknowledges the school feeding programs as essential for the development and growth of school going children and that they have a positive impact on enrolment rates, school attendance, and primary education completion rates (Rahman, 2019).

The school feeding programs started in Bangladesh in early 2000s as an emergency response to children in poverty. Positive reaction to the initial programs drew policy level attention. Success of the initial programs (piloted in selected sub-districts) and lessons learned from WFP implemented school feeding programs over the years led the government to start its own school feeding program in 2 upazilas in 2011 which covered over 56 thousand primary school students. By 2016, the program grew to cover 2.53 million students across 72 upazilas (ibid).

In April 2019, the Government announced its plan to expand a cooked school meal program to reach over 400 thousand children in 2,000 primary schools spread across 16 upazilas. This new program is based on positive results from a pilot by WFP begun in 2013.

Consistent growth of the school feeding programs with technical support from WFP and the recent decision to expand these indicate that the policy makers have recognized the efficacy of the school feeding interventions. A comprehensive program is planned to be scaled up gradually to cover all primary schools.

Since 2010, Bangladesh Government has been distributing free books to school children at the beginning of the year. This is an ambitious project. In the past, it took up to six months for schools in remote areas to get the books. In contrast, at the beginning of 2020, 42.5 million primary and secondary level students received free books at the very beginning of the learning year. The approximate cost of printing these books was BDT 10.5 billion for a yearSarkar, 2019).

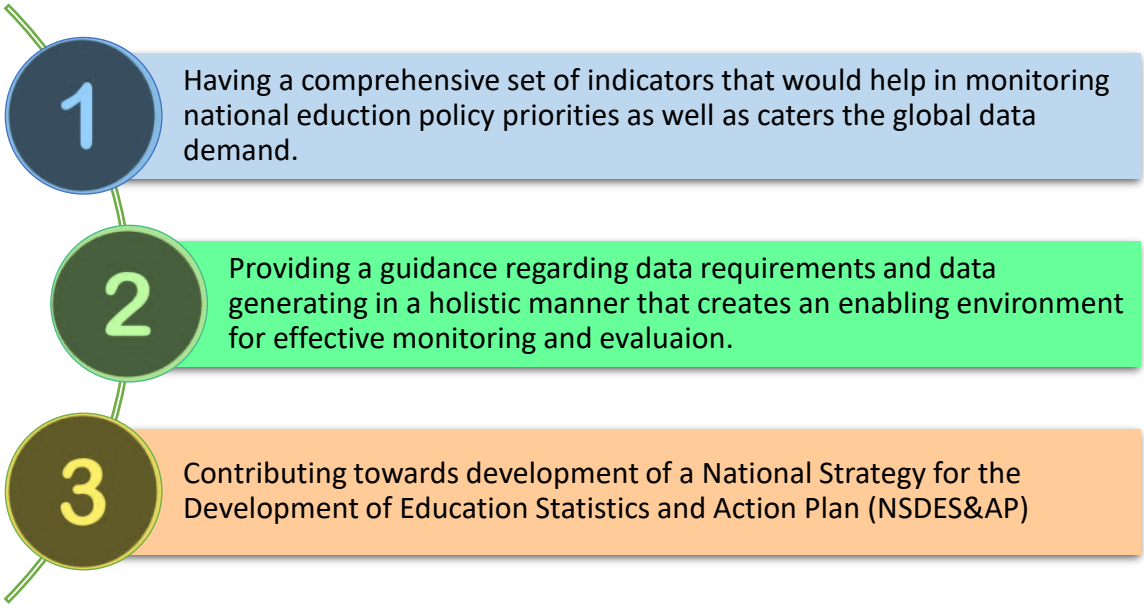
With a decade of experience, the intervention has become more efficient and implementation flaws have been minimized over the years. In 2020, the government decided to further incentivize the school going children and announced providing an additional BDT 2,000 to each student along with the free books. This money is said to be transferred to students so that they or their parents may use it for buying school uniforms (UNB News, 2019).

Looking ahead, the emerging context of curricular reform, innovations in pedagogy, and ICT resources for learning content, including textbooks and supplementary materials on-line need to be kept in view. Whether a huge and expensive operation of producing and distributing textbooks every year for millions of students need to continue indefinitely is a reasonable policy issue. The alternatives of combining electronic and physical learning materials as the strategy for making these available to students deserve to be examined.

4.10. National Indicator Framework (NIF) and Better Monitoring of Progress

The National Indicator Framework (NIF) on Education for Bangladesh has been developed by the National Data Technical Committee under the Capacity Development in Education (CapED) program with support from UNESCO and UIS. The government owns this document in the context of felt need for a set of indicators based on country priorities and national plans (that will include the globally accepted indicators) which may be utilized for monitoring and tracking progress towards attainment of the education related objectives of the country. The core objectives of the NIF are shown in Figure 4.6.

Figure 4.6: Overarching objectives of the National Indicator Framework (NIF) on Education for Bangladesh

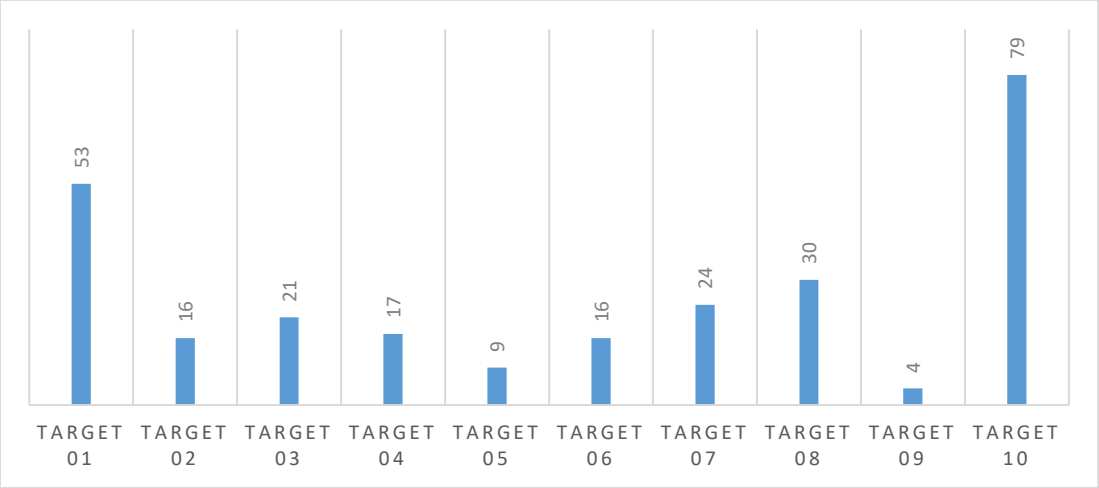


For the development of the NIF, National Education Policy priorities have been linked with global, thematic and national indicators. The thematic indicators set has been used as the menu to derive nationally relevant indicators for attaining the SDG4 targets. Finally, the SDG4 indicators have been mapped against those of other targets that involve education issues.

The NIF has set National Indicators combining global indicators, thematic indicators and some additional indicators against each of the 10 targets under the fourth goal of SDG. A total of 269 targets have been set in the framework documents with the highest number of goals against target 10 under SDG4, i.e. 'By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing states'. A total of 79 indicators are chosen against this target. The smallest number (4 indicators) are set against target 09 under

SDG4, i.e. '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 programs, in developed countries and other developing countries'. Prioritizing data collection and analysis in a situation of limited capacity and in line with the national objectives and targets is a concern.

Figure 4.7: Number of indicators set against each of the 10 targets under SDG4



Source: National Indicator Framework (NIF) on Education for Bangladesh 2019

NIF has been based on existing education plans and programs covering the sub-sectors of education and keeping in view the global and thematic indicators of SDG4. However, current weaknesses in the capacity to collect, record and process are likely to constrain effective monitoring and evaluation. Building relevant capacities to consistently collect, compile, and analyze data in line with NIF requires policy attention and commitment of resources. It is expected that the National Strategy for Development of Education Statistics and Action Plan (NSDES&AP) will provide guidelines to this end.

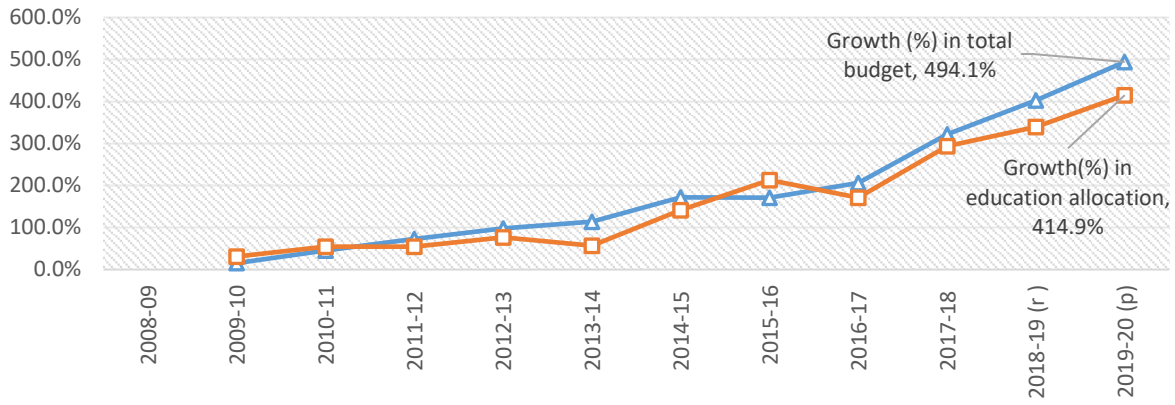
5. Education Finance and Resources

The share of the education sector as a whole in total public expenditure and as a ratio of GDP is an indication of government priority to quality education for all. This section first presents an analysis of the expenditure for the education sector. This is followed by discussion of transparency in budget allocations, household costs for education, equity in education expenditures, and adequacy of education resources and their use.

5.1. Education Sector Public Expenditure

Allocations for education sector have nominally increased by four times between 2008-09 and 2019-20, whereas the total national budget has grown by five times (Figure 5.1). The budget of the fiscal year 2019-20 allocates over BDT 611 billion for the education sector.

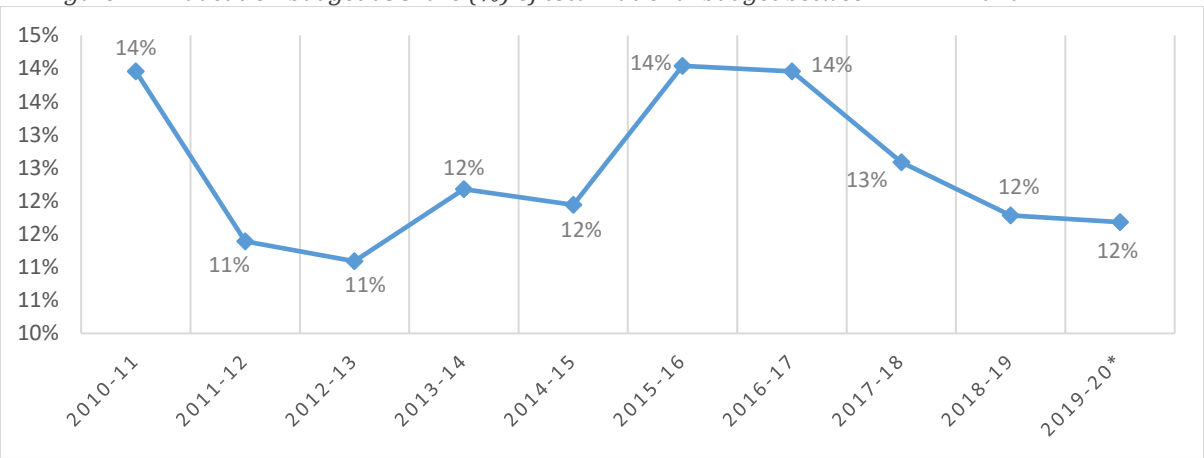
Figure 5.1: Increase (%) in total national budget and education budget between FY 2008-09 (base year) and FY 2019-20



Source: Budget Documents, Ministry of Finance, Government of the People's Republic of Bangladesh

Education budget (i.e. budget allocated to MoPME, and MOE combined for the two divisions, SHED and TMED) has been hovering between 11 to 14 percent of the total national budget (see Figure 5.2). Sector stakeholders suggest that this share has to increase significantly to ensure that the country has the right kind of human resource development to cope with the macroeconomic challenges (e.g. employment, investment etc.) and achieve the national development goals.

Figure 5.2: Education budget as share (%) of total national budget between FY 2010 and FY 2019-20

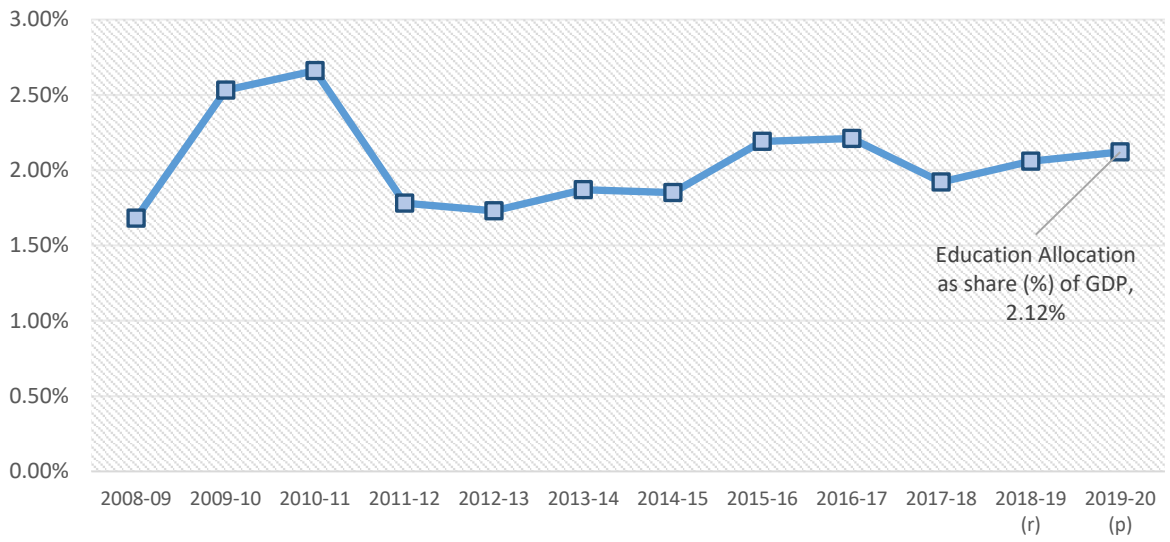


Source: Budget in Brief of various years, Finance Division, Ministry of Finance, GoB

As shown in Figure 5.3, over the last decade share of public spending in education has been hovering around 2 percent of the GDP. The global average for this ratio is above 4 percent.

Bangladesh clearly has to push this ratio further upwards, at least doubling it, to match the global average.

