

Report No. 80613-BD

Bangladesh

Education Sector Review

Seeding Fertile Ground: Education That Works for Bangladesh

September 28, 2013

Human Development Sector
South Asia Region



Document of the World Bank



The World Bank

World Bank Office Dhaka

Plot E-32, Agargaon
Sher-e-Bangla Nagar
Dhaka 1207, Bangladesh
Tel: 880-2-8159001-28
Fax: 880-2—8159029-30
www.worldbank.org.bd

The World Bank

1818 H Street, N.W.
Washington DC 20433, USA
Tel: 1-202-473-1000
Fax: 1-207-477-6391
www.worldbank.org

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CURRENCY EQUIVALENT

(Exchange Rate Effective as of August 28, 2013)

Currency Unit = Bangladesh Taka (BDT)

US\$1 = 77.36 BDT

FISCAL YEAR

July 1 – June 30

ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
ASPR	Annual Sector Performance Report
BANBEIS	Bangladesh Bureau of Educational Information and Statistics
BEPZA	Bangladesh Export Processing Zone Authority
BHTPA	Bangladesh Hi-Tech Park Authority
BISE	Board of Intermediate and Secondary Education
BMEB	Bangladesh Madrasah Education Board
BMET	Bureau of Manpower, Employment and Training
BNFE	Bureau of Non-Formal Education
BRAC	Bangladesh Rural Advancement Committee
BTEB	Bangladesh Technical Education Board
CAMPE	Campaign for Popular Education Bangladesh
CCDE	Center for Curriculum Development and Evaluation
CCT	Conditional Cash Transfer
C-in-Ed	Certificate in Education
CPD	Continuous Professional Development
DEO	District Education Officer
DIBS	Diploma in Business Studies
DPE	Directorate of Primary Education
DSHE	Directorate of Secondary and Higher Education
DTE	Directorate of Technical Education
ECD	Early Childhood Development
ECL	Each Child Learns initiative
EFA	Education for All
EPZ	Export Processing Zones
ESR	Education Sector Review
ESS	Enterprise-based Skills Survey
FDI	Foreign Direct Investment
FEP	Food for Education Project
FSSAP	Female Secondary School Assistance Project
GDP	Gross Domestic Product
GER	Gross Enrollment Rate
GNI	Gross National Income

GPS	Government Primary Schools
HEQEP	Higher Education Quality Enhancement Project
HH	Household
HIES	Household Income and Expenditure Survey
HOI	Human Opportunity Index
HSC	Higher Secondary Certificate
HT	Head teacher
IALS	International Adult Literacy Survey
ICT	Information and Communication Technology
IDA	International Development Agency
IEA	International Association for Evaluation of Educational Achievement
JDC	Junior Dakhil Certificate
JSC	Junior Secondary Certificate
LASI	Learning Assessment in SEQAEP Institutions
LFS	Labor Force Survey
MMC	Madrasah Managing Committee
MDG	Millennium Development Goals
MEW	Monitoring and Evaluation Wing
MICS	Multiple Indicator Cluster Survey
MoE	Ministry of Education
MoPME	Ministry of Primary and Mass Education
MPO	Monthly Pay Order
NAPE	National Academy for Primary Education
NCTB	National Curriculum and Textbook Board
NEP	National Education Policy
NER	Net Enrollment Rate
NGO	Non-governmental Organization
NORAD	Norwegian Agency for Development Cooperation
NSA	National Student Assessment
NSDC	National Skills Development Council
NSQAS	National Skills Quality Assurance System
NSS	National Skill Standard
NTEC	National Teacher Education Council
NTRCA	Non-Government Teachers' Registration and Certification Authority
NTVQF	National Technical and Vocational Qualifications Framework
NU	National University
OECD	Organisation for Economic Co-operation and Development
PECE	Primary Education Completion Exam
PEDP	Primary Education Development Program
PESP	Primary Education Stipends Program
PIRLS	Progress in International Reading Literacy Studies
PISA	Programme for International Student Assessment
PLCE	Post Literacy and Continued Education
PMT	Proxy Means Test
PN	Policy Note
PTI	Primary Teacher Training Institutes
PUAC	Private Universities Accreditation Council
RNGPS	Registered Non-Government Primary Schools
ROSC	Reaching Out-of-School Children
RPL	Recognition of Prior Learning
SBM	School-Based Management

SDP	Skill Development Project
SEQAEP	Secondary Education Quality and Access Enhancement Project
SESDP	Secondary Education Sector Development Project
SESIP	Secondary Education Sector Improvement Project
SESP	Secondary Stipend Project
SLIP	School-Level Improvement Plan
SMC	School Management Committee
SSC	Secondary School Certificate
STEP	Skills and Training Enhancement Project
SWAp	Sector-Wide approach
TA	Technical Assistance
TE	Teacher Educator
TFP	Total Factor Productivity
TIMSS	Trends in International Math and Science Study
TLM	Teaching and Learning Materials
TQI	Teaching Quality Improvement
TTC	Technical Teachers Training College
TVET	Technical and Vocational Education and Training
UCEP	Unprivileged Children's Educational Program
UGC	University Grants Commission
UNICEF	United Nations Children's Fund
UPEP	Upazila Primary Education Plan
URC	Upazila Resource Center
USEO	Upazila Secondary Education Officer
WDI	World Development Indicators

Vice President	Philippe H. Le Houérou
Country Director	Johannes C. M. Zutt
Sector Director	Jesko S. Hentschel
Sector Manager	Amit Dar
Task Team Leaders	Ayesha Y. Vawda and Leopold Remi Sarr

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ACKNOWLEDGEMENTS

This report has been prepared with active contribution from a number of persons and institutions through a truly participatory approach. Although a World Bank team has constantly remained engaged for more than a year in preparing these three Policy Notes (PNs) which make up the report, it would not have been possible without very useful guidance from two Advisory Groups (AGs) formed specifically to deal with the issues in Education Quality and Skills Development and contribution from many others.

The AGs consisted of a broad range of members from various sectors renowned for their knowledge, experience and expertise in the areas of education and labor market. The members of the Quality AG represented the Ministry of Education (MoE), the Ministry of Primary and Mass Education (MoPME), the Directorate of Secondary and Higher Education (DSHE), the Directorate of Primary Education (DPE), the National Academy of Educational Management (NAEM), the National Academy of Primary Education (NAPE) from the Government of Bangladesh; Dhaka University and BRAC University from academia; Campaign for Compulsory Education (CAMPE), Bangladesh Rural Advancement Committee (BRAC) and Bishwa Sahitya Kendra (BSK) from civil society; and The Asian Development Bank (ADB), Japan International Cooperation Agency (JICA), The United Nations Children's Fund (UNICEF) and the Australian Agency for International Development (AusAID) from the development partner community. The Skills Development AG consisted of representatives from the MoE, the University Grants Commission (UGC), the Ministry of Labor, the National Skills Development Council Secretariat, the Directorate of Technical Education (DTE), Bangladesh Technical Education Board (BTEB), Bangladesh Bureau of Statistics (BBS), the Bureau of Manpower, Employment and Training (BMET) from the Government of Bangladesh; Dhaka University, BRAC University, and Bangladesh Institute of Development Studies (BIDS) from the academia and research institutions; representatives from the private sector; BRAC, Dhaka Ahsania Mission and Underprivileged Children's Educational Programs (UCEP) from civil society; and International Labor Organization (ILO), Swiss Agency for Development and Cooperation (SDC), ADB, UK Department for International Development (DFID), Canada, and European Union (EU) from the development partner community. The AG members reviewed the PNs by supporting their preparation from the earliest stage including review of the concept notes, proposed research methodology and design. They also looked into their key findings and messages, and provided valuable technical advice and insightful information based on their knowledge, field experience and familiarity with the ground realities, through a series of meetings and workshops.

Special thanks are due to the following AG members/ individuals without whose generous contributions this report could not have been possible: Rudi Van Dael (ADB); Ahsan Abdullah, Shajahan Ali Mollah and Md. Kahn Jahan Ali (BANBEIS); Shafiqul Islam and Riful Jannat (BRAC); Manzoor Ahmed and Erum Mariam (BRAC Institute of Educational Development); Niaz Asadullah (BRAC-RED); Binayek Sen and Rushidan Islam Rahman (BIDS); Abdullah Abu Sayeed (BSK); Nurul Islam (BMET), Rasheda K. Chowdhury and K. M. Enamul Hoque (CAMPE); Nicolas Simrad (Canada); Michal I. Islam (Chittagong Skills Development Council-CSDC); Sadequr Rahman (Dhaka Ahsania Mission); Shyamal Kanti Ghosh, Humayun Kabir, Fazle Siddique Yahya, Mezaul Islam and Ruhul Amin (DPE); Md. Babar Ali (DTE); Didarul Alam and Sirajul Hoque (DSHE); Fazle Rabbani and Libuse Soukupova (EU); Shamse Ara Hasan (**Gono Shahajjo Sangstha**-GSS); Siddiqur Rahman and Sumera Ahsan (Institute of Education and Research, Dhaka University); Arthur Shears and Hari Pada Das (ILO); Maki Nagai (JICA); Iqbal Khan Chowdhury (MoE); Shamsur Rahman and Md. Salimuzzaman (NAEM); Nazmul Hasan Khan (NAPE); Jiban Kumar Chowdhury (National Skills Development Council-NSDC Secretariat); Hossain Zillur Rahman (Power and Participation Research Center-PPRC); Sadiq Ahmed (Policy Research Institute -PRI); Tahsinah Ahmed (SDC); Brig. Gen (Retd) Aftabuddin Ahmed and Mohiuzzaman (UCEP); Akhtar Hossain (University Grants Commission- UGC); Nabendra Dahal and Mohammad Mohsin (UNICEF); and Salman Zaidi (World Bank).

The World Bank team was led by Ayesha Y. Vawda, Task Team Leader, and Leopold Remi Sarr, Co-Task Team Leader. The core team members included Subrata S. Dhar, Shinsaku Nomura, Seo Yeon Hong and Yumiko

Yamakawa. At the same time, Dilip Parajuli, Syed Rashed Al-Zayed, Yoko Nagashima, Md. Mokhlesur Rahman, Hiroshi Saeki, Susan Opper, Muhammad Asahabur Rahman, T. M. Asaduzzaman, Christophe Nordman, Nusaybah Yusuf, Syeda Kashfee Ahmed, and Zaima Ahmed contributed to the report with technical and various background studies. The analysis presented in the report benefited from the background papers prepared by Amritpal Kaur Sandhu and Md. Lutfur Rahman (Teacher Study), Nurul Islam Khan and Sumera Ahsan (Examination Study), Md. Selim Reza (Migrant Worker Study), as well as some studies conducted by the World Bank staff such as the College Study, the Urban Slum Study (outsourced to DATA International), and the Enterprise-based Skills Survey (outsourced to SRG Bangladesh).

Nasreen Begum, Nazma Sultana, Sandra X. Alborta, and Rex Quiah led the logistical arrangements for publication, communication, contracts, and workshops for the AG meetings.

The report benefited from the feedback received from Michael Drabble, Prateek Tandon, Lianqin Wang, Husein Abdul-Hami, Andras Horvai, and Robert Chase. The team gratefully acknowledges the valuable comments on the final draft from the Ministry of Primary and Mass Education and the Ministry of Education of the Government of Bangladesh. The team greatly benefited from the overall guidance provided by Amit Dar and the overall review of activities by Jesko Hentschel, Christine E. Kimes, Tahseen Sayed, Ellen Goldstein, and Johannes Zutt. This report has been edited by Tammi Titsworth and Golam Faruque Khan. The World Bank Education Team in Bangladesh expresses its deepest gratitude to everyone involved in the process of preparation, production and dissemination of this report.

PREFACE

Developing a particular sector presupposes the mobilization of resources on one hand, and a favorable policy framework, appropriate institutional arrangements, and successful implementation of needed interventions on the other. And what can play the most effective catalytic role in bringing all these factors into play in a democratic society is a vibrant policy dialogue, which, in turn, needs a strong base of information about the problems and prospects of that particular sector. Facilitating educational development in Bangladesh through well-thought-out and sustained measures backed by a meaningful policy dialogue can be possible only when an authentic picture of the major issues in the area of education is available. By attempting to bring these urgent issues to the fore, this Education Sector Review aims to catalyze a focused, coherent and a well-articulated policy dialogue on education and skills development in Bangladesh. The most appropriate policies, once adopted through such dialogues, would lead to right interventions to bring about a momentous expansion of the human resource base and steadily steer the country along the road to growth and progress. Bangladesh, aspiring to be a middle income country by 2021, needs this dialogue, more so in the face of recent developments in the education sector.

Bangladesh is now at a crossroads, given its educational development and growth pattern. With a large and relatively young population – 155 million people in 2012, and 31 percent of them below the age of 15 -- the country is poised to earn a considerable demographic dividend, provided these young people get the opportunity of quality education and skills development resulting in gainful employment. The headway Bangladesh has already made in education as well as in other social sectors is globally recognized, but there are still a number of formidable challenges that need to be correctly identified and tackled with utmost efficiency and commitment. This report takes a stock of the achievements and challenges that mark the education sector of Bangladesh and tries to suggest appropriate policy measures. It consists of three Policy Notes (PNs) focused on Access and Equity, Education Quality, and Skills Development. Prepared over a period of 18 months, the report is structured in such a way as to present succinctly the key findings and the suggested policy directions.

As the findings show, Bangladesh has a good track record in enhancing access and equity in education, with remarkable achievements in widening access to primary education, attaining gender equity at the primary and secondary education levels, marked reduction in repetition and dropout rates, and attaining reasonably high levels of completion in primary education. Gender equity in primary and secondary education has been achieved well ahead of the Millennium Development Goal target set for 2015. But on the debit side, enrollments of the poor are still lagging. About five million children are still out of school, either because they did not enroll in school or dropped out very early, mostly due to poverty. The repetition rates are still high despite the notable decline in recent years. The transition rates are low across various levels of education. Children living in urban slums suffer from both demand and supply-side limitations to education. What needs to be done now is to target the remaining, hardest-to-reach population groups so that they have access to universal primary education. Quality early childhood development should be pursued and the efficiency level in the utilization of funds substantially improved. Budgetary allocations for secondary and higher education also have to be increased considerably.

With regard to quality of education, Bangladesh has already taken some bold steps to assess the health of the education system. Some major projects are now being implemented to address the quality question at the primary, secondary and tertiary levels. However, the challenges for improving the quality of the education system are daunting and multi-faceted. They include low learning levels, inadequate acquisition of non-cognitive skills, inequitable learning among students, a high degree of variation between schools, low teacher motivation, low time on task, weak examinations and teacher development systems, limited incentives for performance compared to much fewer disincentives for poor performance, and low levels of accountability in properly using public finance. The Quality PN seeks to diagnose the maladies, and suggest policy options that may raise the levels of education quality. One of its important messages is that issues in education quality improvement are neither linear nor uni-dimensional, and that they require simultaneous interventions on several fronts.

Skills development is surprisingly much less talked about in Bangladesh than educational access and quality despite considerable emphasis on skills and training across various education policies over the past decades. However, there is now a growing interest combined with a large number of important initiatives and activities in this important area in the country, particularly in vocational education and training. The Skills Development PN attempts to contextualize the nature of skills development from an educational perspective, and to reflect on the link between the demand and supply of skills, as well as the equity and efficiency of skills development opportunities in the country. It also affirms the need to assess skills development from a holistic perspective, from early childhood to adult work life.

While this report has profusely drawn on the constant guidance provided by the two Advisory Groups on the issues related to quality and skills development as well as on some secondary literature, original research was conducted in areas where information gaps were identified. It attempts an objective analysis of the relevant issues complemented, where possible, with relevant examples from local and international experience. The report will best serve its purpose if it can ignite a lively and broad-based policy discourse resulting in the adoption and implementation of much needed policies in the field of education that may lead Bangladesh to the next stage of economic and social development.

EXECUTIVE SUMMARY

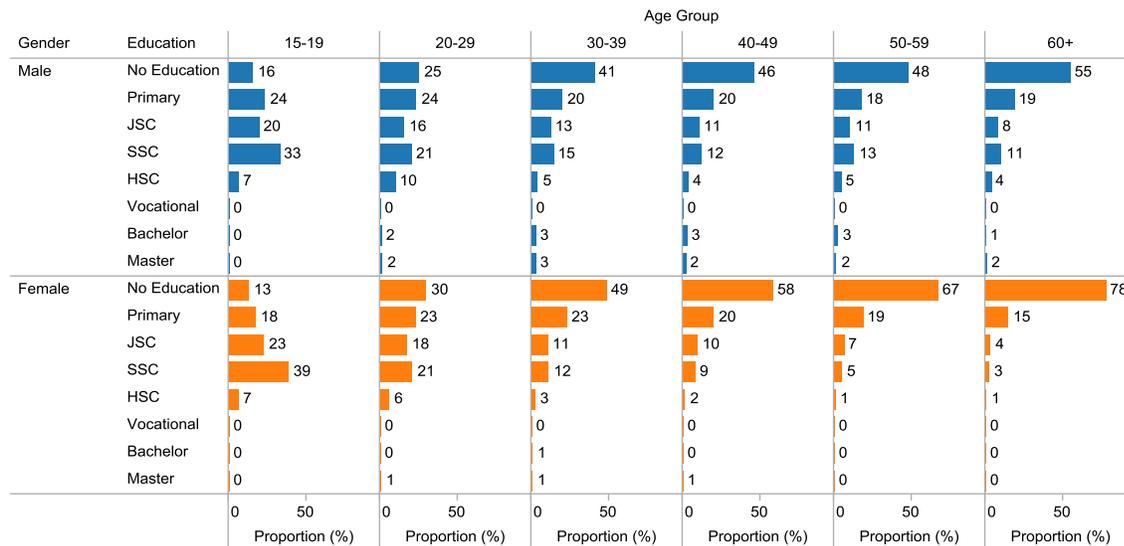
1. Introduction

1. **Bangladesh is recognized globally for its achievements and potential, despite a number of difficult challenges.** Given the sustained economic growth over the last three decades, Bangladesh is identified as one of the Next Eleven emerging economies in the world. The country has met several Millennium Development Goals ahead of time and reduced poverty substantially over the last decade. It has a large and relatively young population—there were 155 million people in 2012, and 31 percent were below the age of 15. A few major cities are undergoing rapid urbanization—Dhaka being one of the eight most populated cities in the world—which affects the educational access and completion of children, especially those living in urban slums. The country also has one of the lowest nutrition rates in the world.¹

2. **The country is at a crossroads, given its educational development and economic growth pattern.** Improvements in the quality of education and structural changes in the economy could propel the economy into the next phase of economic growth, yielding a demographic dividend that can be captured over the next few years. Doing more of the same, however, comes with the risk of falling into a low-productivity/low-wage trap:

- a. **Educational access has increased significantly over the last decade, particularly at the lower levels of education and especially so for women (figure 1).** However, 96 percent of the labor force has less than a secondary education, and two-thirds have less than a primary education. Just a third of the primary graduates acquire the numeracy and literacy skills they are expected to master by the time they graduate.

Figure 1: Average Education Level Attained by Each Age Group



Source: Authors' analysis using the Labor Force Survey (LFS) 2010.

Note: The sum of all education levels for each age group by gender equals 100. HSC = Higher Secondary Certificate; JSC = Junior Secondary Certificate; and SSC = Secondary School Certificate.

- b. **The economy, although largely informal (90 percent), has sustained good progress—the growth rate has been steady at 5.8 percent per annum in the 2000s and poverty has declined substantially.** The drivers of growth have been low-skill, low-wage labor-intensive manufacturing—the ready-made garment sector has played an important role, and women, who constitute 90 percent of the employees in this sector,

¹ The malnutrition rate of children under five was at 41.3 percent in 2007.

have played a key role in the economic growth of this country. Remittances from emigrant workers, almost 100 percent of whom are employed in low-skill, low-wage sectors, have also played an important role in growth and poverty reduction.

- c. **The country is expected to benefit from a demographic dividend, with a higher share of working-age population and a declining dependency ratio, and per capita gross national income (GNI) growth is expected to accelerate.** Annually, 2.1 million people will enter the prime working-age population over the next decade. This presents a great opportunity for Bangladesh to move to the next stage of economic development. However, given the recent pattern of economic growth (that is, competition on the basis of low cost, driven primarily by low-skill, low-wage labor-intensive employment, rather than higher productivity of the labor force), it is also possible that Bangladesh might get stuck in a low-wage, low-productivity trap. To realize its goals of attaining middle-income status and to capitalize on the developments in educational access, the country will need to make structural changes in the economy, create more and higher-productivity jobs, and improve education and skill development. This will ensure that Bangladesh achieves the most out of the demographic dividend, and steer the country to the next stage of economic and social development.

3. **This series of Policy Notes (PNs) aims to support, over the medium term, a coherent and articulated policy dialogue on education and skills development that would help Bangladesh achieve its target of becoming a middle-income country.** The three PNs, which are a culmination of work over the last 18 months, were guided by two principles: (i) to provide just-in-time analysis and policy directions on topics of greatest interest to policy makers, civil society, think tanks, development partners, and researchers in Bangladesh; and (ii) to undertake this work in a collaborative manner, seeking guidance from a panel of advisors early in the process of preparation of these PNs. As a result, this series of PNs does not claim to be comprehensive, unlike the Education Sector Review conducted by the World Bank in 2000. The three PN focus on access and equity; education quality, and skills development. Two Advisory Groups were established to guide the work, comprising national and international experts and practitioners, and including Government counterparts. The groups regularly provided technical advice and guidance on the structure and objectives of the work, identification of knowledge gaps, analysis of data, and verification of key findings and policy directions. The groups also analyzed the overall messages of the PNs, to ensure that they are in line with Bangladesh's context and regional perspectives. Another benefit of having the Advisory Groups involved is that they shared insightful information from field operations and realities on the ground, and they advised how best to disseminate policy directions. Original research was conducted in areas where information gaps were identified. Some of the key studies carried out for this report include analyses of the National Student Assessment (NSA) and the Learning Assessment in SEQAEP Institutions (LASI), the Urban Slum Study, a survey of 500 enterprises for skill development, and a study of colleges. Where possible, key policy directions are complemented with relevant international examples to support the dialogue.