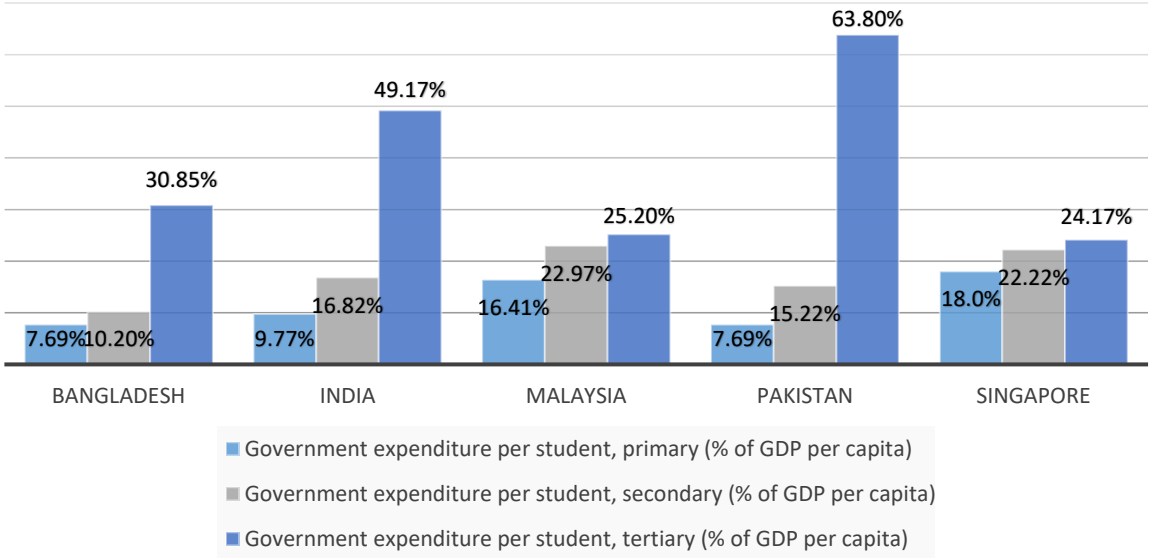
Figure 5.3: Allocation for education sector as share (%) of GDP of Bangladesh



Source: Budget Documents, Ministry of Finance, Government of the People's Republic of Bangladesh

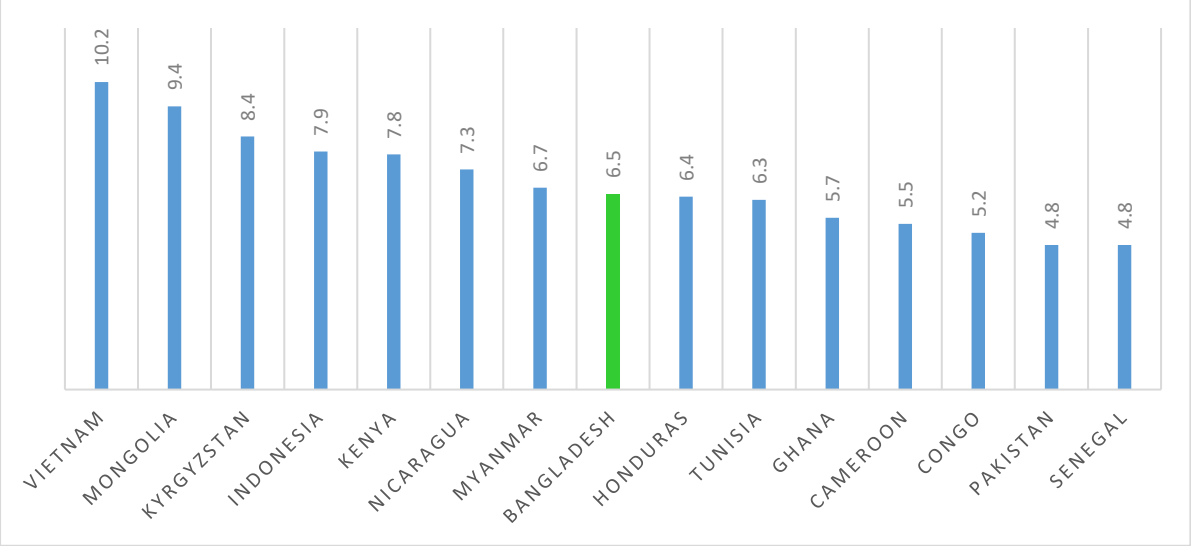
Comparative data show that per student public expenditure at all levels of education has been low in Bangladesh (Figure 5.4). The relative ratio of expenditure for different levels of education also are in contrast to the pattern in more developed education systems, such as those of Singapore and Malaysia and similar to the low performing systems, such as those of India and Pakistan.

Figure 5.4: Government expenditure per student at different levels as % of per capita GDP for Bangladesh and some other countries



Source: UNESCO Institute of Statistics (http://uis.unesco.org/)

Figure 5.5: Learning adjusted years of schooling for Bangladesh and other Low and Middle Income Countries (LMCs)

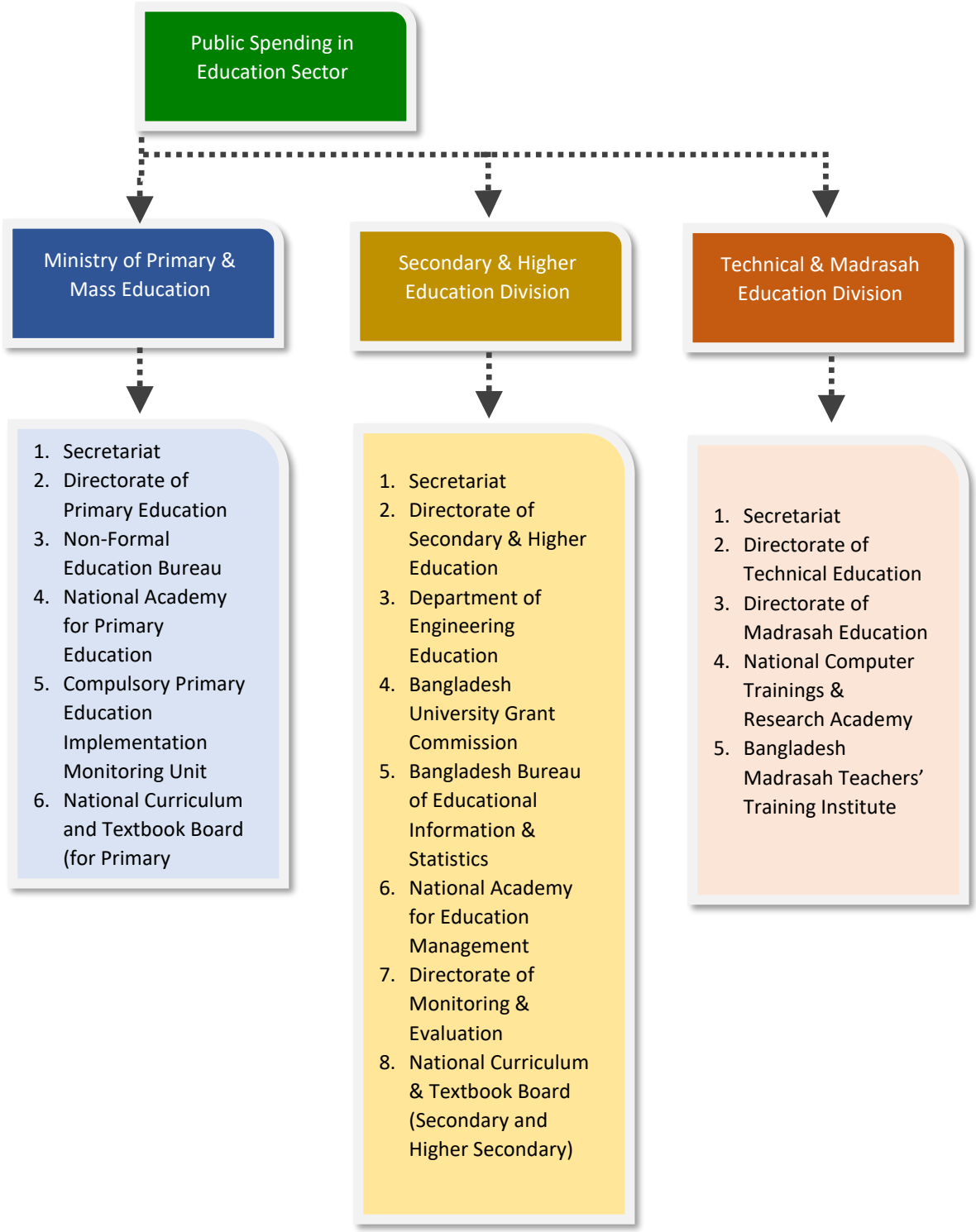


Source: World Bank, 2019

Despite having a relatively low share of the GDP invested in education sector, it has a relatively higher Learning Adjusted Years of Schooling (LAYS) (see Figure 5.5). Compared to the low-level of public expenditure on education, access to education is relatively high in Bangladesh. A child born today can expect to go through an average of 6.5 years of schooling before age 18 (Miningou, 2019). The average ratio is 6.6 years for Lower-Middle Income Countries (LMICs). Some argue that Bangladesh is more efficient in utilizing public resources to ensure access to education (ibid). However, the price that is being paid for expansion of services at low cost may be in terms of quality learning outcome – resulting in a low cost and low-yield system.

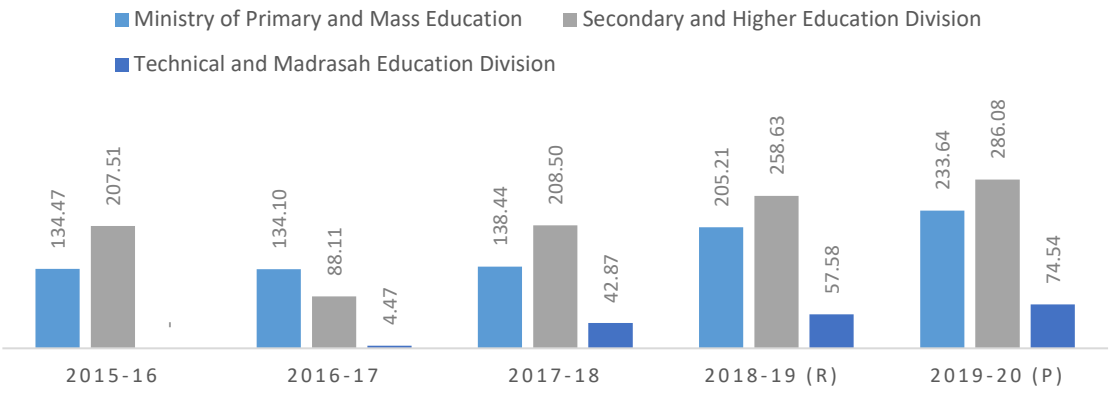
Public expenditures for education in Bangladesh are channeled mainly through three ministries/divisions. These are: 01) Ministry of Primary and Mass Education (MoPME), 02) Secondary and Higher Education Division of the Ministry of Education, and 03) Technical and Madrasah Education Division of the Ministry of Education. Each of these ministries/divisions channels the public investment for education through multiple agencies (Figure 5.6).

Figure 5.6: Ministries/divisions/agencies primarily responsible for public spending in education in Bangladesh



Total education allocations channeled through the said three ministries/divisions increased from BDT 342 billion in FY 2015-16 to BDT 594 billion in 2019-20 (a 73 percent increase in 5 fiscal years). In terms of proportions, as per the proposed budget of the current fiscal year, over 39 percent of the total allocations for these three ministries/agencies have been made for the Ministry of Primary and Mass Education (MoPME) (Figure 5.7). In terms of proportions , over 48 percent of the education allocation is to go to the Secondary and Higher Education Division. The remaining share (over 12.5 percent) is for Technical and Madrasah Education Division. The rationale and criteria for deciding the proportions and how these may change in the future need to be examined further.

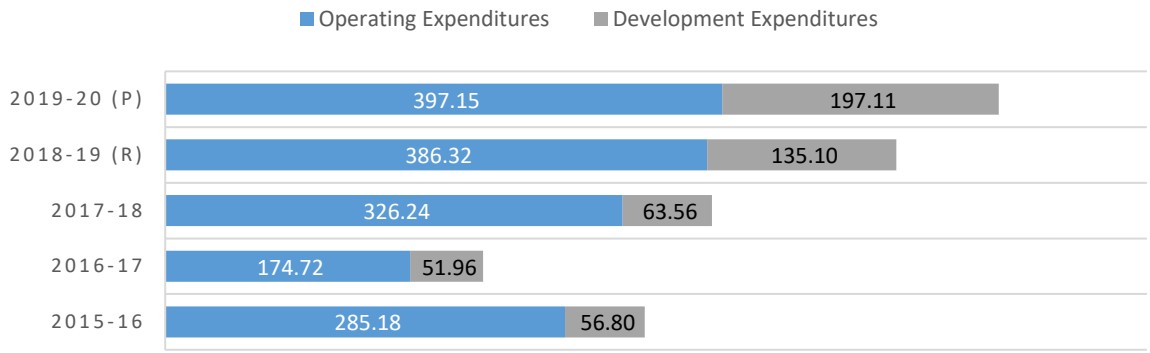
Figure 5.7: Ministry/Division wise spending (in billion BDT) for education inn recent five fiscal years



Source: Budget Documents, Ministry of Finance, Government of the People's Republic of Bangladesh

In the national budget for education, operational expenditures have been higher compared to development expenditures. However, a trend of increasing share of development expenditures is visible. In FY 2015-16, share of development budget in the total education budget was about 17 percent. And in the latest budget for FY 2019-20 this share has increased to over 33 percent (Figure 5.8). The share of development budget in overall budget for education has almost doubled in the last five years. This implies that as the total budget for education increased over these years, more went to development projects. Again, the implications of the relative proportions and how operating or recurrent expenditures and development expenditures are defined and how they interact and support each other to serve the educational objectives are questions that need to be examined and made more explicit.