4. **The main findings and key policy directions related to the three PNs are provided next, in Section 2.** These findings are presented in a concise manner to remain relevant and useful for a diverse audience. A policy matrix also shows the cumulative findings of the PNs (see table 1 at the end of this Summary). Further work will be required to sequence these policy options. An analysis of cost of these policy levers would also be highly fruitful in determining the optimal mix of policy interventions.

2. Main Findings and Policy Directions

5. **The Bangladesh education system is large, catering to over 30 million students, involving many stakeholders (for example, there are 13 types of providers in primary education; 10 examination boards at the secondary level; and about 98 percent of secondary institutions are private, mostly supported through public subsidies).** The country has experimented with some of the most innovative models of demand-side financing and public-private partnerships. There are two ministries managing education—the Ministry of Primary and Mass Education (MoPME), which covers primary education (grades 1–5), non-formal education, and literacy; and the Ministry of Education (MoE), which is mandated to oversee secondary education (grades 6–12), technical and vocational education and training, higher education, and madrasah education.

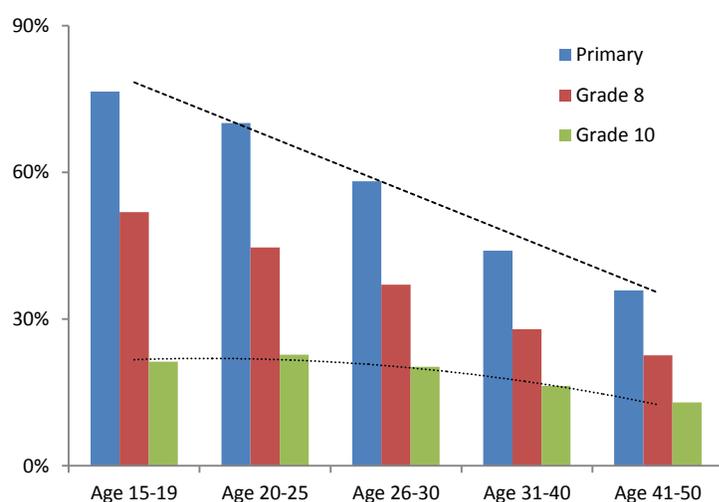
2.1 Education Access and Equity

6. **Context: The rationale for universal access to education is well established.** Bangladesh has done remarkably well in enhancing access and equity in education, with notable achievements in nearing universal access to primary education, attaining gender equity at the primary and secondary education levels, marked reduction in repetition and dropout rates, and attaining reasonably high levels of completion in primary education. The remaining challenges are few and not insurmountable. This PN was drafted to document the significant achievements of the country and to analyze the nature and scope of the remaining challenges, especially those related to the education of children who are either already out of school or who are at a high risk for being out of school (either due to non-enrollment or early dropout), as well as those in urban slum areas. Some relevant examples are provided from local and international experience in addressing the educational challenges through the proposed policy directions.

2.1.1 Key findings

7. **Bangladesh has improved access and completion at all levels of education, especially at the primary level.** As a result of massive expansion of supply, targeted stipends to bring the poorest and girls into schools, and continued investments in education, Bangladesh achieved almost universal access in primary education. Primary and secondary gross enrollment rates (GERs) have reached 101 percent and 63 percent in 2010, increasing from 91 and 52 percent in 2000, respectively. The primary net enrollment rate (NER) is most recently reported as 93 percent. Enrollment in pre-primary is low at 23 percent (2009). Primary, lower secondary, and secondary education completion have systematically increased over time. Thirty-six percent of people aged 41–50 in 2010 have completed primary education; whereas that same share among people aged 15–19 is 76 percent (figure 2), indicating that the share of primary school completers has more than doubled in 30 years.

Figure 2: Primary and Secondary School Completion Rates across Age Groups (2010)



Source: Household Income and Expenditure Survey (HIES) 2010.

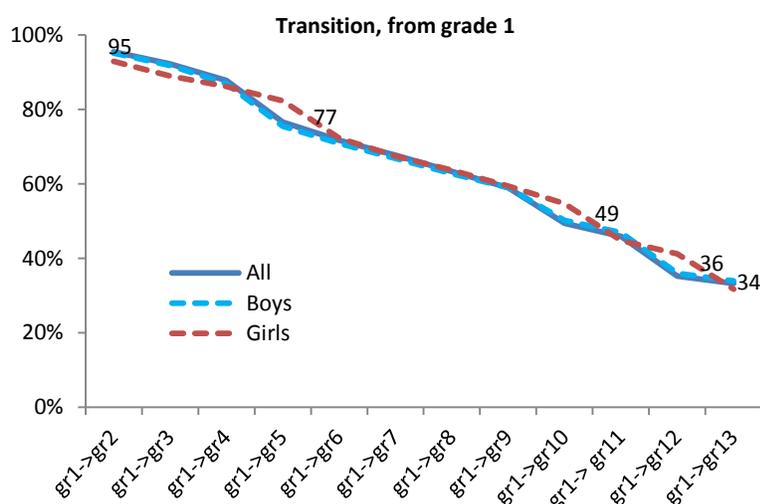
8. **Bangladesh has achieved gender equity in both primary and secondary education, well ahead of the Millennium Development Goal target set for 2015. Females are ahead of males in primary and junior secondary, but behind them in higher secondary and tertiary completion rates.** Between 2000 and 2010, the primary NER increased from 67 to 80 percent for females and from 64 to 74 percent for males. Girls outnumber boys in secondary education—the NER increased from 44 to 55 percent for girls and from 32 to 45 percent for boys. In higher education, however, just 40 percent of the enrolled students are female. At the primary and junior secondary level, completion rates of females are 8 to 9 percentage points higher than those of males in 2010, and the gender gap in completion at the junior secondary level has reversed between 2000 and 2010, favoring toward females. However, at the secondary and higher education level, men have 5 to 7 percent higher completion rates

than women, although the gap is decreasing. Only about 45 percent of tertiary students are female. The number of female students is even lower for public and private universities, at around 26 percent.

9. **Enrollments of the poor are lagging.** Inequity in primary enrollment because of household poverty has been reduced by half between 2000 and 2010. For example, the gap in the primary NER has declined from 16 to 6 percentage points between 2000 and 2010. However, secondary GER among the poor (45 percent) is substantially low compared to 76 percent for the non-poor. In tertiary, NER for the non-poor increased from 9 percent to 11 percent between 2000 and 2010, while NER for the poor remains at the same level as 10 years ago, thereby widening the gap between the two groups.

10. **Repetition and dropout rates have declined, but they are still high; combined with low transition rates across various levels of education, these imply low levels of learning in the country.** Seven percent of grade 1 students repeat the grade, raising concern about the readiness of new entrants to primary education. Ten percent of grade 5 students repeat grade 5, suggesting that many are not ready to complete primary education. In addition, although the primary school dropout rate of government primary schools (GPSs) and registered non-government primary schools (RNGPSs) has declined from 47 to 40 percent between 2005 and 2010, the dropout and repetition rates for GPSs and RNGPSs (45 and 12 percent in 2009, Bangladesh Primary Education Annual Sector Performance Report [ASPR] in 2011) are significantly higher than the national average of 6 and 5 percent in 2009, respectively. A significant percentage of children aged 6–17 drop out of school very early; 6 percent of children stop at the pre-primary level, another 6 percent complete only grade 1, and 24 percent complete grade 5 but never enroll in secondary education. Given the level of repetition and dropout rates in 2009, it is estimated that out of 10 primary students who enter school, only about 7 to 8 students reach grade 5; 6 to 7 students transit to grade 6; 5 students reach grade 10; and 3 to 4 students complete higher secondary without any repetition (figure 3).

Figure 3: Survival Rate Throughout the Education System in 2009, Starting from Primary



Source: Multiple Indicator Cluster Survey (MICS) 2009. The calculations are based on the 2009 grade-progression rate across all grades.

11. **About 5 million children are still out of school, either because they did not enroll in school or dropped out very early, mostly due to poverty.** This is the population of children who are most difficult to bring to school and most difficult to retain until the completion of the primary cycle. About 16 percent of children aged 6–14 are out of school (2010) and 13 percent of children never enroll in or never complete grade 1 (HIES, 2010). Parents' education and household income are two of the most significant risk factors for children being out of school. The poorest children (coming from the poorest 20 percent of families) are 12 percent more likely to be out of school, and this difference is mostly due to them having a lower chance of ever enrolling in or completing grade 1, compared to the richest 20 percent. Having a mother with more than a secondary education reduces the chance of being out of school by about 8 percent, compared to having a mother with no education, after taking into account

other risk factors. Geographically, children in the Sylhet, Dhaka, and Chittagong divisions have a higher risk of being out of school. Disabled children and those with learning difficulties are pretty much out of reach of the education system in the country at present.

12. **Children living in urban slums are suffering not only from demand but also supply-side limitations to education.** The primary GER in the slums is 91 percent, compared to 101 percent nationwide. Similarly, the NER is 62 percent in the slums compared to the national rate of 77 percent (2010). For secondary education, the current GER and NER in the slums are comparable to the 1995 national rates. Twenty five percent of secondary school-aged children of poor households in the slums attend secondary school, while the number is 49 percent among the non-poor slum households. There is a gender gap in enrollment, favoring females. A gap of 18 percentage points is observed between the primary school GER of extremely poor households versus the non-poor in slums, while for secondary education; the gap is even wider (24 percentage points). Although 60 percent of slum primary students attend government and NGO schools and about 70 percent of slum secondary students attend non-government schools, evidence points to a shortage of accessible schools for slum children, especially at secondary level, and the availability of NGO schools is one of the strong supply factors associated with increasing enrollment for slum children. Children whose households migrated recently to the slums are more likely to drop out. The largest share of education spending for slum children goes to private tutoring, both in primary (21 percent) and secondary (31 percent) education.

13. **Although low by international and regional standards, the government of Bangladesh is the largest contributor to education financing in the country.** The amount Bangladesh spends on education has remained relatively stable in the last 10 years, oscillating between 2.2–2.5 percent of the gross domestic product (GDP) over 2000–2008, while countries like India and Nepal have had ratios ranging from 3.1–4.4 percent and 3.0–4.6 percent, respectively, in the same period. The average public education spending of low-income countries is also consistently higher than that of Bangladesh over the last decade, at around 3.2–3.7 percent. Almost all government schools—secular and religious—are funded by public resources, both in primary and secondary education in the form of Monthly Pay Orders (MPOs) to cover teacher salaries, and they provide free tuition and a stipend to rural female students. Teacher salaries—which represent more than 90 percent of the total education budget, both in government and non-government schools—essentially come from the revenue budget. This leaves little room for operational expenditures. According to the benefit incidence analysis,² the poorer households are receiving more public education spending at the lower education levels, but the higher education spending is directed more toward the richer population.

2.1.2 Policy directions

14. **Target the remaining, hardest-to-reach population groups to attain universal access in primary education.** Reaching the goals of universal access in primary and higher enrollments in secondary will be important to help Bangladesh get closer to its goal of reaching middle-income status. This could be pursued through: (i) identifying the remaining hard-to-reach population and developing specific policies and programs to address their needs; (ii) developing a program to address the educational needs of children in urban slums; (iii) scaling up successful stipend schemes, and (iv) working in close partnership with the non-government sector.