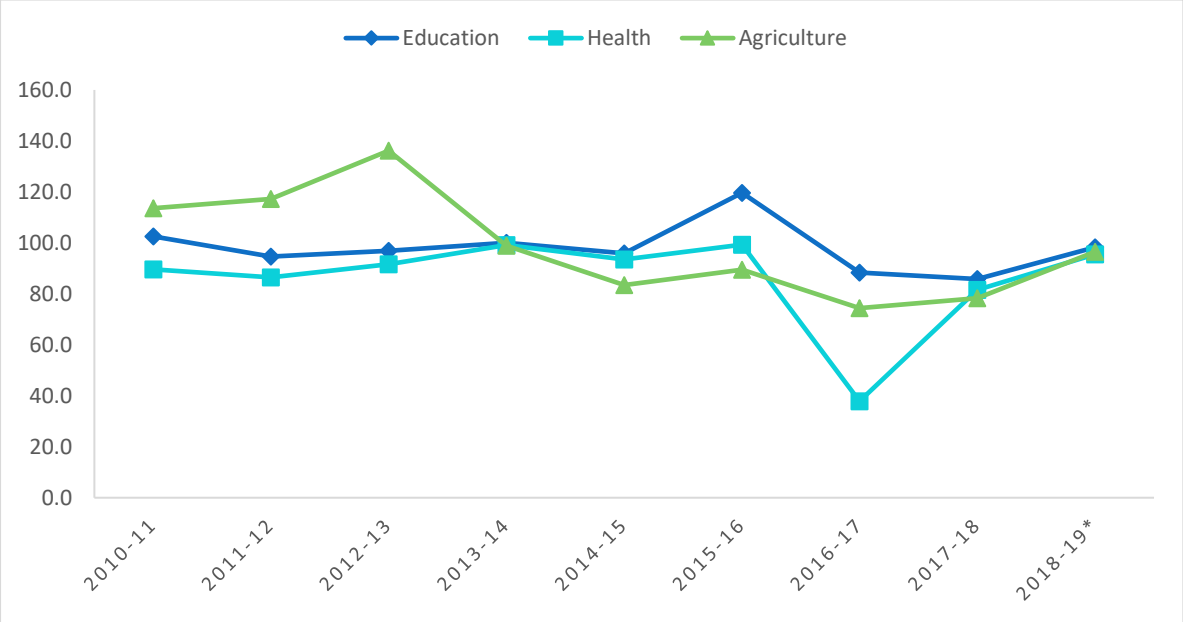
Figure 5.8: Share (in billion BDT) of operating and development expenditures for education allocations in national budget for the recent five fiscal years



Source: Budget Documents, Ministry of Finance, Government of the People's Republic of Bangladesh

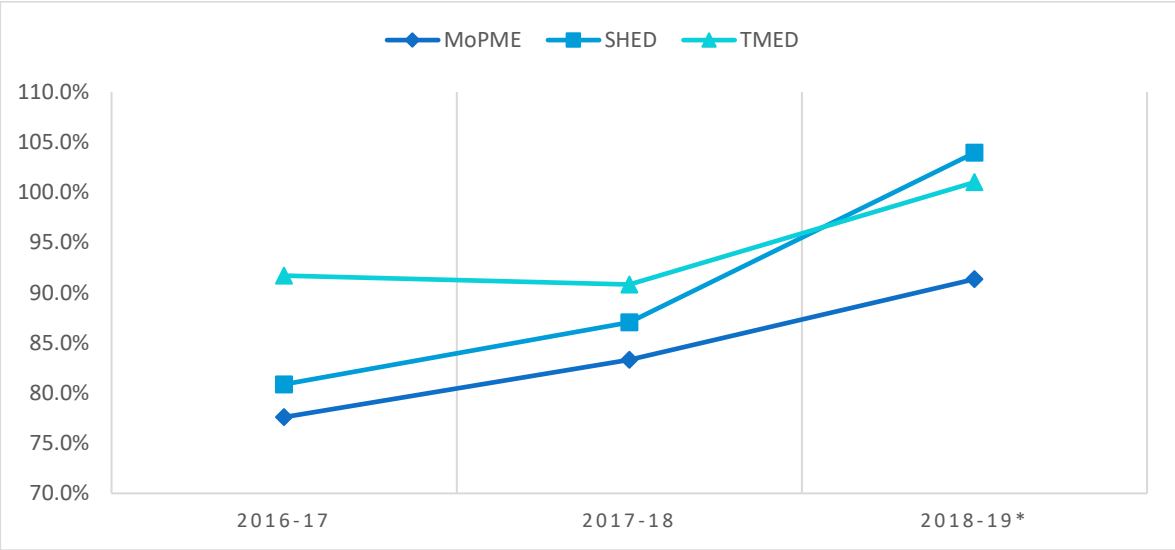
The ministries and divisions responsible for implementing budget allocated for education sector as a whole have been found to be relatively efficient in spending the allocations (i.e. not leaving funds unspent by the end of the year). In terms of budget implementation (i.e. actual expenditures as share of the total budget allocated to a sector or ministry), education has been doing relatively better compared to sectors such as health and agriculture. The next two figures illustrate relative efficiency of budget use. The gap between actual expenditure for education and the proposed allocation for education has been low (see Figure 5.9). Budget implementation for all three education related ministry/divisions has been on an upward trend during the recent fiscal years (Figure 5.10)

Figure 5.9: Actual expenditure as share (%) total budget allocated for education, health and agriculture in Bangladesh



Source: Budget in Brief of various years, Finance Division, Ministry of Finance, GoB

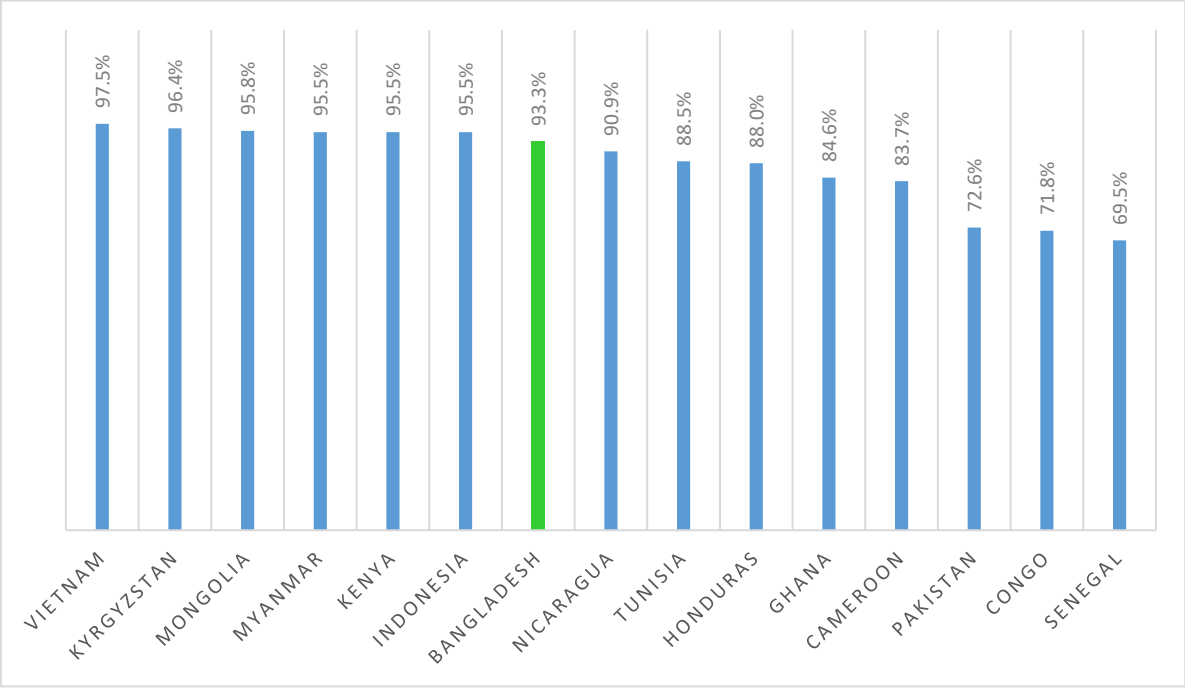
Figure 5.10: Actual expenditure as share (%) of budget allocated for MoPME, SHED and TMED



Source: Budget in Brief of various years, Finance Division, Ministry of Finance, GoB

Miningou (2019) has found efficiency in translating public expenditure into results related to access to education in Bangladesh to be higher compared to many LMICs. It is revealed (see Figure 5.11) that the efficiency ratio for Bangladesh is 93.3 percent, which is significantly higher than a number of developing countries.

Figure 5.11: Efficiency in translating budget allocations into access to quality education for Bangladesh and other LMICs



Source: World Bank, 2019

It can be argued that additional expenditure for this sector is likely to be utilized adequately and likely to contribute towards achievement of the national macro-economic objectives. As a whole, there is a strong rationale for increasing education sector budget significantly in Bangladesh. At the same time, there is need for increasing overall effectiveness of educational investments and examining and removing structural barriers to realizing better returns on substantially larger investments in education as discussed below.

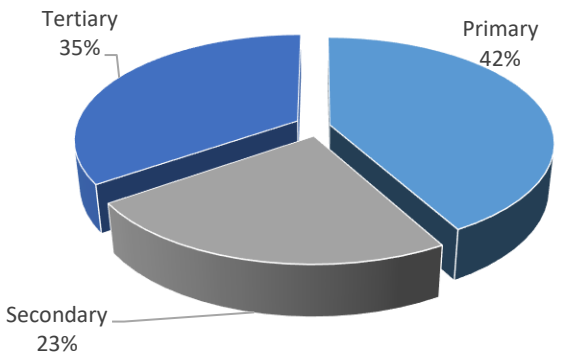
5.2. Budget Transparency in the Education Sector

A point to be noted is that the education sub-sector wise allocations cannot be directly figured out from the finance documents of the agencies. This is in part because the said three major ministries/divisions channel public funds to multiple sub-sectors (primary, secondary and tertiary education). For example, the Directorate of Madrasah Education oversees allocations going to both secondary and tertiary level madrasahs. Similarly, the expenditures for the Secretariat of the Technical and Madrasah Education Division also are distributed among the secondary and tertiary level Madrasahs.

The distribution of funds for different types of institutions has not been found in the available and accessible National Budget documents of the Finance Division of the Ministry of Finance. Thus, the distribution of the total allocation for any agency (under a ministry/division) that goes to multiple education sub-sectors cannot be directly attributed to those sub-sectors. An alternative calculation was conducted by taking the number of students in the respective sub-sectors and applying per student cost to derive estimates of education expenditures. This was done for FY

2017-18 using the latest Bangladesh Education Statistics 2018 by BANBEIS (showing the number of students in the education sub-sectors in 2018).

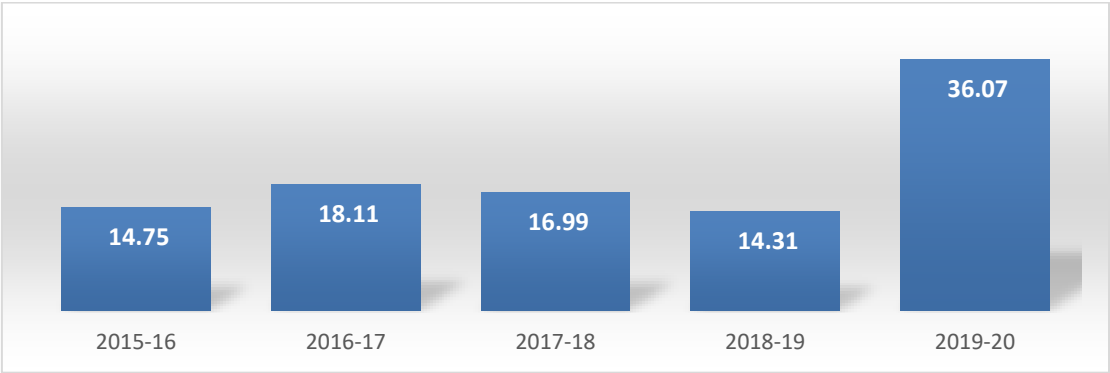
Figure 5.12: Share of education national budget for different education sub-sectors (primary, secondary and tertiary) in FY 2017-18



Source: Estimate based on data from Bangladesh Education Statistics 2018 of BANBEIS and Budget Documents of FY 2017-18 of Finance Division, Ministry of Finance, GoB

The estimate derived from per student expenditure at different levels of education indicate that a total over BDT 521 billion from the national budget was channeled through the three major ministries/divisions for education sector in FY 2017-18. Of this amount the largest share went to Primary Education. Secondary education received less than a quarter of that allocation, while the share of the tertiary education sub-sector was over one-third. The point to be noted is that tertiary education here includes the technical and vocational education, professional education as well as general higher education. Budget data normally published, as presented in the previous section (see Figure 5.7 above), may suggest a different picture of the allocations. These data indicate a consistently lower ratio for primary education and a higher ratio for secondary education, though the latter included some parts of tertiary education (particularly higher secondary education). Preparing budgets, and presenting budget data and allocations in a more transparent way reflecting the education priorities and strategies clearly need greater attention. Historically, primary education has received a larger chunk of public investments. This has resulted in significant achievements in attaining the education related MDGs. However, in the medium to long term (to attain the 2030 SDG agenda) a shift in this may be required along with absolute increase in total education expenditure. A larger share may have to go to the secondary and technical and vocational education for preparing Bangladesh's youth for the workplace out of a larger education budget pie. The appropriate human resource development will have to be the strategic target to guide public education resource management.

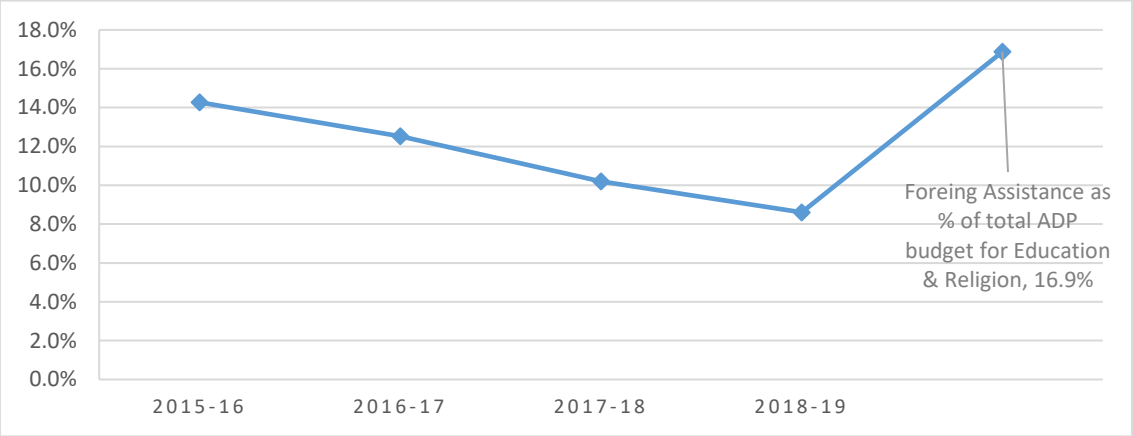
Figure 5.13: Foreign Assistance (billion BDT) for Education and Religion sector of the Annual Development Program (ADP)



Source: Bangladesh Economic Review 2019, Finance Division, Ministry of Finance, GoB

Data related to contribution of international development partners (foreign assistance) in non-development expenditure of education sector is not available, but also not expected to be a significant amount. Foreign assistance in 'Education and Religion' (as listed in Ministry of Finance budget records) of the Annual Development Program (ADP) is available. Actually, very little share of the foreign assistance for 'Education and Religion' goes to Ministries/Divisions other than those related to the education sector (shown in Figure 5.6). Over the last five fiscal years (including the ongoing one), on an average 20 billion BDT in foreign assistance has been disbursed for the 'Education and Religion' sector of the ADP (see Figure 5.13). Over the last four fiscal years, on an average, Foreign Assistance has comprised 11.4 percent of the ADP allocations for Education and Religion. For the current fiscal year this share is proposed to be 17 percent (see Figure 5.14). There is usually a significant gap between allocation and actual disbursement.