15. **Pursue quality early child development.** Early child development (ECD) has shown a lot of promise in terms of equalizing learning outcomes, such as enrollment, retention, and cognitive development among children from diverse backgrounds. The learning gains have been highest for children from the poorest backgrounds. In Bangladesh, remaining inequities—which seem to start early and continue throughout the lifetime—are large. And, enrollment in early child development is quite low at present. It is therefore recommended that Bangladesh attempt to provide high-quality ECD to all of its children. Since the non-public sector has been a principal provider of these services, attempts should be made to work closely with them, facilitating expansion of their services through public financing of these NGO-run programs.

² Benefit incidence analysis focuses on recurrent expenditures.

16. **Enhance efficiency.** High levels of inefficiency indicate that increasing expenditures will not necessarily result in better outcomes, and the chances for underutilization of funds, or misuse of funds, remain. To reduce repetition and dropout rates and improve transition rates in the education system, it requires a two-pronged approach—improve the quality and relevance of education, as well as support for disadvantaged children to lessen the negative impact of demand-side constraints (such as poverty and learning difficulties). In Bangladesh, both areas need to be prioritized. Demand-side constraints can be tackled through some of the aforementioned initiatives, but improvements in the system’s quality and relevance will determine, to a large extent, the usefulness that families see in education.

17. **Increase allocations of the national budget for secondary education, and support resource mobilization in higher education.** Bangladesh has achieved steady GDP growth over the last 10 years, but has kept the amount of GDP allocated to education at 2.2–2.5 percent, which is relatively low compared to countries with a similar GDP per capita. In secondary education, dealing with the task of enhancing access and improving the quality of learning requires more resources than are currently available. A formula-based funding mechanism should be initiated to ensure more efficient use of public resources. For higher education, increasing autonomy, decentralization, and resource mobilization of colleges and public universities could enable expansion with quality. Allocating scholarships and student aid and deploying adequate student loan schemes to enable access to tertiary education for students from disadvantaged backgrounds is also necessary.

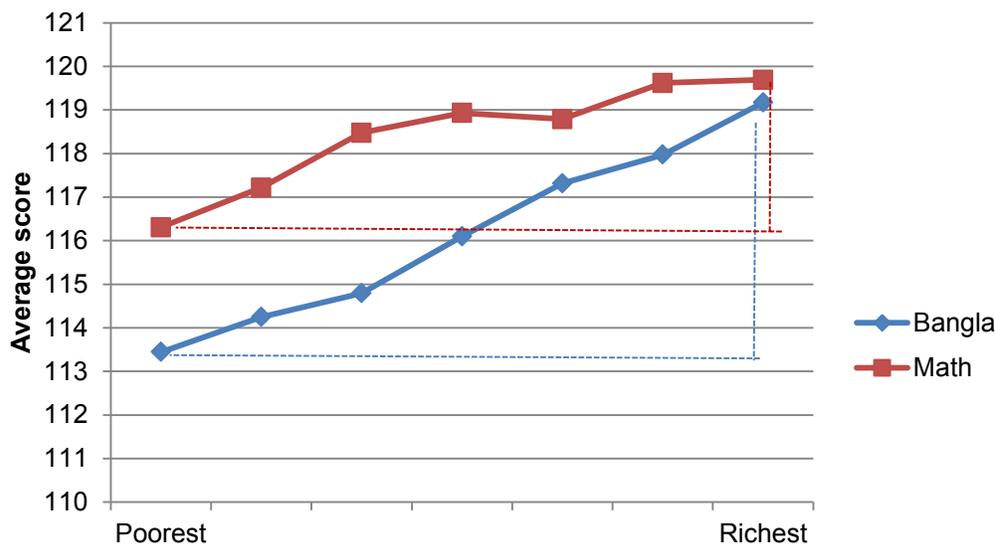
2.2 Education Quality

18. **Context: Having access to higher-quality education has a far greater impact on economic and social development than sheer increases in access.** Improving the quality of an education system, however, is complex and often requires action on many fronts simultaneously. Improving the quality of education is among the topmost priorities of the government of Bangladesh. In this regard, the country has undertaken the first credible assessment of learning, the National Student Assessment (NSA) in 2011, and the very first assessment of its kind in secondary education, the LASI in 2012. These are bold steps and provide sound bases for assessing the health of the education system. The challenges for improving the quality of the education system, however, are significant, including low learning levels, inadequate acquisition of non-cognitive skills, inequitable learning among students, a high degree of variation between schools, low teacher motivation, low time on task, weak examinations and teacher development systems, limited incentives for performance compared to even more limited disincentives for poor performance, and low levels of accountability for the use of public finance. Many of these challenges are already recognized by the government and important initiatives have been undertaken in the last few years, including improvements in the examination system, monitoring learning consistently through high-quality assessments, merit-based teacher recruitment in primary education, and innovative pilots for supporting learning among all children. The Policy Note on Education Quality provides diagnostics to assess various aspects of Bangladesh’s education system, and points to policies that may support higher levels of educational quality, recognizing that education quality improvement is neither linear nor clear cut, and that it requires interventions on several fronts simultaneously. Relevant international examples have been provided to supplement the policy directions, which could support Bangladesh in selecting the most appropriate policy for the country.

2.2.1 Key findings

19. **Although Bangladesh has succeeded in providing greater educational access to its populace, learning is low and unequal.** An assessment of literacy and numeracy in grade 5 indicates that only 25 percent of grade 5 students master Bangla, and only 33 percent master Mathematics competencies. At the grade 8 level, competencies in Bangla, English, and Mathematics are respectively 44, 44, and 35 percent. Regional differences exist in students’ learning outcomes. Dhaka and Chittagong are performing better than the national average, but performance in Rajshahi and Sylhet is lagging significantly behind. Students in GPSs perform better than students in RNGPSs. The performance difference that appears in grade 3 becomes more severe by the end of the primary education cycle, particularly so in the Barisal and Sylhet divisions. Students from poor households across the nation perform generally lower than students from wealthy households (figure 4). It is estimated that the children from poor families are at least three-fourths of a school year behind their richer counterparts in Bangla, and half a school year behind in Mathematics.

Figure 4: Average Score by Different Wealth Groups (Grade 5)

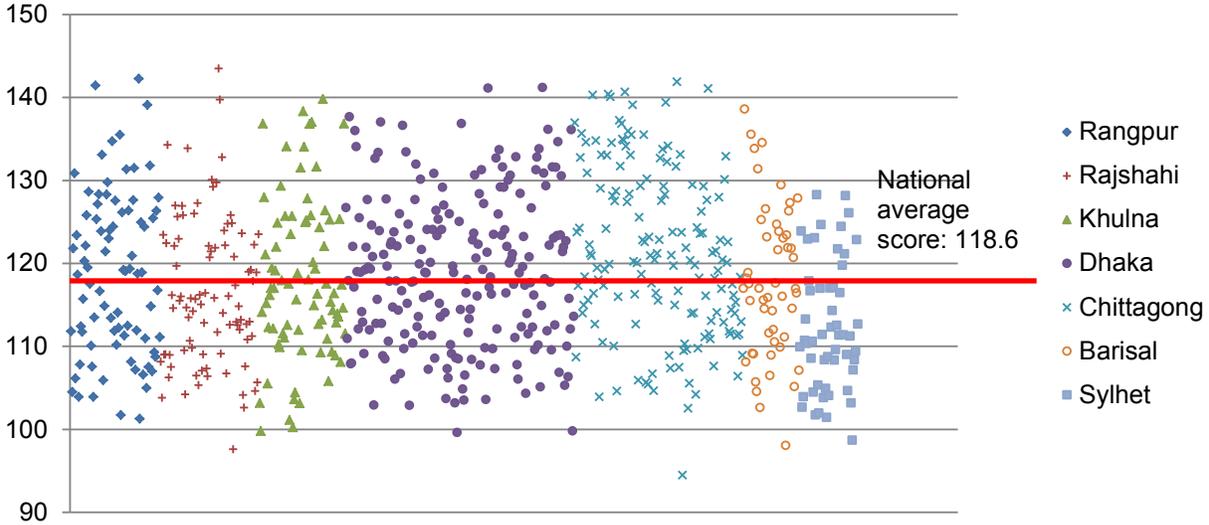


Source: Authors' estimation using the National Student Assessment (NSA) 2011.

20. **Learning inequalities begin early, and continue throughout a student's lifetime.** Low levels of learning appear to exist even in the lower grades—50 percent of the students in grade 3 already fail to meet the competency target for Mathematics, and 33 percent fail to meet the same in Bangla. These students are most at risk of dropping out before completing primary education, and are most likely to join the informal labor market. In contrast, a student with a better foundation of skills who performs better in primary or secondary school, from a more privileged background, is more likely to move further into higher education, increasing his/her chances of obtaining a job that requires higher skills and pays a higher wage.

21. **Most of the quality issues in Bangladesh's education system are largely attributable to factors that are well within the purview of public policy reform.** Analysis of student performance in grade 5 Bangla indicates that even though demand-side constraints of the communities are more or less the same, a wide variance in performance exists among schools. The most important determinant of learning in Bangladesh is the school/institution that one attends. There are great discrepancies in the academic performances of schools—one school as a whole will tend to perform better than another school. In fact, larger performance disparities exist among schools rather than among students within a school. The difference between the best- and worst-performing schools within a division is as large as 40 points, which is substantial (figure 5). Among students in grade 5, school-related factors account for 73 percent of the differences in students' performance, while only 27 percent of the differences in performance can be attributed to student-related factors, which is quite different from findings in other countries, but not unusual given Bangladesh's state of economic development.

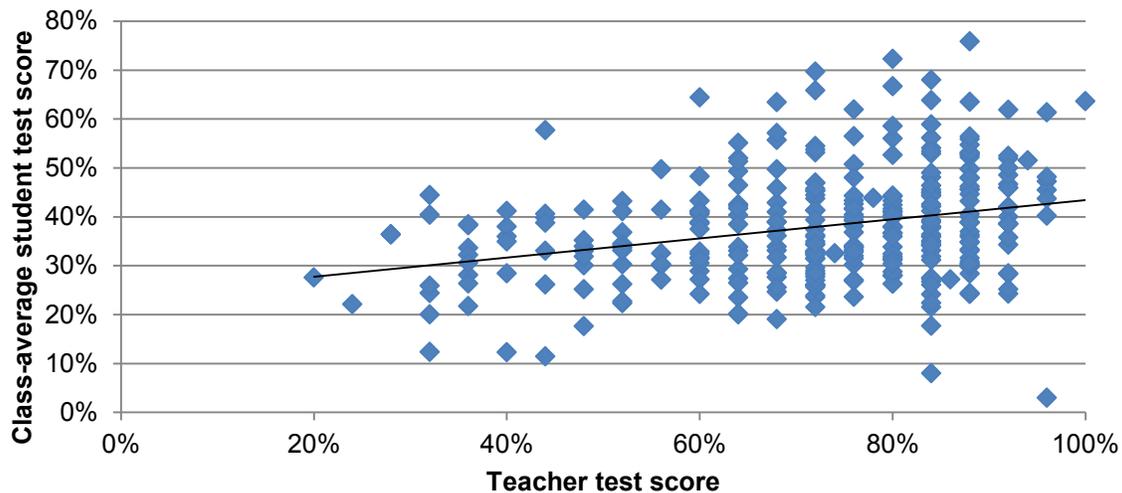
Figure 5: Distribution of School Average Test Scores (Grade 5 Math)



Source: Author's analysis using NSA 2011.