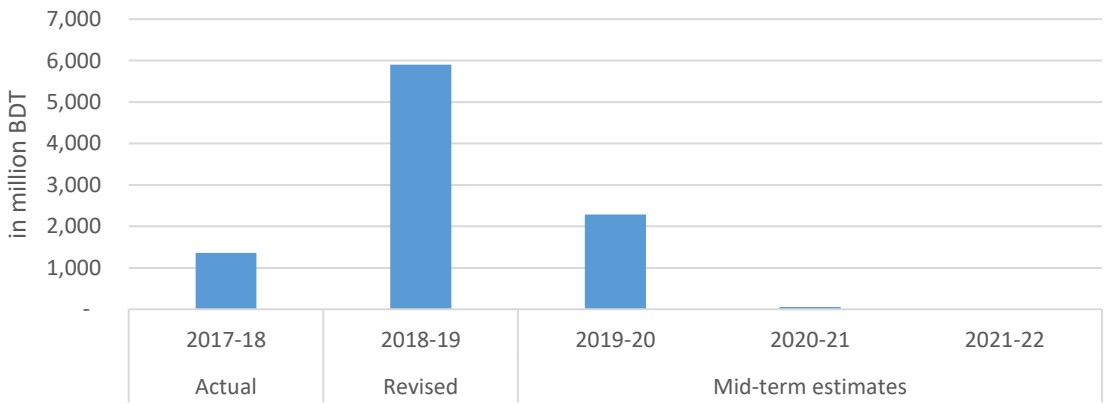
Figure 5.14: Foreign assistance share (%) in total ADP allocations for Education and Religion sector



Source: Bangladesh Economic Review 2019, Finance Division, Ministry of Finance, GoB

As discussed before, different agencies of the government spend public resources for implementing different non-formal education interventions such as basic literacy program for 11-45 years age group in 64 districts, skill training through establishing income-earning and life skill training activities, providing vocational and skill development training, special education and training for persons with disabilities, and providing training on IT skills, etc.

Figure 5.15: Development budget for implementing projects in non-formal education



Source: Calculated from Mid-Term Budget Framework, Ministry of Finance, GoB

Figure 5.15 shows the development budgets for different years (actual for FY 2017-18, revised for FY 2018-19 and the mid-term estimates) for implementing projects directly related to non-formal education. Public bodies responsible for these expenditures are: Bureau of Non-formal Education under MoPME, Department of Social Service (DSS) under Ministry of Social Welfare (MoSW), Directorate of Youth Development (DYD) under Ministry of Youth and Sports (MoYS), Bangladesh Computer Council (BCC) and Bangladesh Hi-Tech Park Authority (BHTPA) under Information and Communication Technology Division (ICTD). Insignificant amounts are shown for 2020-21 and 2021-22 in the mid=term projection, but allocations may increase in revised budgets. Analyses have shown that larger public investments in absolute terms in the education sector has resulted in improving access to education to a commendable extent. However, learning outcomes reflected in student assessments remain low and on certain occasions have been found to be declining (Bhatta et al., 2019).

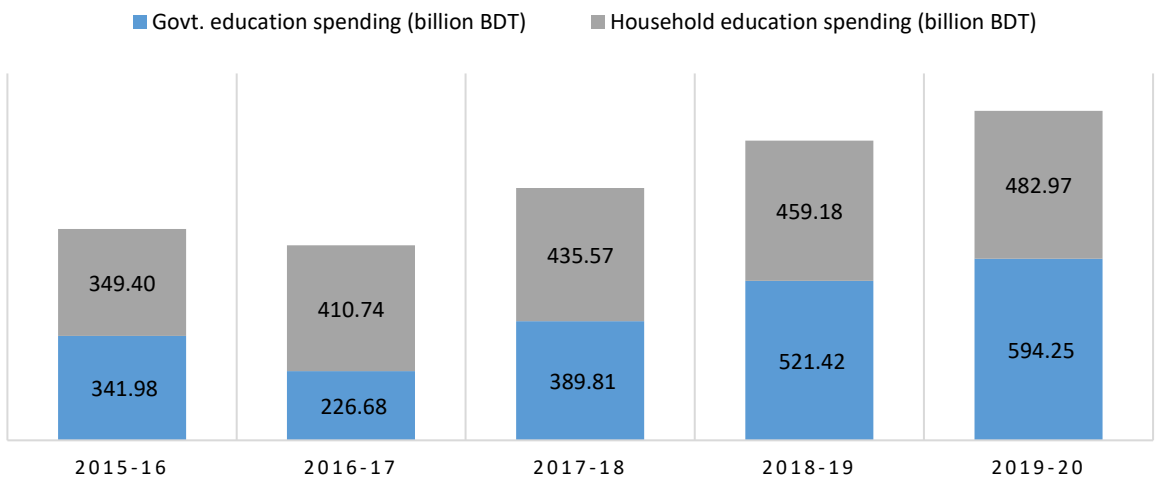
Review of the budget documents have revealed that most of the budget allocations for education sector are being spent for non-development expenditure and consequently, limited resources are being left for development expenditure and, arguably, for quality enhancement. More importantly, like most other sectors, very large chunks of the education development budget is being spent during the last four months of the fiscal year. Both MoE and MoPME spends half of their development budget during the period from March to June every fiscal year. This practice is not conducive to effectively implementing the interventions and most likely adversely affects the quality of implementation of the projects.

The key areas where investments could have a direct impact on learning outcomes, especially at the basic level, have been identified to be: (i) ensuring that teachers are recruited in sufficient numbers and deployed rationally across schools; (ii) expanding access to quality early childhood development programs to improve school readiness at primary school entry; (iii) enhancing early grade reading and mathematics skills; (iv) strengthening examinations and assessments; (iv) improving teacher training; and (iv) strengthening teacher accountability (Bhatta et al. 2019).

5.3. Cost of Education and Household Contribution

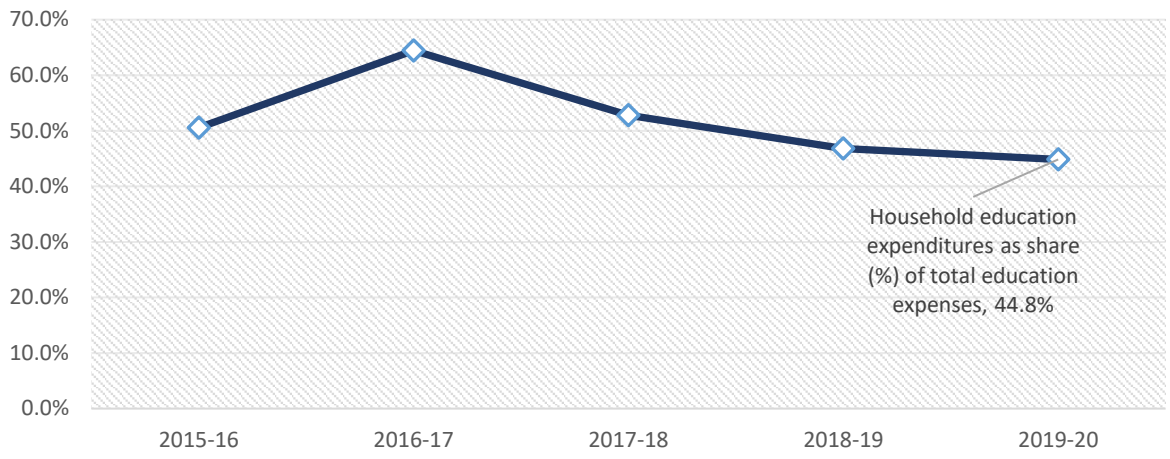
The households themselves in Bangladesh incur a comparable amount of out of pocket expenditure per student as the government. Between FY 2015-16 and FY 2019-20 a total of BDT 4,212 billion has been spent for education and of this amount BDT 2,138 billion has come from the households (i.e. more than 50 percent) as indicated by Household Income and Expenditure Survey (Figures 5.16 and 5.17).

Figure 5.16: Govt. and household spending (in billion BDT) in education, FY 2015-16 to FY 2019-20



Source: Household expenditures have been estimated based on data available from HIES reports 2000, 2005, 2010, and 2016.

Figure 5.17: Household education expenditures (out of pocket expenditures for education) as share (%) of total education Expenditures in Bangladesh.

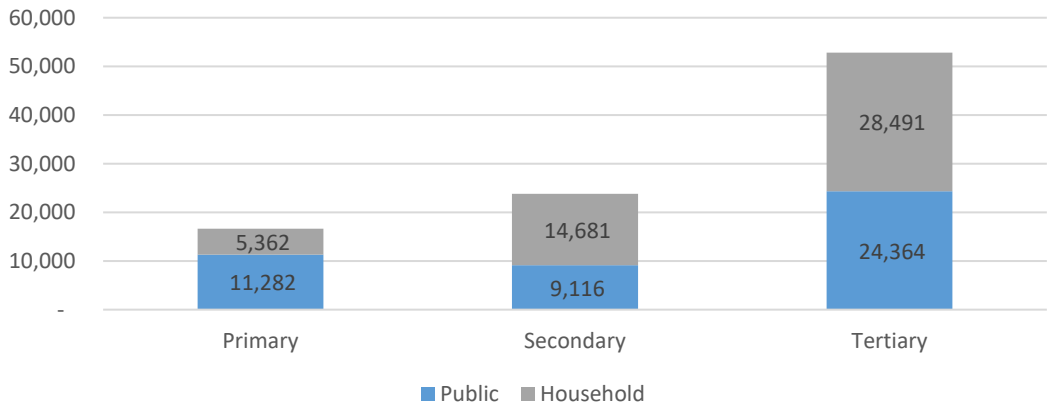


Source: Household expenditures have been estimated based on data available from HIES reports 2000, 2005, 2010, and 2016

As shown in Figure 5.17, share of out of pocket expenditures by households in total education expenditures have declined from over 50 percent in FY 2015-16 to below 45 percent in FY 2019-20. However, the absolute amount invested by households has actually increased by 40 percent, from BDT 349 billion in FY 2015-16 to BDT 483 billion in FY 2019-20. A point to be noted here is that households have been spending a smaller share of their total income for education in FY 2019-20 compared to FY 2015-16 (the ratio decreased from 5.46 percent to 5.29 percent). Whether this represents a trend cannot be ascertained. However, it is clear that parents are prepared to spend a substantial part of their income for education of their children. This has been exactly the trend in many developing countries, including in South-East Asia (Rahman, 2002).

The discussion so far has revealed that both government and the households are investing significant amount of resources for education. This necessitates further disaggregated analysis of the data across different sub-sectors of education.

Figure 5.18: Per Student Educational Expense by Govt. and Household FY2018-19 by education sub-sectors



Source: Household expenditures have been estimated based on data available from HIES 2016 report and govt. expenses data from Ministry of Finance.

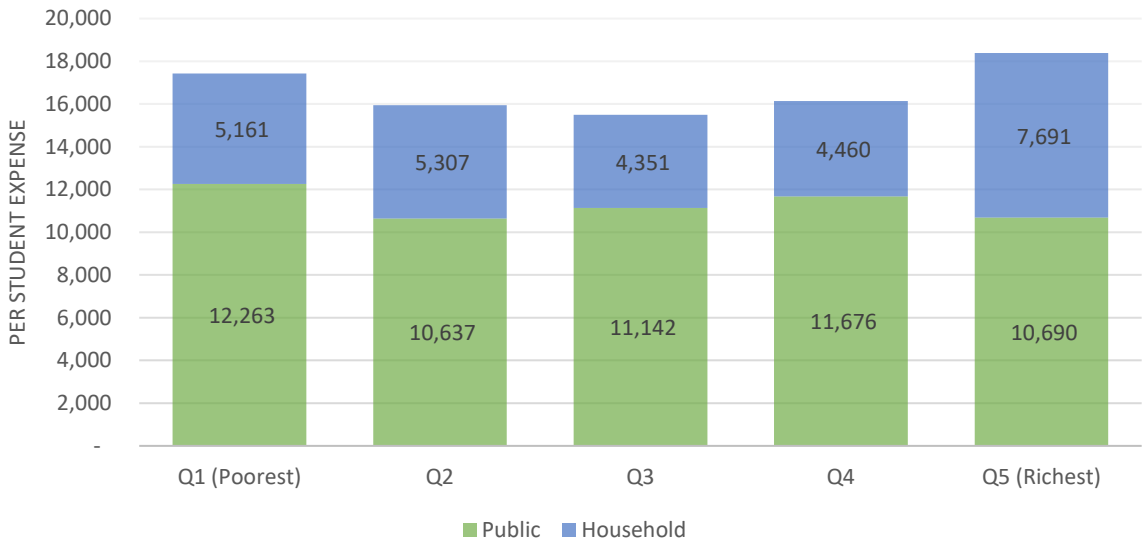
As shown in Figure 5.18, total per student expenditure per year (public and household combined) is lowest for primary level and highest for tertiary, which is expected. However, public expenditure per student is higher for primary level than secondary level (BDT 11 thousand and

BDT 9 thousand respectively). This reflects government commitment to compulsory and free primary education up to grade 5. This commitment has to be reconsidered in the light of SDG4 pledge for universal and free secondary education with significant implications for public expenditure in education.

5.4. Expenditure by Income Quintiles

Expenditure by income quintiles, especially for primary education, is a measure of equity in educational opportunities. In total primary education expenditure per student per year (i.e. public expenditure and household expenditure combined), quintile 5 (richest) households spend the most (over BDT 18 thousand), followed by the quintile 1(poorest) households (over BDT 17 thousand). (See Figure 5.19.) Assuming the data are reliable, it may be argued that government and household expenditure together result in mitigating large gaps in per student primary education expenditure by the rich and the poor. Whether the total expenditure meet the adequacy criterion for education expenditure in terms of resources for acceptable learning outcome is questionable as discussed earlier. Moreover, the elite and the privileged in Bangladesh do not generally send their children to mainstream schools, opting for private and English medium schools. In this sense, these data may not reflect the real state of educational equity.