22. **An important determinant of learning within the school is the quality of the teacher.** In fact, several international studies have confirmed that an effective teacher is the single most important school-related factor responsible for better learning. From a review of international impact evaluation studies in developing countries, the programs that address the problem of weak teaching are empirically proven to be the most effective programs. Although teachers are one of the principal resources available to the education system, it appears that they are not being utilized in the most effective manner in Bangladesh. The current system does not attract, constitute, and retain the best professionals, and once recruited, it provides little incentive to keep them motivated. Teachers' lack of their subject knowledge is negatively affected with students' learning (figure 6), and they are not encouraged to be innovative with their pedagogical approaches or to learn from their peers through any learning networks. Additional years of experience in teaching also are not correlated with higher student learning, mostly due to low motivation levels.

Figure 6: Relationship between Teachers' Subject Knowledge (Measured by Test Scores) and Students' Learning



Source: Author's calculation using the Secondary Education Quality and Access Enhancement Project (SEQAEP) impact evaluation survey (2008).

23. **Partially because many teachers do not have much effective training, and also because the current curriculum and testing procedures encourage and reward rote learning, the most common teaching style in Bangladesh is lecturing and reading textbooks.** Teachers also do not get much time on task—sometimes because of teacher training, meetings, and tardiness—but also because of the limited contact hours available during the academic year. Contact hours in primary school are much lower than international norms (900–1,000 hours per year) as a result of many holidays, double-shifting (where schools teach different students in two different shifts), and teachers' other time-consuming responsibilities. The annual total contact hours in grade 1 is 861 in a single-shift school and 595 hours in a double-shift school, resulting in 30 percent fewer schooling hours for children in double-shift schools, which make up about 90 percent of primary schools in the country.

24. **Many teachers also have low motivation—because the profession is not regarded as a high-profile one, career progression opportunities are limited, and incentives for innovating effective teaching and learning practices are non-existent.** Examinations expect almost 100 percent memory recall of the information in the textbooks, and therefore limit the time for innovative or child-centered teaching and learning. Also, teachers do not have many avenues for continued professional development, and this—coupled with the lack of any positive or negative feedback or accountability—seems to affect teacher morale.

25. **All of these teaching issues are important, because they affect the quality of teaching offered, and thus, how much a student learns.** Teacher issues are also important because they constitute the largest single budgetary element in schools in Bangladesh. There are 830,000 teachers in Bangladesh teaching 30 million students, and a large proportion of public expenditure on education is dedicated to the salaries and allowances of teachers (over 90 percent system-wide). Thus, improving the teachers' performance is linked directly to improving the efficiency of public resource usage.

2.2.2 Systemic constraints

26. **There are several systemic constraints to improving the quality of teaching and learning; first, the extensive examination system limits incentives for innovative and high-quality teaching and learning.**

Bangladesh has a well-established system of examinations at all levels.³ Given how pervasive exams are in the country, it is no surprise that the examination system—what is tested, how it is tested, how it is graded, and how the results are used across the system—sends strong signals about its centrality in the entire education system and what matters most in terms of student learning. There is an overall sense that public examinations, as they stand now, might not be the most robust mechanism for determining how well students master the curriculum objectives. Examinations and tests also send strong signals to the teacher-development system, particularly in terms of the skills required of a teacher. In this context, a teacher who recognizes and builds on the differential skills and abilities of each student to acquire the expected curriculum competency might not be rewarded (in terms of the percentage of his/her students who pass). The exam does not reward student-centered teaching and learning, providing little or no incentive to teacher-development policies to prepare a cadre of teachers who can stimulate learning in students with diverse skill sets.

27. **Second, the absence of robust performance standards for institutions and articulation of competencies for students pave the way for large variations in performance across schools.** Evidence shows that choosing the right school is the most important decision for a child’s future. Going to a good school more or less guarantees a reasonably good learning outcome, which impacts the rest of the student’s academic, professional, or social life. Ideally all schools should provide education at an acceptable level of quality. Therefore, measures are needed to elevate the quality of all institutions. Given the sheer size and complexity of Bangladesh’s education system, it is important to establish simple, robust, and measurable standards of performance at all educational and skill-building institutions.

28. **Third, incentives for good performance are non-existent or minimal, rendering good policies ineffective.** Incentives for good practices and disincentives against bad practices are essential for good standards to lead to positive outcomes. The evidence on the interface between policy and practice and the incentives for high performance in Bangladesh is weak. In many instances, the regulatory regime is reasonably strong, demanding transparency, accountability, and good-quality performance. However, such policies stumble during implementation because of inadequate incentives for compliance and/or disincentives to prevent non-compliance. And other elements—official or unofficial—sometimes erode the effectiveness of a good policy. For example:

- a. **Bangladesh’s government has a high-quality, merit-based primary teacher recruitment policy.** However, the use of annually determined quotas, together with accepted criteria for determining merit, may in fact lead to the recruitment of a candidate who scores low on the merit criteria. Moreover, because the pass rate for considering candidates as “qualified” is set very low (33 percent in 2012), the system does not signal recruitment as a reward for good performance among aspiring primary school teachers.
- b. **Another case in point is the subvention that the government provides to secondary school teachers in the form of an MPO.** Although the policies regarding subventions have clear criteria linking them to school performance, using subvention as a tool to improve the quality of education and to hold the schools accountable for performance has largely failed because there is no strong impetus for the schools to continue performing well, as schools are hardly penalized for underperformance. Moreover, political support, rather than adherence to quality criteria, appears to be more important for the continuation of MPOs. As a result, MPO schools—constituting some 98 percent of secondary schools in Bangladesh—perform well below the expected level.
- c. **Bangladesh has a good policy of involving communities in the oversight of secondary schools in the form of school management committees (SMCs).** The policy empowers communities to make all of the management decisions (such as teacher recruitment) regarding schools at the local level. However, this well-intended policy translates into a bad practice because of the political capture of SMCs, as schools often welcome political support to withstand policy enforcement.

29. **Fourth, there is limited interface between the subsectors, which are administered by two different ministries, despite the fact that one builds upon the success of others and provision at one level has considerable implications for other levels.** Because of the system’s large size and complexity, reforms in the last few years have been introduced without much coordination within various subsectors. For example, the move in

³ Almost all primary and secondary institutions hold monthly exams, end-of-semester exams, and end-of-grade exams. Standardized exams are held at the primary education level (grade 5), junior secondary level (grade 8), senior secondary level (grade 10), and higher secondary level (grade 12). Several schools even hold exams for kindergarten classes.

primary education toward a competency-based examination system would have much to inform the examination reforms at the secondary level, and vice versa. The national student assessment at grades 3 and 5 should be linked to the secondary assessment and provide a wealth of information about the entire education system's health. As changes in examination systems in primary and secondary education become more established and demand a different skill mix from teachers, higher education institutions would need to factor these demands in as core competencies for their graduates. The Technical and Vocational Education and Training (TVET) system has worked out a detailed qualifications framework and expects it to be implemented through all of the skill-building activities provided in the country. However, links with the general secondary education system and with higher education are yet to be fully explored. Such links could support the development of a robust lifelong learning and skill-development environment in the country.

30. **The most important household characteristic of learning is the level of education achieved by a student's parents.** Parental education, especially of the mother, has a positive correlation with student performance. Households with more educated parents are more likely to have books at home. One way that parental education affects student learning is a habit of reading at home. Thirty-six percent of grade 3 and 41 percent of grade 5 student households reported that they had books at home. Test scores are generally higher for those children who have books at home.

2.2.3 Policy directions

31. **Change what is “valued” in education through examination reforms and spread this message throughout the system.** The messages that examinations are currently sending to students, teachers, and policy makers are that the system values memorizing facts and passive recognition or repetition of single, correct answers. A good testing system in Bangladesh could send a clear message about what the system values in student learning—strong literacy and numeracy competencies, and interpersonal and behavioral skills such as problem solving. The reforms should also ration the current number of examinations; continue the ongoing improvements in the technical and managerial aspects of examinations; and enhance acceptance for reforms through consultation, communication for public awareness, and effective use of the examination results to improve teaching and learning.

32. **Set national learning goals, backed by political support at the highest level, monitor the goals consistently, and use results of high-quality learning assessments to enhance accountability and inform policies.** If done well, learning assessments can be extremely powerful instruments for communicating about an education system's health. The government of Bangladesh has taken bold and important steps by undertaking learning assessments in primary and secondary education: NSA and LASI. Baseline information on what students learn, what factors affect their learning, and what policies could support higher learning is already available through the results and analysis of NSA and LASI. Setting a target for learning outcomes is a critical next step towards improving quality. While test implementers often feel a sense of completeness after the exams and assessments are finished, translating the assessment findings into policies and actions is important. Assessment results should be widely disseminated to enhance accountability and inform policies. Bangladesh may also consider benchmarking the performance of its students to get a broader perspective on performance.

33. **Articulate and consistently measure standards of performance for service delivery by institutions and teachers.** These standards could include, as a priority: (i) the competencies that students should acquire in different subject areas for specific educational levels, with higher-level competencies building on the foundations provided during the junior years of education, taking into account a child's developmental stages; (ii) the competencies expected of educators, as opposed to the academic qualifications of staff—for example, teachers, head teachers, teacher educators, and technicians; and (iii) the accreditation standards, which would enable quality assurance of various programs offered by different providers. It is advisable to set these standards and to measure compliance, with the objectives of improving the quality of education, rather than policing it. It is also important, in the context of Bangladesh where there is so much diversity in the types of providers, to apply flexibility and contextually specific criteria in measuring performance against agreed standards. Once standards are defined, it will be important to measure them consistently and through simple, robust means, and to provide incentives for compliance.

34. **Enhance policy measures to address teacher performance and motivation.** It is important for MoPME to continue its efforts at enhancing teacher development, already introduced through the Diploma in Primary Education program (currently under pilot) as an entry point of the primary teacher’s career and continued professional development. Some of the current issues that many teachers in the system are encountering in Bangladesh—remote locations of several schools, overpopulated classrooms, and the teachers’ limited capacities—may be tackled by introducing the practice of shared responsibility, whereby teachers share a collective vision about their roles and responsibilities. In this model, collaboration between teachers and support for weaker teachers by their more experienced and stronger colleagues is seen as a fundamental input to enhancing teacher and student performance. Furthermore, introducing effective performance management for teachers could be explored in Bangladesh. School systems use monetary and non-monetary incentives in attracting and rewarding effective teachers. These rewards promote excellence, and show that not only are teachers qualified and highly trained, they are competent, effective, and efficient. The MPO system is prevalent throughout Bangladesh but not rendering effective teachers, for a variety of factors, including governance issues and a lack of accountability for public funds. Truly linking teacher performance with the MPO system is a difficult endeavor, but one that is likely to be extremely worthwhile in changing the outcomes and motivation levels of the education system’s most important resource. One way of enhancing accountability is by publicizing the performance of schools—conditions necessary for obtaining and retaining MPOs—systematically, so as to raise public awareness and involvement in using this extremely important resource to support the achievement of learning outcomes.

35. **Devolve centralized authority and promote school-based management (SBM), using information for enhanced accountability and to actively engage stakeholders, to bring all schools—particularly the weakest-performing ones—to acceptable quality standards.** Most countries whose students are among the highest performers in international assessments of learning achievement have provided a high degree of autonomy to their local authorities and schools, especially their teachers and parents, particularly in deciding what courses to teach and how to use funds at the school. This form of SBM has not only been helpful in enabling schools to provide for students’ diverse needs, but also to minimize disparities in provision across all of the schools in a country. As part of this shift in focus, schools could use report cards and other information to enhance accountability and transparency. Engaging the SMCs to actively support accountability is expected to overcome governance issues that permeate the system. The government needs to play an active role in introducing targeted interventions to address the learning needs of weak students or provide conditional cash transfer (CCT) programs as a positive incentive to encourage students to perform well in school.

36. **Coordinate reforms, exploring all synergies and consequences.** The current management structure in education—with two distinct ministries, several boards, and various semi-autonomous bodies (such as the National Academy for Primary Education [NAPE] and National Curriculum and Textbook Board [NCTB])—makes it difficult to coordinate. The fact that 24 agencies are involved in TVET also creates a highly challenging environment to coordinate. However, coordination is crucial and could be attained through establishing inter-ministerial and/or inter-agency task forces, where each ministry or agency has a specific responsibility around key thematic areas. The most pressing areas for collaboration include teacher development, where links should be established between the Diploma in Education and other Diploma programs in the country; training provided at Teacher Training Colleges for secondary teachers and the National Technical and Vocational Education Qualifications Framework; national assessment; national examinations; and creating a curriculum framework for academic and vocational secondary education to provide a basic set of secondary competencies in all secondary graduates, which is a growing area of interest among many countries around the world. Two recent decisions of the government—the merger of primary and secondary education and nationalization of all RNGPSs—require significant coordination across all relevant agencies and ministries to make the transition fruitful, adequately financed, and—under the appropriate regulatory support system—to be a meaningful addition to the education of a generation of children undergoing this transition. If uncoordinated, it could create a great deal of chaos.

37. **Develop key national institutions.** The two key areas that could have the strongest impact on creating a culture and dialogue on education quality are also the two areas in which capacity appears to be most urgently required. These are in the professionalization of the teacher development process and in the area of conducting national assessments for learning. Given the absence of pre-service training for teachers and the low quality of in-service training, the creation of a national institute for the development of primary and secondary education teachers, with high intake requirements, may go a long way in addressing the skill gap that is currently unmet by either higher education institutes in the country or through the various small-scale teacher training programs.

Undertaking a good assessment requires some level of independence from the mainstream provision of education services, with a capacity to undertake high-level technical work and coordinate across many stakeholders (including agencies and units that deal with curriculum, examinations, textbook development, and monitoring and evaluation). The agency undertaking the assessment also needs to be high profile, so that it is able to influence educational policy making and planning as well as teacher training. Also, it is essential for one system of assessment to be applied consistently across primary and secondary education. The education system needs a well-established and acknowledged institutional home that takes full responsibility, from designing the assessment framework to disseminating and post-assessing follow-up.

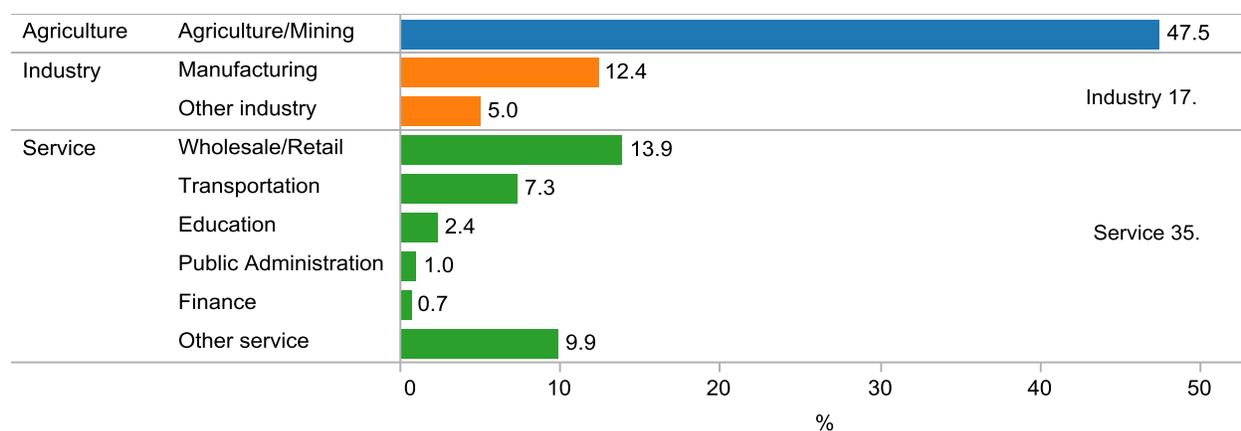
2.3 Skills Development

38. **Context: Unlike access and equity, and similar to the situation for improving education quality some decades ago, the path towards attaining robust skills development in countries is less clear globally.** What is clear is that skills development is not a one-time activity in an individual's life and that it is incremental, cumulative, and transformational. And while a great deal of skill development is within the purview of the education sector and those who are providing skills, the economy and nature of jobs provide equally strong messages and incentives for skills-development opportunities in a country. The dialogue on skills development is much less established in Bangladesh, as compared to the dialogue on educational access and quality. However, there is growing interest and a large number of important initiatives and activities in this important area in the country, particularly for vocational education and training. The PN attempts to contextualize the nature of skills development from an educational perspective, and to reflect on the link between the demand and supply of skills, as well as the equity and efficiency of skills-development opportunities. The policy directions in this PN focus on changing the definition of skills development and engaging more holistically in this area. Relevant international examples are also provided to support the debate and dialogue on the design of the most optimum set of interventions to support skills development in the country.

2.3.1 Key findings

39. **The Bangladeshi labor force is large and growing, mostly informal, moving away from the agricultural sector, and underemployed.** Female employment levels have increased. The total number of workers in 2010 was 56.7 million, and the labor force grew by an average of 1.3 million per year. In 2010, informal employment was estimated at about 88.5 percent of the total number of jobs in the labor market. Close to half of Bangladeshi workers were engaged in the agriculture or mining industry in 2010, although this share is marginally shrinking from 51 percent in 2000 (figure 7). The industry sector, largely represented by manufacturing, takes up 17.4 percent of the labor force. The expansion of labor-intensive non-agricultural sectors (accounting for 17.4 percent of the labor force), including garments (which grew by 12 percent annually between 1995 and 2010) and manufacturing, was supported by a move of former agricultural workers and female workers—both low-skill, low-wage workers—into these sectors. The service sector employs 35.1 percent of workers. The majority of workers in the three largest sectors—agriculture, wholesale/retail, and manufacturing—are informal workers, defined as either working in unregistered business entities or working without a formal contract. While the unemployment rate is relatively low, the underemployment rate is very high, estimated at 20.3 percent in 2010.

Figure 7: Composition of the Labor Force by Economic Sector (2010)



Source: Authors' analysis using LFS 2010.

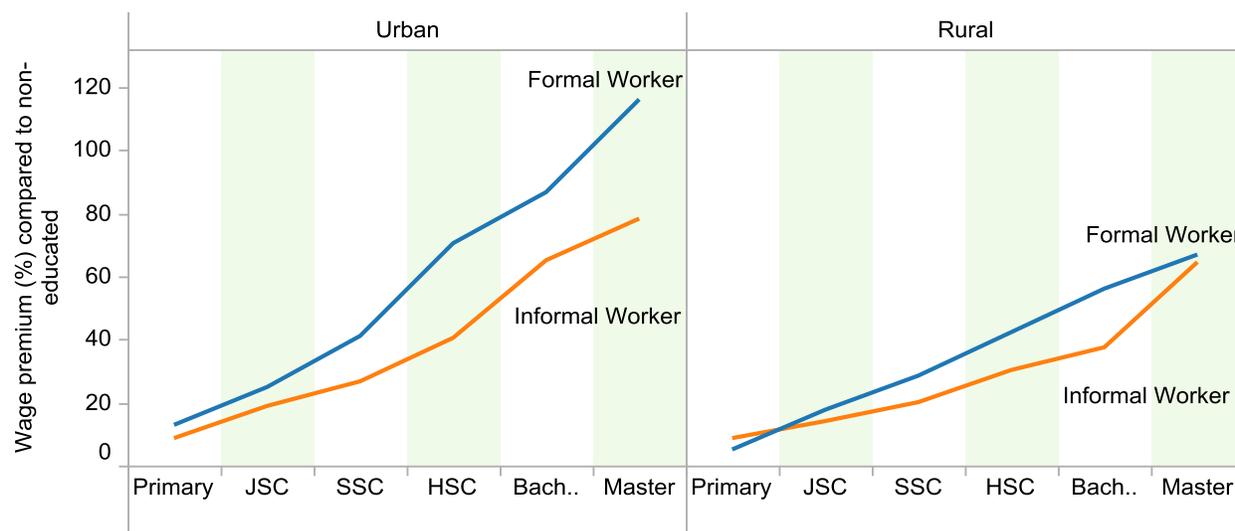
Note: The sum of all numbers adds up to 100 percent.

40. **International migration has become an increasingly important means for economic growth and employment generation in Bangladesh's economy, although most remain employed in low-skill jobs.** The annual number of emigrant workers has increased from 104,000 in 1990 to 223,000 in 2000, and to 875,000 in 2008. Subsequently, the contribution of remittances to the GNI has also increased from 3.0 percent in 1993 to 3.8 percent in 2000, and to 10.9 percent in 2011. Although the share of professional migrant workers in Bangladesh was close to 6 percent in 2002, it has dwindled to close to zero since the mid-2000s. In recent years, the share of less-skilled emigrant workers is growing, reflecting that the largest demand for Bangladeshi workers in other countries is for low- or semi-skilled workers, mainly because of their willingness to accept low-profile jobs, including hazardous work with low wages.

41. **Ninety-six percent of Bangladeshi workers, including all those working in the formal and informal sector, have up to a secondary education.** Forty-one percent of the 56.7 million workers in the Bangladeshi domestic labor market have no education at all and 23 percent have not completed their primary education. The pattern is similar for both males and females, but considerably different between urban and rural areas. In urban areas, the share of workers with no education is 28 percent, while the share is 45 percent in rural areas. Secondary-level school dropouts, including Junior Secondary Certificate (JSC), Secondary School Certificate (SSC), and Higher Secondary Certificate (HSC) students, represent 14, 15, and 3 percent of the work force, respectively. The share of JSC and SSC workers is larger among the female workforce than among male counterparts. Only 0.2 percent of workers have a technical diploma, and 3.7 percent of workers have more than university degrees.

42. **Education and skills matter for success in the labor market, both formal and informal.** A formal education is the key determinant of occupational differences in the formal economic sector. Academic degrees and academic performance determine the occupations that workers are likely to have. Higher education is also rewarded with higher returns, especially in the formal sector in urban areas (figure 8). Evidence shows that not only educational qualifications, but also positive behavioral skills, generate higher returns. In the informal sector also, education and skills differentiate between successful and unsuccessful workers.