Figure 5.19: Per primary student expenses (BDT) by public sector and by household for different income quintiles

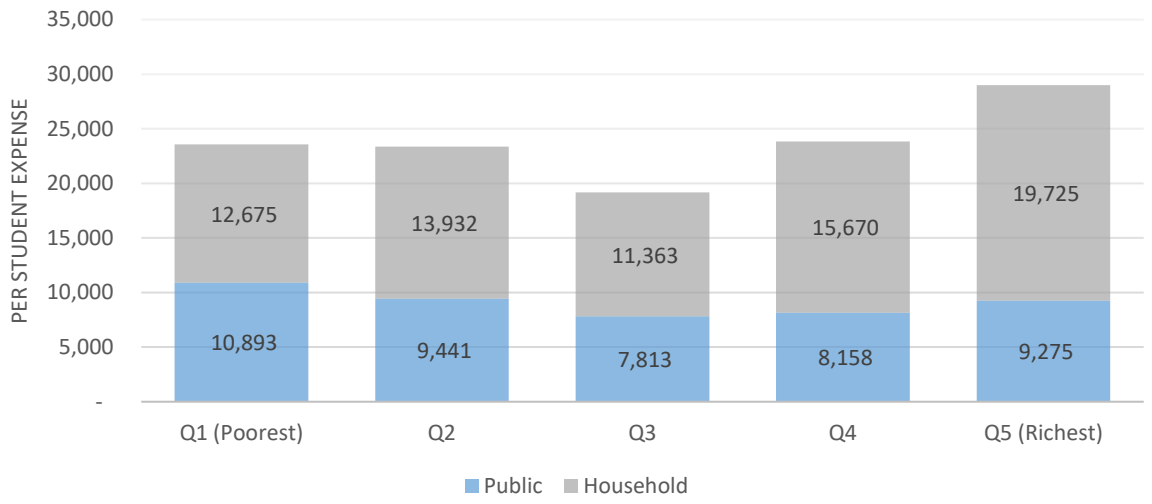


Source: Calculated using data from HIES 2016 by BBS

The household expenditure per secondary level student for higher income quintiles (except for quintile 3) is higher compared to that for quintile 1 (the poorest). The richest 20 percent households spend almost BDT 20 thousand per secondary level student per year, which is 55 percent higher than the spending by the poorest quintile household (Figure 5.20).

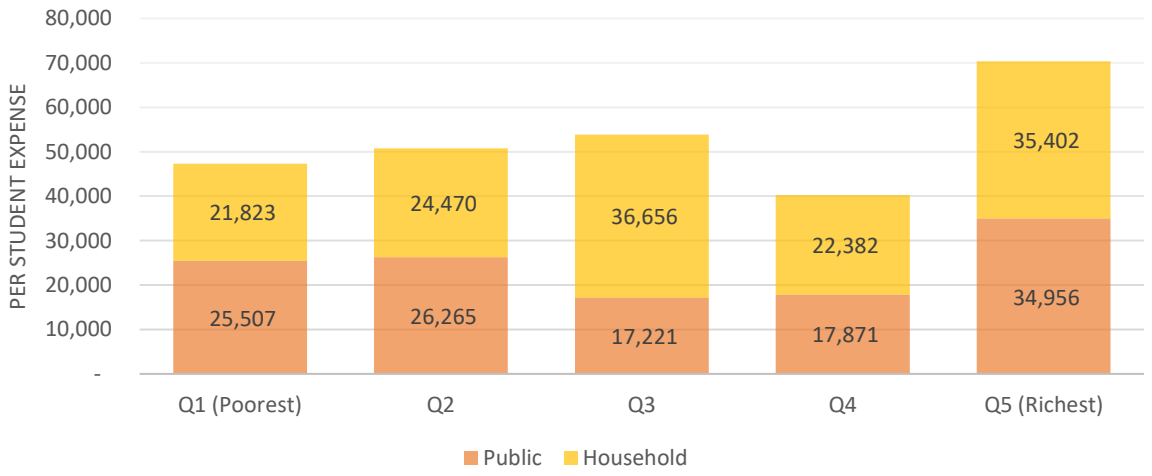
Households belonging to the 3rd quintile (i.e. the fifth and sixth income deciles) have been found to be spending the lowest amount per secondary level student per year. This counter-intuitive statistics merit further investigation.

Figure 5.20: Per secondary student expenses (BDT) by public sector and by household for different income quintiles



Source: Calculated using data from HIES 2016 by BBS

Figure 5.21: Tertiary level per student expenses (BDT) by public sector and by households



Source: Calculated using data from HIES 2016 by BBS

Figure 5.21 shows all quintiles except the fourth one spent on tertiary education more out-of-pocket per student compared to quintile 1 (poorest 20 percent). Fourth quintile households despite being more income rich than the first three quintiles have been found to be spending less. This might be because of these households enjoyed better access to publicly manage tertiary institutions compared to the three poorer quintiles, but this needs to be probed further.

Maps derived from BBS Household Income and Expenditure Survey 2016 relate average household income in a district and average gross enrolment at class five and class eight of students in a district. An expected pattern of low enrolment correlated with low income did not emerge. Some districts with high average income had low gross enrollment around 60 percent, much lower than the national average. Similar lack of pattern was seen for class eight enrolment. (See Annex maps 07 and 08.). These findings suggest that the aggregate district data do not provide a real picture of the situation that identifies the vulnerable and disadvantaged households. This is an argument for upazila and lower level planning, budgeting and resource management for schools in order to take affirmative steps to serve the vulnerable households and ecologically and otherwise disadvantaged locations. The geographical distribution of ecologically

vulnerable areas based on district maps have been mentioned above in section 4.2. (See also Annex map 6.)

The quantitative data regarding education budgets and expenditure need to be examined further in terms of adequacy of resources and their effective use to serve the objectives of equity and inclusion as well as quality. The subsector discussion and the cross-cutting issues earlier have clearly signaled many issues about the education system performance in relation to these objectives.

5.5. ADEQUACY OF EDUCATION RESOURCES AND THEIR EFFECTIVE USE

How to finance the 2030 and the interim education agenda is a critical issue. It is fundamental to have adequate financial resources and political commitments to make a good-faith effort in this regard. Political commitment without financial backing does not work, as history shows. But the questions – how the necessary resources will be mobilized, who will bear the costs and how, and how good use of resources will be ensured are clearly not easy to answer.

Resources for education. The overview of achievements and challenges in education discussed above raises the critical point that effective action has to be taken to translate the targets, strategies and indicators into results in terms of learning, skills and capabilities of people. Adequacy of resources and budgets is a necessary condition for realizing this aim. However, how the resources are used will make the real difference. Adequacy has to be examined along with efficiency and effectiveness of resource use, as well as the consequences for equity in educational opportunities which is a social priority.

Global resource challenge. By 2030, low and middle-income countries will need to increase spending on education from the current US$1.2 trillion per year to US$3 trillion, according to Global Partnership for Education (GPE). The Incheon Declaration recommends that national governments allocate 4 to 6 percent of their gross domestic product (GDP) and/or at least 15 to 20 percent of their total public expenditure to education, with a focus on basic education. (UNESCO, 2015).

Bangladesh, a GPE partner country, remained far below these averages with around 10 percent of the government budget and around 2% of GDP spent on average for education in recent years. GPE notes that challenges remain in many of its partner countries in using the allocated financial resources efficiently and effectively to meet sector goals. Education sector plans and aligned donor support have to improve efficiency and effectiveness of resource utilization and ensure equitable resource allocation to reach the most marginalized populations. Learning from ongoing activities and future efforts in finance data collection and analysis, along with increased social accountability, GPE intends to support partner developing countries to further improve education finance management and create better linkages between education spending and education outcomes. Bangladesh has to take advantage of this collaboration beyond just adding to funding assistance.

A brief by the UN Department of Economic and Social Affairs (DESA) argues that the Action Agenda for resource mobilization need to draw upon all sources of finance, technology and innovation; promote trade and debt sustainability; harness data; and address systemic issues regarding SDG resource mobilization. It thus can build a strong foundation to support implementation of the 2030 Agenda for Sustainable Development (UN-DESA, 2015).

Resource Adequacy and Efficiency in Bangladesh. Bangladesh, as an aspiring middle income country, and yet allocating one of the lowest proportions of public resources to education even among LDCs, will have to show a stronger resolve in its public finance commitments. There is obviously a resource adequacy concern in relation to the objectives of quality and equity espoused by the government. There are issues about aligning external assistance to national needs and priorities in respect of quality and equity, and efficiency in resource use – both

domestic and external, and strengthening accountability and reducing waste and corruption. Addressing these concerns effectively is important in making good use of the domestic education resources, since proportion of external assistance in education expenditure is relatively low, no more than a fifth of total development spending. The claim to a larger volume of assistance will be stronger if it can be demonstrated that finances support key objectives efficiently and effectively (CPD-CAMPE, 2016).

Larger resources and budget provisions for improved school infrastructure, school feeding programs, better learning materials, and more and better paid teachers are expected to result in better learning outcomes. What are the evidences in this respect? The evidence is not unequivocal -- it is very much conditional on several factors. Do the resources reach intended beneficiaries in the right way and at the right place and time? Are the facilities improved in the right way? Are teacher performance standards established and enforced, incentive arrangements and structures for teachers and schools applied, and so on? It also can be argued that there is a threshold or minimal level of resource inputs that is critical to affect results; investments below a threshold to make a meaningful difference may cause the waste of resources and inputs.

Along with the concept of a threshold of resources to make teaching-learning happen, attention has to be given to how the inputs fit together to make the classroom and the school function to produce results. The concept of a threshold does not refer to a magic number, but suggests a way of thinking about how inputs and processes are brought together to produce the desired outcome. Many countries in the Asia-Pacific Region have already reached the indicated benchmarks for GDP share and national budget share for education (4-6% and 15-20% respectively) proposed in Education 2030 Framework for Action. However, even those who have reached the benchmark do not seem to have met the adequacy requirements in resources for their national educations systems.

Education resource discussion, especially national financial data on an aggregated basis, and with some breakdowns, is limited mainly to public resources. There are, therefore, large gaps in the picture of education resources available for education including primary and secondary education that takes into account private and household contribution and expenditures. Better education finance data are needed that provide information comprehensively and identify incidences of who pays and who benefits. Solid methodological standards are necessary to ensure their consistency and quality. The National Education Accounts (NEA) methodology is one such approach that provides these standards.

NEAs are comprehensive data collection, processing and analysis exercises which attempt to answer the following questions:

- Who finances education and how much do they spend?
- Where do the funds go?
- What are the funds being spent on?
- Who benefits?
- What are the unit costs?

UNESCO Institute of Statistics (UIS), International Institute of Educational Planning (IIEP) and GPE have been promoting the idea of National Education Accounts in several developing countries in different regions. The approach may partially overlap with public expenditure review in education undertaken or encouraged by World Bank. NEA's scope is broader than just public expenditures (UIS, 2015). Nepal in this region has embarked on an NEA initiative. Bangladesh would do well to consider such an initiative to have a better picture of its education resources and build a case for more resources and their better use. Such an initiative will help improve governance and management of the education system, discussed in the next section.

6. Governance, System Management and Planning

Effective governance is essential to achieve successful outcomes. There are different means of integrating key facets of governance into the development agenda in general and the education agenda in particular. The SDG discourse in this respect has revolved around either having a stand-alone governance goal or integrating governance into other goals on specific issues, such as, education. Either way, or a combination of both, must lead to better decisions, must help the government meet its responsibilities and legal obligations, and importantly create an ethical basis for governance.

EFA 2015 National Review of Bangladesh noted the governance challenge:

> *The continuing concerns and problem areas in educational development and difficulties of finding effective resolutions point to dilemmas in policy development, policy ownership, building consensus on key objectives and strategies and their effective implementation. The difficulties in consensus building on governance issues are rooted in the socio-economic divisions, power structure and political dynamics, which have resulted in the co-existence of three parallel streams of education - the vernacular general education, the religion-based madrasas, and the English medium schools.* (EFA National Review, 2015).

Education 2030/SDG4 to some extent are facing similar constraints. In this regard, three aspects of governance need to be considered: i) good governance (the processes of decision-making and their institutional foundations encapsulating accountability, transparency and rule of law), ii) effective governance (the capacity and conditions for implementing good governance decisions), and iii) equitable governance (achieving distributive outcomes). These aspects are inter-connected, but they also require specific strategies and efforts backed up by necessary political commitment (Ibid.).

Translating governance challenges into achievable action: It is necessary to assess country readiness for the translation of SDG4 and other education commitments into appropriate measures within the national education system. This includes assessing the policy, planning, monitoring, and management contexts of national education systems in order to identify the gaps between commitments and ambitions. Also necessary is to identify the actions required to strengthen, adjust and/or adapt policy and planning frameworks and processes to reflect 2030 targets and other commitments (UNESCO, 2016). This is clearly a continuing process that has to be supported at policy-making level. The present exercise of ESA and ESP should be seen as a contribution to this effort. Discussion in the previous sections in this exercise has alluded to different elements of turning governance into a potent instrument for achieving the major policy objectives, as noted below.

Policy context*:* Understanding the policy context implies an examination of legislative and policy frameworks and an identification of potential gaps that may exist between the national policy goals and priorities and global commitments.

Planning context: It is necessary to identify entry points which would allow the mainstreaming or integration of 2030 commitments and other national priorities into the national planning process and mechanism. Depending on specific national policy/planning cycles, this could be done either through the development of a sector-wide, or sub-sector plan(s), or by realigning/updating existing plans to better reflect SDG4 commitments. The five year pans and the perspective plan are appropriate vehicles for this purpose.

Management Context: This involves understanding existing sector coordination mechanisms and processes in view of the system-wide inclusiveness and transparency requirements of the Education 2030 ambitions. Partner dialogues can also be organized to ensure coordinated efforts to contextualize SDG4 commitments.

Monitoring and evaluation: This involves an examination of existing national monitoring and evaluation frameworks and mechanism that reflect the requirements of the global indicator

framework proposed for the monitoring of SDG4 progress. Adapting to and aligning national and global monitoring and evaluation objectives would be an important consideration.

Governance reform discourse and studies have been supported to a limited extent by donor collaboration with NGOs and research/academic institutions outside the public sector (such as support to CAMPE, BRAC, Ahsania Mission, CPD, IED of BRAC University etc.). A clearly articulated strategy on the part of development partners/donors to strengthen professional capacity building of government and non-government entities does not exist. Strengthening and expanding public-private cooperation approach in this respect recognizing comparative advantages, for improving governance, management and service delivery in the national system is yet to be developed and applied. (EFA National Review, 2015). This observation made five years ago appears to be still relevant today.

Specific strategies, objectives and targets for addressing major education governance issues were not clearly identified or articulated in 7FYP. For example, two Ministries of education running school education create coordination, continuity, and articulation problems in respect of curriculum, teachers, maintaining quality and standards and expanding services in a rationalized way. There has been slow or no progress in many areas in implementing the National Education Policy 2010 due to the absence of a permanent Education Commission or a similar oversight mechanism with appropriate role and authority to guide and monitor education reform. These major issues do not get a mention in the plan.

The new 8th Plan (2021-2024), now under preparation, can be an opportunity to articulate goals and objectives for education and skills development in the light of National Education Policy, National Skills Development Policy, aspirations for a middle income country and the global SDG 2030 and Education 2030 agenda. These can be placed within a longer term frame of the Perspective Plan 2041. This would provide a basis for considering governance issues in a systematic and purposeful way.

National Implementation Mechanism. It has been noted that measures required to attain education 2030/SDG4 need to be aligned with the national development strategies of Bangladesh. Therefore, the strategy needs to be focused at the national level with a clear roadmap for implementation, monitoring and coordination. As this strategy needs to be supported by adequate resources, the involvement of the Ministries of Planning and Finance and the Prime Minister's Office is essential. Indeed, a high level coordination mechanism has been established at the Prime Minister's Office, with operational support from the General Economics Division of the Planning Commission.

The preface of the Education Policy 2010 had stated, "Education policy is a dynamic matter…..The practical experience of its implementation and the ongoing progress in knowledge, science and technology and their application will continue to enrich the education policy." With a decade's hindsight it can be said that it is time to revisit the national policy and examine how it needs to be "enriched" (MOE, 2010).

In respect of SDG4 and the national education priorities, this appears to be an opportune time to set up the proposed permanent National Education Commission which can revisit implementation of the policy, exercise overall oversight and help guide the direction of education and human resource development, taking a broad view with a longer time horizon.

Furthermore, strengthened national level efforts should be linked, or even driven by and be responsive to the efforts of sub-national or local level with the close involvement of non-government stakeholders and NGOs. A multi-sectoral approach is needed with active involvement of multiple ministries and stakeholders to ensure optimum use of the resources to meet a number of other goals of SDGs which complement or benefit from SDG4. These stakeholders include the formal educational structures, networks of educators and educational programs, civil society, private sector etc. Children and youth groups themselves must also play

their role in implementing and monitoring SDG4, and should have opportunity to be involved in every stage of the process.

In respect of SDG Coordination, Bangladesh may be a few steps ahead of other countries with its Five Year Plan and an established coordination mechanism The Eighth FYP comes at a critical juncture for shaping development priorities and strategies to let the country move into the rank of middle-income countries and adapt national goals to SDG 2030 agenda and vice versa. Education and skills part of the Plan has a key role in this effort. The Plan needs to identify structural and operational constraints for education and skills development and indicate what should be done to overcome these obstacles. The structural weaknesses will require a sustained and longer term effort, yet must be pursued with a sense of urgency. More immediate steps need to be taken on operational issues, but still designed within a framework of structural reforms (CAMPE-CPD, 2016).

6.1. Structural Issues

Major structural issues which, on the basis of national education discourse and as discussed above, as well as, recent studies and policy advocacy of education researchers and stakeholders, have come to the fore, include:

- *Resource adequacy*. Very low level of public resources for education by international comparison, lack of adequately stated criteria and benchmarks for resource allocation (and stagnation of education allocations in real terms as share of GDP) have to be addressed;
- *Decentralized and effective governance*. With a highly centralized governance and management structure for the large educational system of the country; decentralization with accountability in educational management at all level needs priority attention;
- *New thinking about teachers*. Insufficient numbers of teachers of required quality standards and inability of system to attract and retain capable people in the teaching profession call for new out-of-box thinking about teachers and the education workforce;
- *Effective skills development*. Supply-driven skills development with low quality and low relevance, and minimal attention to apprenticeship and needs of the informal economy (though it accounts for over 80% of employment) are critical constraints;
- *Quality in higher education including degree colleges*. Unacceptably low quality of degree colleges under the National University (with 80 percent of tertiary enrolment in these colleges, which also are the suppliers of primary and secondary teachers} weaken the capacity of the professional workforce of the nation and create a vicious cycle in education;
- *One Ministerial jurisdiction for school education*. School education divided under two ministries (unlike anywhere else in the world), create problems of curriculum continuity, student assessment, teacher preparation and supervision, and developing and guiding and implementing an overall quality-with-equity strategy in the national education system.
- *A comprehensive law for education*. An overall legal framework that would facilitate the development of the education system to realize the goals of quality with equity, rather than constrain reforms and their implementation is necessary;
- *Supporting development and use of professional capacity*. Human resource management and use in the education system need to nurture competency and professionalism with incentives, rewards, establishment and application of performance standards, and professional network building;

- *Partnership building*. Government, non-state actors, civil society, private sector need to work together for optimal policy development, governance, resource mobilization and assessment of progress; greater voice of stakeholders at all levels has to be encouraged.

- *A permanent education commission.* As anticipated in Education Policy 2010, a permanent high-powered and statutory national education commission to help maintain the oversight and guide coordinated development of education and human resource development would help realize the overarching objectives of quality, equity and inclusion in the education system.

6.2. Operational Issues

The operational issues arise from the long-standing structural weaknesses and the consequent deficiencies in the governance, management and decision-making process in the education system. Several of these raised above in the sub-sectoral discussion and gleaned from recent research reports as well as media coverage of educational issues are mentioned below:

- *Student learning assessment*. Dysfunctional learning assessment with too many public examinations which do not measure competency and distort teaching-learning has frequently come up as a concern;

- *Harmful political interference*. Criminal elements in political party-affiliated student bodies, particularly in tertiary education, vitiating academic atmosphere are a staple in public and media discussion;

- *Curriculum reform*. Curriculum burden and weak continuity and articulation through grades have been identified as a priority area in curriculum review and reform.

- *Disadvantaged groups*. Geographical, ethnic, and language-based access deficits; seriously inadequate opportunities for children with disabilities, despite some progress, need greater attention;

- *School facilities*. School building, premises and play grounds – which should be built and maintained as a symbol of commitment to education and community pride.

- *Quality control in private and public universities*. Proliferation of private and public universities without essential quality control defeats its very purpose;

- Education policy implementation mechanism. Slow and fragmented approach to Education Policy 2010 implementation has become glaringly evident.

- *Digital technology*. Better and inclusive use of digital technology for teacher upgrading, enriching student learning resources, efficient management information system, and ensuring wide and affordable access to the Internet for all educational institutions is the stepping stone into the 21st century.

- *School meal*. The policy on adopted on school meal for all children, especially at pre-primary and primary level, implemented without burdening teaching personnel and distracting them from classroom instruction has to be implemented effectively.

- *Corruption*. Controlling corruption, waste, mismanagement and moving away from a culture of tolerance of these destructive practices are a critical ingredient of effective implementation of reform.

In order to guide educational development to serve national development aspirations, the planning function has to be strengthened in appropriate ways. A panel of education experts with

insight and interest in the interface of education planning and program development should be brought into the process of crafting the plan. The plan has to be used as the basis for budgets in the two education ministries, agreeing on a framework of priorities and resource allocation for the education sector in a coordinated way.

It is worth repeating that the Eighth Five Year Plan (2021-24) comes at a critical juncture for shaping development priorities and strategies to move into the rank of middle-income countries and adapt to agenda 2030 for Bangladesh.

7. Conclusion

Prioritizing education as a critical tool for ensuring inclusive and sustainable development, the Government of Bangladesh has been focusing on expansion of education with greater success than on quality and learning outcomes. There has been creditable achievement in attaining education related MDGs, especially in enrollment at the primary level. It has also attained gender parity in terms of participation of girls at primary and secondary levels. The government intends to expand non-formal education for youth and adults within a framework of lifelong learning. An integrated sub-sector approach in this area is under consideration.

Public investment in the education sector has increased nominally along with the growth of the economy and budgetary resources of the country. However, growth in education sector budget has been proportionately less than the growth in total national budget. The education sector budget as share of GDP of the country has been hovering around 2 percent which needs to be doubled to match the global average for developing countries.

The National Education Policy 2010 came in to being with a view to ensure that the "next generation is provided with real education and knowledge of science and technology and thereby … develop into efficient and skilled human resource, respectful and committed to people and inspired by patriotic spirit". The policy objective to build a pro-poor education system, which is accessible and available equitably, unified in purpose, well planned, science oriented and of high standard according to the constitutional directives remain valid and relevant. A concerted and determined effort is needed to pursue these objectives with appropriate adaptation of the strategies in the current and future national and global context.

Responsible ministries and agencies have formulated various sub-sector programs which are being implemented. These need to be examined and adapted as needed to overcome the obstacles to attaining national priorities for the country aspiring to be in the middle and upper middle income ranks and achieve the SDG 4 targets. These challenges include enhancing quality of education at all levels, linking the education content and learning outcomes to employability of the graduates, further emphasizing non-formal education and TVET, enhancing equity with affirmative steps to serve the lower income households and those in special needs, and mitigating regional disparities.

7.1. ESP Goal and Sub-goals

The next step in the sector analysis and planning sequence is to work on the sector plan (ESP). In the course of preparing this ESA, stakeholder consultation was held to discuss anticipated ESP overall goal and sub-goals. The Senior Secretary of the Ministry of Education, the Secretary of the Ministry of Primary and Mass Education, and the Secretary for Technical and Madrasa Education were also consulted on these.

Taking into account the existing policy objectives reflected in various documents, the participants in the consultation endorsed an overall goal that was aligned with the SDG4 goal and that emphasized the three key elements of access, equity and quality in education. These elements were to be seen in the context of sustainable development and promotion of lifelong learning. The overall goal of ESP thus set was:

> *To contribute to the achievement of the SDG4 goal of equitable, accessible and quality education towards building a sustainable and prosperous society and promoting lifelong learning for all in line with the objective of Bangladesh becoming a developed country by 2041*

The participants agreed that realizing the overall called for particular attention to access with equity, quality and relevance of learning content and outcome, and effective governance and system management. Three sub-goals were, therefore, set relating to the three main components of the overall goal. The sub-goals are:

A) In relation to Access and Equity: *"Ensure compulsory basic education and increase scope for further education for all irrespective of gender, age, religion, ethnicity and disadvantaged groups."*

B) In relation to Quality and Relevance: "*Learners at all levels acquire relevant knowledge, skills, attitudes and values to live in health and safety, to live in harmony with nature and people, and to compete in the national and international job market.*"

C) In relation to Governance and System Management: "*Strengthen the result-based management system for effective implementation of the Five-Year Plans, SDG 4 strategic framework and Education Sector Plan, with increased budget allocations with better use of resources.*"

While still provisional until they are confirmed through further consultation, the above goal and sub-goals are seen as reasonably ambitious and are consistent with the existing policy choices. With the ESP results framework, which will be a part of the plan document, special efforts will be made to ensure that specific targets are set and those targets are further checked through a costing simulation model exercise. The time frame for the ESP is proposed to coincide with the 8th Five Year Plan (2021-25).

7.2. AN ESP POLICY-AND-PLAN MATRIX

Through the consultation process, the National Expert Team assisted by international consultants have drafted a policy-and-plan matrix on the basis of the selected ESP goals and sub-goals. A policy-plan matrix consists of a structured content showing the key strategic elements:

f) The ESP overall goal reflecting overall policy
g) The ESP main components and corresponding sub-goals
h) The outcomes under each sub-goal
i) The outputs under each outcome
j) The key interventions under each output

The policy-plan matrix has been drafted at this point up to the level of outcomes as presented below. It can be seen that a total of twelve outcomes have been determined, of which three are for access and equity, four for quality and relevance, and five for governance and system management. The more numerous outcomes related to the quality of education and system management are a signal to show that the critical issues facing Bangladesh education are those of quality and governance. More consultations are planned in order to further develop the policy-plan matrix and to elaborate it up to the level of interventions or activities.

Table 7.1: Draft Policy-Plan Matrix for ESP (2021-25)

Goal	Sub-Goals	Outcomes
Contribute to the achievement of the SDG4 goal of equitable, accessible and quality education towards building a sustainable and prosperous society and promoting lifelong learning for all, in line with the objective of Bangladesh becoming a developed country by 2041.	**01) Access & Equity** Ensure compulsory basic education and increase scope for further education for all irrespective of gender, age, religion, ethnicity and disadvantaged groups.	▪ All children complete education up to Grade 8 and substantial defined progress made in secondary and higher-secondary education to reach SDG target by 2030; ▪ Expansion of non-formal and skill development education within a life-long learning perspective by establishing network of community learning centres and expanding ICT based self-learning; bringing a defined number of participants into organized lifelong learning activities ; ▪ Creating scope of further expansion and improvement of education opportunities in line with changing needs and increased resources.
	02) Quality & Relevance Learners at all levels acquire relevant knowledge, skills, attitudes and values to live in health and safety and in harmony with nature and people, and to compete in the national and international job market.	▪ Measurable learning outcomes improved through competency- based curriculum and child centered teaching- learning process considering global standards; ▪ Introducing a longer term initiative based on new thinking about professional preparation and development of teachers and the education workforce through concurrent approach in degree colleges; ▪ All teachers at all levels have appropriate qualifications and use them in teaching practice ▪ Adequate and quality infrastructural facilities in educational institutions including use of ICT significantly improved
	03) Governance & System Management Strengthen result based management system for effective implementation of 8th FYP, SDG 4 strategic framework and ESP with increased budget allocations and improved human resource plan and management	▪ Improved educational governance and decentralization, with administrative and financial authority and planning and management functions devolved to district and progressively to upazila and institution level ▪ Develop sector wide planning, implementation and monitoring and evaluation capacity and enhancing the effective coordination among the sub-sectors ▪ Increased budget allocations with rationale and criteria applied for quality, equity, inclusion; improved capacity for effective resource utilization ▪ Establish a statutory permanent education commission and adapt a comprehensive education law to support policy objectives. ▪ Financing and resource mobilization approach including public and non-public resources to serve adequately the equity, quality and inclusion principles.

7.3. AN ESP OUTLINE PROPOSED

The focal point for drafting of the ESP will be the NET with technical support by international consultants, and in collaboration with key national stakeholders and UNESCO Dhaka Office. To facilitate the work, an outline indicating the provisional content of the plan document with its chapters and main sections has been proposed.

Similar to documents of its kind, the ESP will have four substantive chapters besides the key country context information (especially important for the benefit of GPE review). The four chapters envisaged are:

e) A summary of the findings from the ESA;
f) The proposed strategic framework with the set goals, outcomes, outputs and interventions;
g) A chapter on the implementation arrangements that put together accompanying instruments to make implementation as smooth as possible;
h) A chapter on costs and financing with a presentation of the costing hypotheses and the agreed financing scenario.

It should be noted that the ESP may be more appropriately described as a plan framework as the proposed content suggests. A national education sector plan as the guiding document for educational development of the country over a medium term requires more details including detailed sub-sectoral plans than can be presented in the envisaged ESP content and with the available resources and time. It must be prepared with the lead given by the concerned sector and sub-sector authorities, and must be owned by them and national policy-making bodies. The sector and sub-sector action plans are expected to be prepared as part of the Eighth Five Year Plan (FY2020/21 to FY 2024/25) preparation and implementation process.

The Education Sector Plan to be prepared as part of the GPE process with the ESA as the starting point is, therefore, intended to be a necessary framework and an important contribution, indeed a head-start, for an on-going national process. This process is the more involved and detailed exercise of education sector and subsector plan and program development, and its adaptation and refining as the situation demands in the context of the Eighth Plan, SDG4 framework, and the Perspective Plan (2021-41).