Figure 8: Urban and Rural Wage Premiums of Education and Formal Work



Source: Authors' analysis using LFS 2010.

Note: Employees with no education are the reference group for this comparison. Formal–informal sector differences are computed by using interaction terms for informal sector dummies. Workers with Technical and Vocational Education and Training (TVET) qualifications are not shown in this graph due to a very small sample available in LFS.

43. **Completion of formal education is a critical channel for acquiring skills.** Non-formal channels of skills acquisition, which might be better suited for informal sector workers, remain underutilized in Bangladesh. Although the composition changed marginally from 2005–2010, most workers still have little or no education. As a result, general education is the largest supplier of skills in Bangladesh at present. The formal TVET sector is small (currently accounting for less than one percent of Bangladeshi workers), largely public, and growing. Roughly 3.7 percent of workers in the formal and informal economy acquire skills through higher education, and most of them are employed in the formal sectors. While short-term formal TVET programs could provide skill-development opportunities to current and potential informal sector workers, they are currently not being availed by them, because the courses require a minimum grade 8-level education. Similarly, apprenticeships appear to be a relatively uncommon path for skills acquisition in Bangladesh. Participation in apprenticeships/internships in the formal sector is more common among higher-educated workers. Post-employment training, or enterprise-based training, is important for career development, but formal training options are relatively limited—14.5 percent of Bangladeshi firms provide off-the-job training, and 18.8 percent provide on-the-job training.

44. **There are many components involved in developing students' abilities and imbuing them with desirable work skills for future employment.** Skills development is not only dependent on the education system. The economic conditions and job markets are equally important factors that affect graduates' employment opportunities, and determine what levels of education and training and what types of skills people will acquire. In Bangladesh, bottlenecks exist on the education and training side and the job market side, as well as the transition from education to work.

45. **There are five key issues affecting skill development in Bangladesh, within which mismatches abound.** Some of the problems that ensue include mismatches between the skill requirements of the labor market and the skills available; between the prerequisites for a quality work force and the focus areas of pre-employment

education and skill building; between the skills being demanded by students and those that are being sought by the labor market; and between employers' and employees' perceptions of a high-quality, high-skilled, and effective worker.

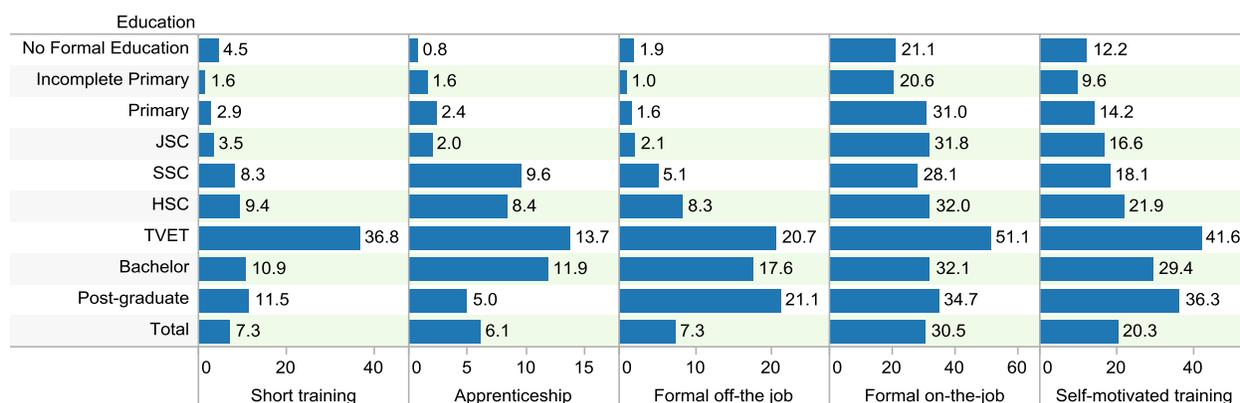
46. **The first key issue is that most graduates lack effective work skills due to the low quality of education and lack of quality standards.** Many students in primary and secondary schools (which provide the bulk of the workforce today and for the next few decades, for the formal and informal economy) do not perform well on curriculum competencies and lack foundational skills that could be useful for them in their work life. In recent surveys of the formal labor market, employers weighted behavioral skills (responsibility, communication, problem solving, and team work) as more important than technical skills (vocational or information and communication technologies). While information from a similar survey is not available for workers in the informal sectors or those on informal contractual arrangements in the formal economy, the demands for their skills would be close to, if not replicates of, those expressed for non-professional workers in the formal sector—responsibility, problem solving, team work, customer care, communication, motivation, and creativity, followed by cognitive and hard skills. In fact, one could make the case that perhaps such skills would be even more demanded in the informal sector, and their acquisition could lessen vulnerability in this sector, since employment so often depends on personal relations. While prospective and current employees strive to obtain more technical skills, both employers and employees have a low opinion of the institutions' training abilities because of yet-to-be-operationalized competency standards set for training and education programs.

47. **Second, although the formal economy values higher education, the labor-intensive economic growth model generates overall low incentives for up-skilling, especially for workers in the informal sector.** There is a robust demand for college and university graduates in the formal economy, especially in urban areas. However, the current model of economic growth, in which the country is competing on the basis of low-cost, low-productivity, and labor-intensive manufacturing sectors, will expect higher education graduates to constitute fewer than 5 percent of the entire country's labor market. However, this model of labor-intensive growth, together with easy access to informal employment in the agricultural and non-agricultural sectors, means that there is less pressure for workers to acquire skills. Similarly, the increasing demand for low-skilled work in international labor markets has not supported a culture whereby workers are inclined to acquire new skills.

48. **Third, support for effective school-to-work transition is weak, even for formal sector employment.** Despite a policy platform (including Vision 2021 and the National Education Policy [NEP]) that could promote educational and training institutions and labor market communication, the education system and labor markets coexist closely as two fragmented systems, with a lack of communication and utilization of knowledge of the other. The need for advanced school-to-work transition support has been limited in Bangladesh's mostly informal economy. The pattern of informality in recruitment preferences and practices permeates in the formal sector as well. Because the labor market heavily relies on informal networks to match job seekers with jobs, there is a risk that optimal job matching is constrained by the limited reach of informal networks. Additionally, career-development services are lacking for vocational and higher education graduates—only 24 percent among TVET graduates and 23 percent among higher education graduates received such support.

49. **Fourth, inequities in skill-development opportunities increase in post-formal education.** Although various opportunities besides formal education are available for developing skills, and some are designed for relatively low-educated workers, overall, post-formal education training opportunities largely benefit the more educated (figure 9). Evidence shows that employees with more education will be offered more post-employment training opportunities, and they seek and take more post-employment training opportunities. Several reasons can explain low participation in post-formal education training among low-educated workers. They may not have an established habit of taking career-building courses or attending classes outside of work; they face high costs, both in terms of direct training and foregone earnings; they have limited information to access training; and they have low expectation of payoffs for improved training, as the majority are hired for low-skill, low-wage jobs with an informal arrangement.

Figure 9: Use of Post-Formal Education Training Opportunities by Education Level (%)



Source: Authors' calculation using the Enterprise-based Skills Survey (ESS) 2012.

Note: TVET graduates include Secondary School Certificate vocational (SSC vocational) and Higher Secondary Certificate vocational (HSC vocational), and Diploma graduates, but not trainees of short courses or non-formal TVET courses. PSC = Primary School Certificate.

50. **Fifth, informal sector workers, constituting 89 percent of the labor force, have limited opportunities for skills development.** As skills and education are important for formal sector workers, they are equally important for informal sector workers. Self-employed workers, who are mostly in the informal sector, need different sets of skills, including not only cognitive skills but also management and strong interpersonal skills, as they perform various functions similar to employers. Yet, as is the case for remedial education, opportunities for the development of entrepreneurship skills are limited in Bangladesh. Skills-development opportunities for self-employed and informal sector workers are mostly through non-formal programs. While the government and some non-governmental organizations (NGOs) and other social organizations offer sporadic training to informal sector workers, there has not been a specific strategy for training for the informal sector.

2.3.2 Policy directions

51. **Articulate a single, long-term vision of skills development by broadening its definition and nurturing a culture of lifelong learning.** In today's global economy, the average worker changes jobs several times as opposed to spending a lifetime in one job, and this is also becoming pervasive in Bangladesh. In this context, the definition of a "skilled worker" is one who has good foundational skills, including interpersonal skills, and market-relevant technical skills. A good skills-development policy must recognize that skills are not built at a certain time in an individual's life—skills development is an incremental and lifelong process, acquired through formal and non-formal education, from pre-primary through higher education, networks, jobs, and other means. And, it relies on aspects that are beyond the control of the education system alone. Skills development in Bangladesh needs to be looked at more broadly and through a long-term vision—it is significantly more than TVET and it involves investments in a broad range of areas. Such recognition will put in perspective the debate, the enormity of the challenges, and force a discussion on priorities among various elements of skills development. It will also be important to bring together the diverse actors, whether they are working on nutrition outcomes or pre-primary education, and TVET or higher education, to work together to contribute to the development of Bangladeshi citizens' skills. Finally, this would also require, from a national perspective, a discussion of tradeoffs between prioritizing one aspect of skill development versus another (for example, whether to expand TVET or focus on quality enhancement in foundational skills; and whether to prioritize nutrition and pre-primary or post-employment training). These are important and difficult questions, yet they are fundamental to answer before embarking on large investments for skills development in Bangladesh.

52. **The priority for Bangladesh's skills-development agenda is to improve the quality and relevance of education.** To develop strong foundational skills in the prospective labor force, improvements are recommended in the following four areas.

- a. **Improve the quality of general education and promote early childhood development (ECD).** A higher quality of the education system, especially at the lower levels, focusing on building strong cognitive and behavioral skills is essential—a child-centered, activity-based approach helps build such skills. Moreover, ECD is critical for building foundational cognitive and behavioral skills and equalizing learning opportunities.
- b. **Improve the relevance of post-secondary education.** Building labor market-relevant skills requires setting up the competency and quality standards of education and training. The ongoing TVET sector reform—with interventions focused on development of competency-based teaching assessment systems and quality assurance systems—is expected to yield higher credibility for the sector and its students. A robust and well-implemented quality assurance framework is also necessary for higher education.
- c. **Enable a smooth transition between education and the labor market.** Career guidance for students is offered in a very limited manner. To improve the relevance of skills that students acquire and their job placement, it is important to provide career and job-placement support through educational institutions or public and private facilities. Similar support and pre-employment training is also important for aspiring emigrant workers.
- d. **Measure and assess non-cognitive skill development regularly.** To continuously check the labor market relevance of the skills developed and measure progress in acquiring non-cognitive skills, the introduction of regular tracer studies of school and institution graduates and regular assessment of non-cognitive skills is helpful.

53. **Support continuous and targeted skills-building for current employees in formal and informal employment.** Within the framework of lifelong learning, it is critical for workers in both formal and informal sectors to continuously improve their skills. Rebuilding the foundational skills of the current labor force is important for the majority of low-skilled workers in both formal and informal employment. In the formal sector, the government policy should support and foster enterprise-based training, because it is relatively limited in Bangladesh—14.5 percent of firms offer formal off-the-job training and 18.8 percent provide on-the-job training. The government can support this by providing incentives to firms (including tax breaks) to train employees. In the informal sector, acknowledging that informal sector workers need different sets of skills and expanding entrepreneurship programs for self-employed and informal sector workers would be necessary. Effective entrepreneurship training can consist of vocational, life skills, and business and financial training. For example, an impact evaluation study of a business training program for rural women in India shows that business training generally has a positive impact on starting up businesses by taking loans from banks, increased income, and increased discussion about business plans with family members.