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9. Annexure

Annex 01: National Education Policy 2010

Table 9.1: Overview of National Education Policy

	Component	Overarching Goal	Key Features
01)	Pre-Primary & Primary Education	Pre-Primary education will aim to inspire children to lean and go to school. Ensuring universal, compulsory, free and uniform quality education for all.	Pre-Primary education will be delivered in a pleasant environment in appreciation of children's spontaneous vigor and curiosity. This will include the instructional programs already ongoing in religious facilities. To strengthen the general foundation of primary education at the national level, the existing discrimination among schools in regards of facilities, infrastructure constraints, lack of adequate number of teachers and the weaknesses in training will be adequately addressed.
02)	Adult and Non-Formal Education	To make all adult citizens of the country literate by 2014.	Emphasis on nation-wide awakening, volunteerism, and NGO engagement. Scope of skilled human resource export has also been considered.
03)	Secondary Education	To equip students with adequate knowledge so that they may choose from diverse stream of higher studies according to their capabilities, or pursue livelihood as per their vocational skills.	Uniformity of three steams (general, madrasah, and technical) through stipulated compulsory subjects like Bangla, English, Bangladesh Studies, General Mathematics, and Information Technology. Infrastructure development of the educational institutes and availability of educational material to be ensured in a manner that addresses regional and other discriminations.
04)	Vocational and Technical Education	Ensuring development of skilled human resource to meet changing domestic demand as well as enhance scope of skilled human resource exports.	Pre-Vocational and ICT education to be introduced at the Primary level of education. Scope of students opting out of main-stream education for vocational education. All technical and vocational education institutes put under the Technical Education Directorate.

	Component	Overarching Goal	Key Features
05)	Madrasah Education	All possible opportunities for students to learn Islam and at the same time to provide them competencies in different branches of knowledge and sciences.	Madrasah courses to be redesigned (from Ibtedaye to Kamil to maintain equivalence with other streams of education. Emphasizing on teaching subjects such as Bangla, English, Mathematics, Bangladesh Studies, Information Technology, and Vocational Education.
06)	Religious and Moral Education	Ensure proper and quality religious education and establishment of moral virtues in life and society and building of moral character of the learners.	Going beyond religion to instill moral values considering significant contribution of social and cultural practices and regional realities.
07)	Higher Education	Generating and innovating knowledge, at the same time to build up a skilled human resource base for the country while ensuring autonomy for the centers of higher studies including the universities.	Updating curricula and syllabi of higher education to meet international standards. Ensuring teachers and students together take part in research work (especial emphasis on original research). Steps to update and/or strengthen Jute Research Institute, Textile College and University, and College of Leather Technology.
08)	Engineering Education	Producing competent engineers with practical and scientific minds and to build up technically trained human resources with special emphasis on ICT.	Scope for institutes of engineering to operate in more than 1 shift to meet the growing domestic and international demand. Emphasis on bridging between the educational institutes with industrial organizations and service providers. Promoting higher studies in engineering and research in the area of engineering.
09)	Medical, Nursing and Health Education	To produce sufficient doctors, nurses, male nurses, health workers, and specialists with adequate professional competency and sensitivity to social realities of Bangladesh.	Expanding post-graduate medical courses beyond the on-going programs to meet the growing demand for medical academics and specialists. Provision for higher education for paramedics holding diploma in medical technology.

	Component	Overarching Goal	Key Features
			Improving traditional Homoeopathy, Unani and Ayurvedic medical practices.
10)	Science Education	Teaching science as a coordinated discipline so that the learners better understand the close relationship between technology and humanities.	Multi-media-based teaching for primary school children Further emphasis on practical classes for sciences and mathematics at the secondary level. Increasing investment in research through regular Master's and Ph.D programs.
11)	Information Technology Education	Producing competent human resources with international standard, trained and educated in information technology to perform efficiently in relevant field.	Going beyond computer science, and incorporating mobile phones, data collection and processing of information. Emphasis on multi-angular necessity.
12)	Business Studies	Ensure acquisition of fundamental knowledge about trade and commerce with emphasis on ethical and humane values, in the context of growing competition in the global market.	Extension, revision, and coordination of business studies on the basis of demands at home and abroad. Formal steps to conduct research by teachers of Business Studies in relating to the actual problems in industries, banks, insurances, and trade organizations. Mandatory short-term internships in the industry, trade and service sectors so that students can gain practical knowledge and experience.
13)	Agricultural Studies	Developing human resource in a manner that ensures improvement of agro-based socio-economic conditions for national development as well as appropriate development of agricultural economy directed towards proper use of natural resources through scientific and mathematical devices.	Increasing number of trainings at Agricultural Training Institutes, Veterinary Training Institutes, Livestock Training Institutes, and similar training institutes. Research on high-yielding seeds, climate change, agriculture and bio-technology. New courses along with traditional courses to upgrade agricultural studies in view of scientific progress and demands of national development.

	Component	Overarching Goal	Key Features
14)	Law Studies	Creating skilled teachers, lawyers, law experts and justices to ensure the rule of law.	Increasing the duration of law courses for general LL.B course from two years to three years. Incentives for higher studies and research. Effective supervision of law colleges.
15)	Women's Education	Emphasis on women's education to ensure women's comprehensive development and empowerment and women's participation in a balanced social advancement.	Special allocation in the National Budget along with promoting private initiative and financing in this regard. Creating opportunities for women for education of part-time vocational, non-formal and technical nature. The secondary level curriculum of last two years will include gender studies and issues of reproductive health.
16)	Fine Arts and Crafts Education.	Inspiring students to nurture an aesthetic life and motivating them in the pursuit of arts and helping them become professional as they acquire necessary skills.	Necessary steps to develop Fine Arts and Crafts education to meet professional ends (with special opportunities for students belonging to underprivileged groups). Introducing Fine Arts as an optional subject at primary and secondary levels. Establishment of national art galleries, music and dance academies and theatres under public initiative.
17)	Special Education, Health & Physical Education, Scout, Girls' Guide and Bratachari	Steps to bring the handicapped learners into the mainstream. Encouraging students to take physical exercise for keeping fit and help create a sense of discipline and punctuality. To help the learners acquire the qualities to become responsible, self-conscious and philanthropic persons by developing their personality.	Not Applicable

	Component	Overarching Goal	Key Features
18)	Sports Education	To encourage the students to take part in sports and to create opportunities for Bangladesh sportspersons through institutional education so that they can become renowned as professionals.	Not Applicable

ANNEX 03: PEDP 4

Table 9.2: Overview of PEDP 4

	Component	Overarching Goal	Key Features
01)	Pre-Primary Education	• The Government of Bangladesh (GoB) is committed to provide one year of free pre-primary education (PPE) to all children age 5 at government primary schools. • Nearly 100% of Government Primary Schools (GPS) and 99% of Newly Nationalized Primary Schools (NNPS) now offer one year of pre-primary education.	• Free of cost pre-primary education for all children • Government Primary School, newly nationalized primary school (NNPS) will provide these pre-primary educations.
02)	Beneficiary of PEDP4	• The PEDP4's direct beneficiaries are approx. 13.5 million children and other 5.1 million that are enrolled in other type of primary school enrolled in the MoPME/DPE pre-	• The Primary education development plan (PEDP4) of the government will cost US dollars around 20 billion to implement the next five-year initiatives is to run until 2023 focusing mainly on quality education as a number of teachers will be appointed and provided training in different courses.

	Component	Overarching Goal	Key Features
		primary and primary education system • The indirect beneficiaries include over 90 million family and community members in all areas of the country.	• 165,174 teachers will be recruited under the program in the next five years. • 139,174 teachers will be given diploma in education (Dip-in-Ed) training and all teachers will receive subject-based training. • Some 20,000 teachers will also be given one-year-long ICT training and 65,000 teachers will get leadership training under the program.
03)	Program Development Objective	• PEDP4 has three main components. • Components; Quality, Access and Participation, Management, Governance and Financing.	The program is designed to achieve three high-level outcomes: • Quality teaching-learning practices in all schools enable children to acquire the essential grade-level competencies stipulated in the curriculum • Learning environments support participation of all children, ensure continuity of education, and enable quality • Strong governance, adequate and equitable financing, and good management enable the provision of quality education that is efficient, inclusive and equitable
04)	Quality	• Quality teaching-learning practices being applied in all schools • Eight Sub-component to achieve intermediate goal	Eight Sub-component: • Curriculum • Teacher recruitment and deployment • Teacher education • Continuous professional development • ICT in education • Assessments and examinations • Pre-primary education
05)	Equitable Access and Participation	• Provide all communities with learning environments • Supporting participation of all children, ensure continuity of	Seven Sub-component: • Needs-based infrastructure • Needs-based furniture • Maintenance • Water and sanitary hygiene • Out-of-school children • Special Education Needs and Disability

	Component	Overarching Goal	Key Features
		education, and enable quality.	• Education in emergencies • Communication and social mobilization
06)	Management, Governance and Financing	• Ensure strong governance and adequate and equitable financing, and good management • Enable the provision of quality education that is efficient, inclusive and equitable.	Five sub-components: • Data systems for decision-making • Institutional strengthening • SLIPs/UPEPs • Strengthened budgets • Procurement and financial management
07)	PEDP4 improved and have a wider Range of beneficiaries	• It will strengthen the foundation of primary education • Will result in improved learnings	• use of supplementary reading materials. • Strengthening NAPE for professional development • Providing second-chance education to out-of-school children • Decentralization of functions to Divisions, Districts and Upazilas subject to readiness • measurement of the quality of teaching-learning practices
08)	Curriculum Revision & Dissemination	• Need assessment • Situation Analysis • Curriculum Evaluation • Curriculum Dissemination	• Curriculum will be revised, and textbooks and teaching-learning materials will be developed to support flexible learning and assessment. • Preparing Need based curriculum for achieving the goal
09)	Program governance, coordination and communication	• Strengthening the institutional capacity • Improving the effectiveness and opportunity	• Deliver the result included in the programs RF at all decision-making level. • Involve all the agency to achieve the various program milestone.
10)	Governance and organizational structure	• Carrying out overall strategic direction. • Carrying out monitoring and reporting.	• Timely deliver all the activities taken by PEDP4 • Distribution of all the report in timely manner.

ANNEX 04: SEDP 2018

Table 9.3: Overview of SEDP

	Component	Overarching Goal	Key Features
01)	Enhanced quality and relevance of secondary education	1. Improved quality and relevance of curriculum. 2. Strengthened teacher quality. 3. Improved teaching-learning in Bangla, English, Mathematics, Science and ICT. 4. Strengthened reading habit and reading skills among secondary level students. 5. Improved classroom assessment procedures and national learning assessment and examinations. 6. Enhanced use of ICT for pedagogy 7. Improved labor market relevance.	NCPF for all streams of school education, including general schools, Pre-primary education providers, madrasahs, and vocational schools (grades 1–12). 20,000 schools deliver an advanced teaching and learning particularly inscience, mathematics, and English using ICT-based and other modern tools and equipment. Approved NTDP including approval and implementation of the National Framework for Secondary Teacher Pre-service Curriculum specified for all TTCs, including agreed service standards. At least 15 TTCs are awarded a Center of Excellence status in English, science, and mathematics. Undertake and impact study and gap analysis with recommendations of DSHE's ongoing Additional Class Teacher (ACT) program and recruit, train, and deploy qualified and subject-trained ACT based on the gap analysis. The Developing Reading Habit (DRH) program will include the provision of age-appropriate books, training of librarians, libraries, mobile libraries and digital libraries. The new Reading Skills Program (RSP) will include the National Assessment for Secondary Students (NASS) as a reading skills baseline. NSA Plan approved and implemented; NSA for grades 8 and 10 are piloted, applied, and improved. National Examination Policy, including adaption of new exam innovations that assesses the competencies identified in the NCPF, approved and implemented. ICT Master Plan approved and implemented. All secondary schools equipped with ICT facilities (ICT lab, multimedia classrooms, digital contents, and library) that are effectively used.

	Component	Overarching Goal	Key Features
			E-learning modules of Bangla, English, mathematics, science, and other relevant subjects are developed and used in at least 10,000 schools. Pre-vocational and vocational subjects developed and introduced to grades 8–9.
02)	Improved access and retention	1. School infrastructure development 2. Improved access and retention 3. Enhanced cycle completion for girls and disadvantaged areas	Secondary school five-year rolling need-based infrastructure development plan (new construction and rehabilitation) developed, approved, and implemented; about 7,000 schools in underserved areas expanded. A more efficient and harmonized stipend program is implemented; 80% of stipend recipients are retained in school. Capacity of DSHE in stipend program implementation, monitoring, and evaluation increased. Provide support to families with adolescent children and supply boats to assist girls to reach school and home in case of disaster induced circumstances.
03)	Strengthened governance, management and planning	1. Strengthened decentralized education management 2. Strengthened education management information system and monitoring and evaluation 3. Improved teacher management and accountability: 4. Improved school management and accountability 5. Strengthened sector planning, management, and coordination 6. Strengthened Monitoring & Evaluation System	A fully functioning decentralized secondary education management in all zones, districts, upazila, and schools (infrastructure, capacity). Effective systems of resource allocation to schools, which includes improved MPO system and grants to school in place. Strengthened and harmonized operations and sets of education databases between BANBEIS and the DSHE EMIS. All teachers and education managers trained to operate upgraded school-based EMIS. NTSC established and operationalized. Teacher performance management system in place and operational. Provide accountability and performance grants for institutes meeting accountability criteria such as PTA, social audit, EMIS data, etc. to give incentive for teachers and SMC members (maximum 30%). Harmonized secondary education program funded from domestic and external resources under a common secondary education program framework in line with

Component	Overarching Goal	Key Features
		NEP and using MTBF as sector financing framework. MOE and DSHE re-organized to strengthen capacity in results-based sector planning and management under a SWAp. MTBF and the annual development plan harmonized and consistent with NEP priority goals and objectives. Annual Secondary Education Sector Performance Reports are approved, shared, and used as a basis for planning. M&E system strengthened and institutionalized.

ANNEX 05: SDG4 STRATEGIC FRAMEWORK

Table 9.4: Components, challenges and strategic directions highlighted in the SDG4 Strategic Framework

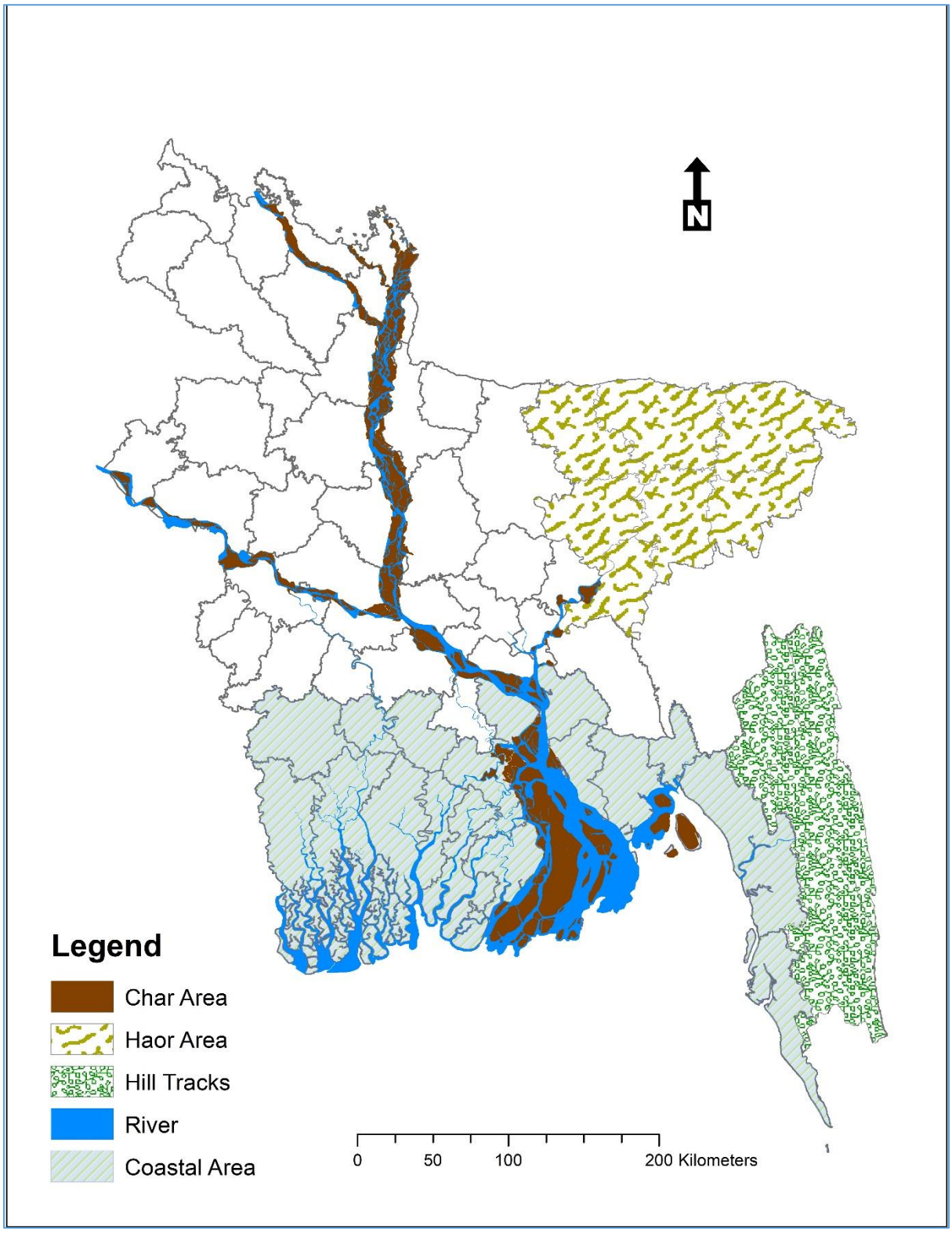
Main Components	Challenges	Strategic Directions
Early Childhood Development (ECD) & Pre-Primary Education	Pre-primary education has been very well received by the general population. It is necessary for the state to take appropriate measures for ensuring effective pre-primary education nationwide based on decentralized management. For effective ECD interventions in the future there should be meaningful GO- NGO collaboration.	Since ECD and pre-primary education are relatively new undertakings it should be systematically implemented in line with the ECD policy framework with a long term view to implement a comprehensive ECD program with two years' pre-primary based on a collaborative strategy involving G0-NGO collaboration.
Primary Education	While there have been substantial improvements in access, the facilities provided are often less than ideal for learning. Pedagogical skills provided to teachers are rarely applied in the classrooms. Commodization of education in the forms of tuition and guidebooks are taking its toll on the learning process as well as on learning outcomes.	The thrust of the strategic directions is to enable the system to deliver primary education that integrates access, equity and quality in a meaningful way. To this end, one of the most significant steps is to make education free and compulsory up to lower secondary (Grade 8) and up to Grade 12 in the longer term. Other strategic dimensions are related to teacher development, to improving effective learning conditions including

Main Components	Challenges	Strategic Directions
		the physical facilities of schools and to scaling up of school meal programs.
Secondary Education	The significance of secondary education can hardly be over emphasized. Secondary education schools and colleges are for the most part run by non-state entities and are marred with problems which often have political implications. A well designed secondary education system, which equips students with skills for the job market, can lead to gainful employment with the potential to significantly contribute to sustainable development.	Subject specialist teachers, who are currently short in supply, must be recruited if quality is to be improved. Therefore, provisions and incentives need to be created to recruit well qualified candidates. Support also needs to be provided for preferential recruitment of equally qualified female teachers. GoB needs to take necessary measures to overcome the governance constraints by bringing secondary education further under its regulatory fold. The governance of secondary education needs to be better integrated and coordinated along with transforming its management system with further professionalization. By taking a sector-wide approach the government has taken a major step towards this.
Equitable Access to TVET and Higher Education	TVET systems are yet to become market responsive. One of the important reasons behind this is that the current curriculum has not been reformed in line with the demands of time. Particularly the system is not favorable for females. As a result, youth and adult females are not enabled to economically empower themselves with the necessary skills. Due to the TVET system's inability to generate gainful employment it is held in low regard by society.	The key feature of the strategic directions is to find meaningful ways and approaches to address relevance and quality of TVET delivery systems. A logical consequence of this is to carry out interventions which are foundational to the establishment of an effective TVET delivery system, such as reform of curriculum, assessment of learning needs, increasing outreach and creating women friendly environments among others.
Gender Equality & Equal Access for All	While there have been commendable improvements in terms of promoting gender equality in education, it has been mainly confined to parity in enrolment. Gender equality can only become meaningful if parity in enrolments can be effectively translated into parity in	Building on Bangladesh's success in gender parity, continued concerted efforts are needed to keep moving toward full gender equality and equal access to quality education for all. More intensive support needs to be provided for girls at secondary and tertiary education levels, for minority ethnic and linguistic groups including for mother

Main Components	Challenges	Strategic Directions
	completion resulting in gainful employment and self-employment. Serious efforts are needed based on a well-informed understanding of the issues and challenges caused by socio-economic limitations imposed on girls and women, the marginalized, members of ethnic minority communities and others who currently face discrimination.	tongue education, for the physically and mentally challenged and for economically and geographically marginalised groups, including through GO-NGO collaboration. Efforts must be intensified for transforming gender discriminatory social norms, e.g. by removing gender stereotypes from textbooks and teaching and learning materials and by integrating messages of gender equality and respectful relationships in the school curriculum and the teachers' training curriculum.
Youth & Adult Literacy	Given the need for literacy, life skills and livelihood skills, it is necessary to establish village based institutes that are able to reach the rural masses and to meet their literacy and other developmental needs. This can be achieved through GO-NGO collaborative efforts that facilitate community based learning centers led by the communities themselves. The community led process will require sustained technical support from NGOs as well as from other state and non-state actors at the grassroots level.	A decentralized NFE implementation system led by BNFE and implemented by NGOs through community led CLCs catering for the specific needs of children between 8-14 years and youth and adults is envisaged as a major contribution to sustainable development.

ANNEX 06: HIGH CLIMATE RISK AREAS IN BANGLADESH

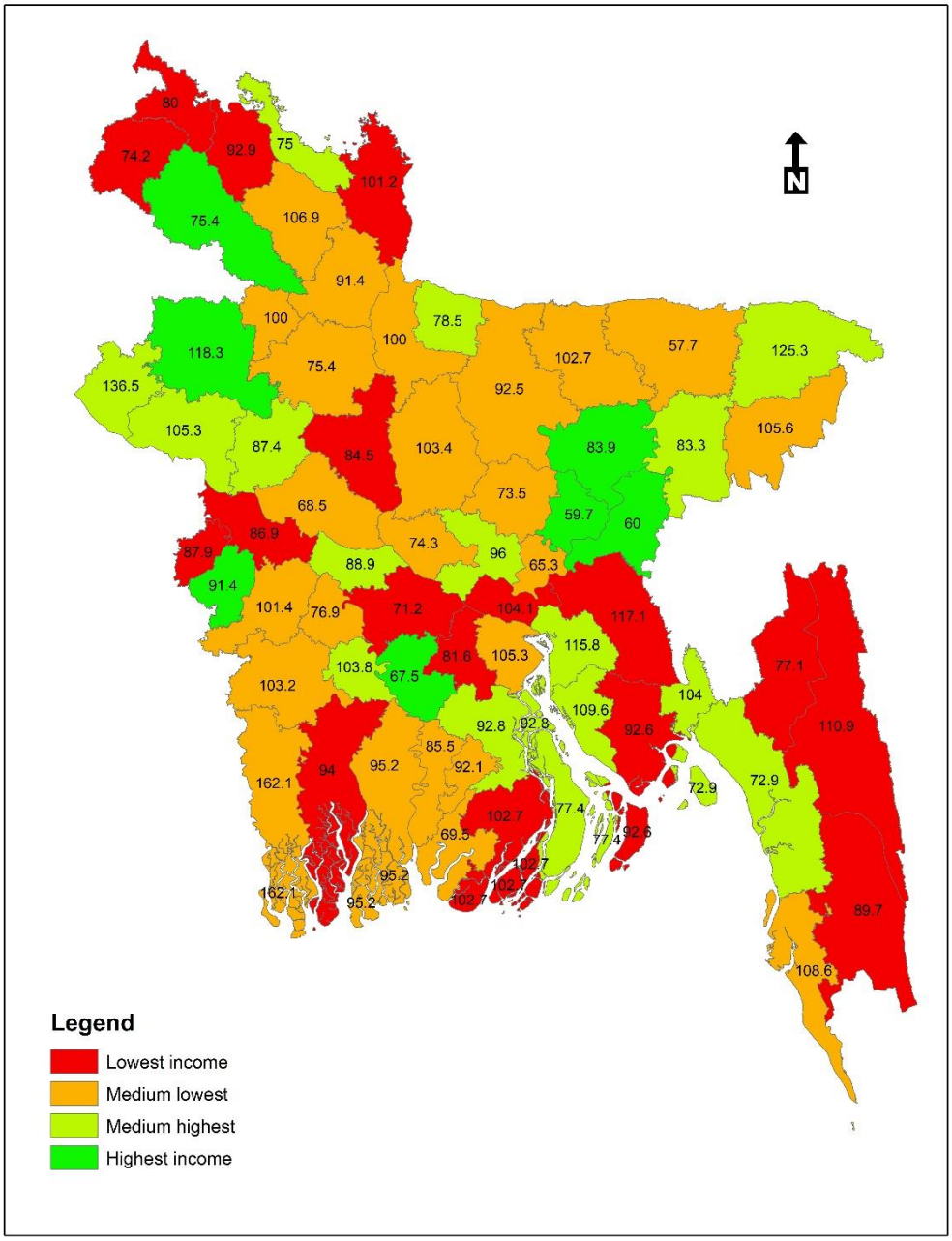
Figure 9.1: High climate risk areas in Bangladesh



Note: *Char* areas are mapped based on survey data available from Shamunnay, National Char Alliance Secretariat. Coastal areas are mapped based on information from Delineation of the Coastal Zone (Working Paper 005) (2003) by PDO-ICZMP. *Haor* areas are not defined (information not available) and hence, the districts with large *Haors* have been shown in the map above.

ANNEX 07: GER IN CLASS 5 FOR DISTRICTS WITH DIFFERENT LEVELS OF INCOME

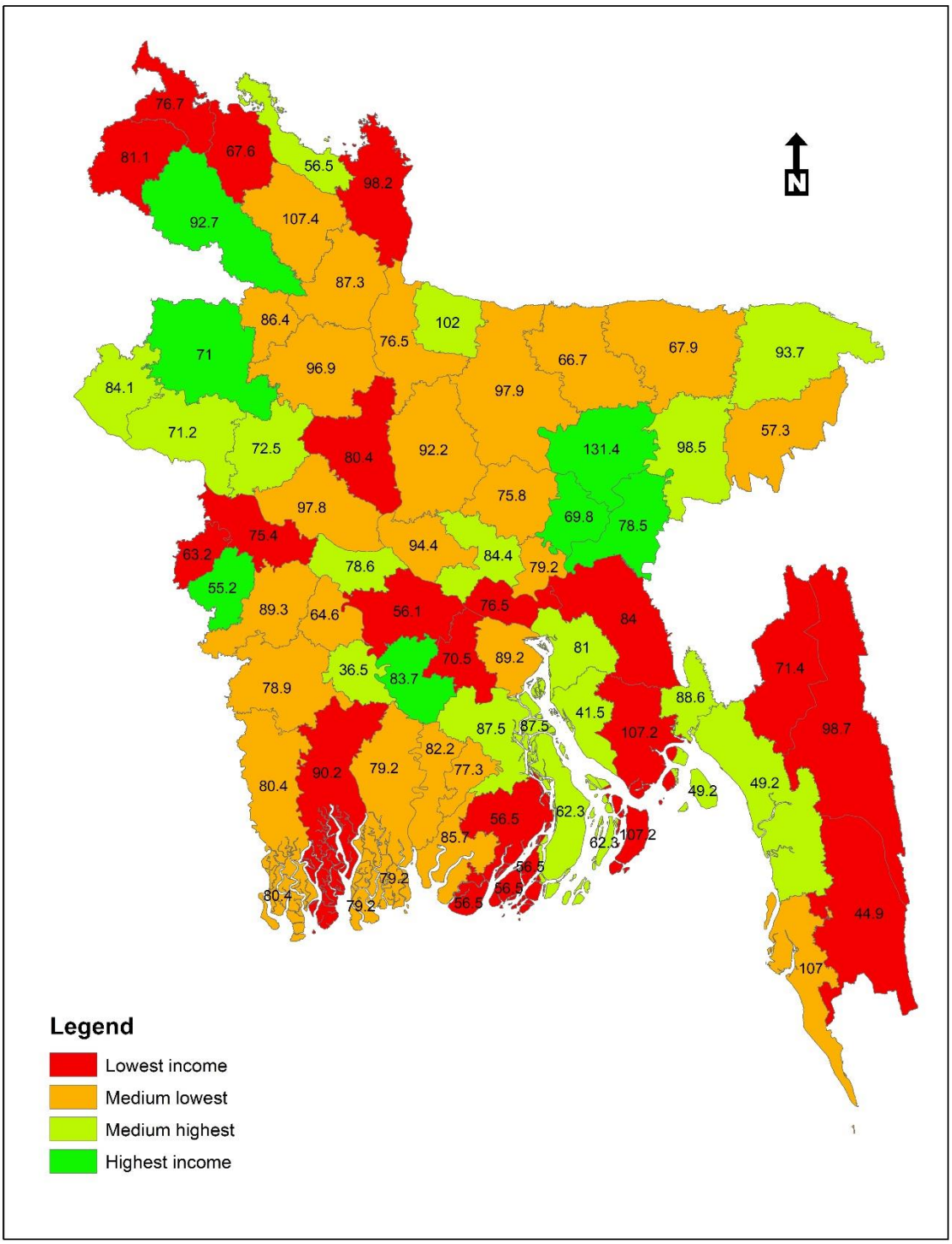
Figure 9.2: GER in class 5 for districts with different levels of average household income



Source: Derived from the data of HIES 2016, BBS

ANNEX 08: GER IN CLASS 8 FOR DISTRICTS WITH DIFFERENT LEVELS OF INCOME

Figure 9.3: GER in class 8 for districts with different levels of average household income



Source: Derived from the data of HIES 2016, BBS