54. **Improve the investment climate and jobs-creation potential.** Jobs and skills are closely interrelated, and the direction of influence is mutual. One way to describe the relationship between jobs and skills is: “Jobs need skills, pull skills, and build skills.” Developing the education system alone, without creating high-skill jobs, does not effectively foster development of high skills. It is therefore important that the government set a policy to attract high-skill jobs by improving the investment climate. In Bangladesh, several issues related to business are commonly identified as key constraints for creating more and better jobs, including electricity, corruption, political instability, and labor regulations. To a large extent, the government can play a critical role in removing such barriers for attracting investment and create an attractive set-up for more investment, such as through the promotion of Export Processing Zones (EPZs).

3. Conclusions

55. **Bangladesh has prioritized educational access, and despite very difficult circumstances—many outside the control of any ministry—it has more or less overcome the access and equity divides that defined its education system some 30 years ago.** Information from the three areas of study in this work has highlighted a number of issues as well as a number of policy directions. While education and skills development are not only geared towards economic productivity, linking the current status of educational provision with the realities of the labor market and aspirations of the country may provide some basis for consolidating the numerous, important areas discussed in this series of PNs.

56. **There is a real and urgent need to improve the quality and relevance of the education system, especially at the lower levels, which provide (and will continue to provide) the bulk of the skills-building needs of the labor market.** In addition to cognitive development, the system needs to effectively provide learning opportunities to garner interpersonal and socio-emotional skills, which are not only highly valued in the labor markets (formal and informal, local and international), but which could also lessen employees' vulnerability in Bangladesh's prevalently informal work sector. Enabling the currently unmotivated stock of teachers to innovate teaching and learning practices (through better training and encouraging the use of child-centered teaching and learning), reforming the examination system (moving away from testing knowledge recall to testing the acquisition of skills), and investing in nutrition and early child development may enable tackling several agendas concurrently. These include quality improvements in education, skills development of the current and prospective labor market, labor productivity, and lessening inequities in access, learning, skills development, and inter-generational poverty in the country.

57. **To enable a move to the next level of economic development, there is a need to change the structure of the economy, and to increase labor productivity.** Improving the quality of education and skills development will enable such a transition of the labor market. Bangladesh will need to focus on providing solid foundational and interpersonal skills to its workforce by prioritizing good-quality primary and secondary education for everyone. The success of these efforts could be limited without substantial improvements in governance, and by providing incentives for doing good and disincentives against doing wrong.

58. **Finally, despite the complexities and proliferation of actors, the education and skill-building system in Bangladesh is one system, impacting the lives of its citizens, regardless of the provider or the regulator.** Policy directions presented through the three PNs are specific to each area, but at the same time, closely related to and building on one another. A policy matrix has been prepared in an attempt to provide cumulative findings of the PNs, and to outline a holistic scope of the educational issues today and the corresponding educational reforms proposed (table 1). Coordinating efforts and dialogue are essential to design and implement comprehensive reforms, as well as to enhance accountability and voice, thereby translating good policies into meaningful outcomes for the citizens of Bangladesh.

Table 1: Matrix of Policy Directions for Educational Reform

Policy priorities	Operational-level reform actions	Issues	Area of expected impact
<p>A. Target the remaining hardest-to-reach population groups to attain universal access in primary education and equalize educational opportunities.</p>	<p>1. Pursue universal completion in primary education through: (i) identifying the remaining population and developing specific policies to address their needs; (ii) developing a comprehensive program to address the educational needs of children in urban slums; (iii) scaling up successful stipend schemes; and (iv) working in close partnership with the non-government sector.</p> <p>2. Pursue good-quality early child development (ECD) through close coordination with the non-public sector that has been a principal provider of these services.</p>	<ul style="list-style-type: none"> • Despite significant progress in access to education during the past decades, enrollment of the poor is lagging. Children living in urban slums are suffering not only from demand but also supply-side limitations to education. • Low retention rates, as a result of high rates of repetition and dropout in primary education negatively affect universal completion of primary education. • A large body of literature indicates that the benefits of good quality ECD are significant on improved learning outcomes, higher enrollment, retention, and cognitive development. Gains are especially strong for children from disadvantaged backgrounds, therefore providing good-quality ECD has a lot of potential for equalizing enrollment, learning outcomes, and skills development outcomes in Bangladesh. At present, however, ECD provision remains limited, especially to the poor. ECD of high quality is also not universally available in Bangladesh. 	<p>Access and Equity</p>
<p>B. Provide adequate funding for education.</p>	<p>3. Enhance the financing available for education through: (i) pursuing efficiency gains; (ii) allocating more to secondary education, and (iii) facilitating resource mobilization in higher education.</p>	<ul style="list-style-type: none"> • The budgetary allocation of the public funds to education sector is relatively low compared to countries with similar GDP per capita. There are binding constraints to increasing the allocation (e.g., high budget deficit, low revenue collection) and it is not likely that education will receive significantly higher shares of the budget anytime soon. • High levels of inefficiency, as observed through high repetition and dropout, indicate that increasing expenditures will not necessarily result in better outcomes. • Enhanced access in primary education has led to increased demand for secondary and higher levels of education. 	<p>Access and Equity</p>
<p>C. Prioritize high-quality learning in lower grades, and building strong foundational cognitive and non-cognitive skills.</p>	<p>4. Focus on improved learning and acquisition of foundational skills in children through: (i) changing what is valued in the examination system (i.e., learning competencies) and ration the number of examinations; (ii) setting national learning goals, which are systematically monitored and fed into the policy-making process (for all aspects of education, including financing, teacher development, curriculum development, etc.); and (iii) developing a national center for monitoring learning.</p>	<ul style="list-style-type: none"> • Low quality of general (primary and secondary) education is the key bottleneck for Bangladesh to become a middle-income country. • Learning inequalities start from lower grades. • Despite its importance in the labor market, non-cognitive skills are not consciously developed (and therefore not tested) through formal education. • The low learning and skills acquisition constrain opportunities for job diversification and productivity gains. • The number of public examinations in Bangladesh is one of the highest in South Asia. Learning assessment, rather than the current public examinations, would be more useful in understanding the strengths and weaknesses of students' learning. Countries successful in improving the learning outcomes effectively use learning assessment targets in policy goals. • The current rote learning-based educational practices do not build students' 	<p>Quality; Skills Development</p>

Policy priorities	Operational-level reform actions	Issues	Area of expected impact
D. Raise the minimum standard of performance at all schools in the country.	5. Target interventions at the school level to raise school and teacher performance through: (i) articulating and consistently measuring standards of performance for students and teachers and schools; (ii) enhancing teacher performance through high quality pre-service and relevant in-service and continuous education and programs such as the Each Child Learns for promoting cognitive and behavioral skills early; (iii) enhancing accountability and incentives for good performance of teachers (staggered MPOs in new schools as a way to encourage good performance) and institutions.	<p>cognitive competencies and non-cognitive skills like problem solving.</p> <ul style="list-style-type: none"> • Most of the quality issues are largely attributable to factors that are well within the purview of public policy reform (teachers, examinations, materials, time on task, etc.). School-related factors account for 73 percent of the differences in students' performance in grade 5. • Teachers are an important determinant of learning; yet, the current system does not attract, constitute, and retain the best professionals, and once recruited, it provides little incentives to keep them motivated. • The MPO system is not rendering effective teachers for a variety of factors, including governance issues and lack of accountability for public funds. 	Quality; Skills Development
E. Engage in sector-wide planning to explore synergies.	6. Introduce quality assurance systems and strengthen accreditation of programs in TVET and higher education	<ul style="list-style-type: none"> • A national qualification framework has been developed for TVET but it is yet to be operationalized. • Higher education does not have an accreditation system yet. 	Quality; Skills Development
F. Articulate a single, comprehensive, long-term vision of skills development.	7. Coordinate reforms, exploring all synergies and consequences across the sector.	<ul style="list-style-type: none"> • Various quality improvement reform measures have been introduced, but many are uncoordinated among different actors—including two ministries, several boards, and semi-autonomous bodies—thereby undermining the effectiveness of the reforms. 	Quality; Skills Development
G. Support continuous and targeted skills-building beyond formal education.	8. Nurture a culture of lifelong learning, by broadening the definition of skills development, and coordinating among all key stakeholders, including public and private actors.	<ul style="list-style-type: none"> • Skills development is not commonly recognized as an incremental and lifelong process acquired through formal and non-formal education, from pre-primary through higher education, networks, jobs, and other means. 	Skills Development
H. Improve the investment climate and jobs creation potential.	9. Strengthen the school-to-work transition by providing more career guidance and job matching.	<ul style="list-style-type: none"> • Support for effective school-to-work transition is weak, even for formal sector employment. 	Skills Development
	10. Focus on reskilling the current workforce through enterprise training, targeted skills building for low-skilled workers, and entrepreneurship training for self-employed and informal sector workers.	<ul style="list-style-type: none"> • Inequities exist in skills-development opportunities, and they increase in post-formal education. Informal sector workers, constituting 89 percent of the labor force, have limited opportunities for skills development. • Reskilling the current low-skilled work force is important—most will remain in the labor force for decades. 	Skills Development
	11. Improve the investment climate and promote Export Processing Zones (EPZs) to attract more high-skilled jobs.	<ul style="list-style-type: none"> • Building skills does not happen without developing jobs. Bangladesh faces a structural issue—the labor-intensive economic growth model generates overall low incentives for up-skilling, especially for workers in the informal sector. 	Skills Development

POLICY NOTE I: ACCESS AND EQUITY

Key Messages

Key Findings

- **Bangladesh has done well in enhancing access and equity in education.** There are notable achievements in nearing universal access to primary education, attaining gender equity at the primary and secondary education levels, marked reduction in repetition and dropout rates, and attaining reasonably high levels of completion in primary education.
- **This achievement is attributed to strong partnerships.** These partnerships among strong civil society groups (such as non-government organizations [NGOs]), the government, and development partners have worked with continuous commitment to ensure gender and income equity in education access. As a result, both the labor force's education levels and women's contribution (in the labor force, and thus in the formal economy) have increased.
- **The remaining challenges are few and not insurmountable.** The most important challenge is related to the education of children who are either already out of school or who are at a high risk of being out of school, as well as those in urban slum areas. A significant number of out-of school children are concentrated in urban slum and remote rural areas. A large enrollment gap between the poor and non-poor, as well as insufficient preparedness and high repetition rates in the early grades, are remaining concerns.
- **To advance universal primary education, strengthening educational resource allocation is important.** The budgetary allocation of the public funds to the education sector is relatively low compared to countries with similar gross domestic product (GDP) per capita, and there is a high level of inefficiency in education spending, as indicated by the high repetition and dropout rates.

Policy Directions

- **Target the remaining hardest-to-reach population groups to attain universal access in primary education.** The actions required will include: (i) identifying the remaining population and developing specific policies to address their needs; (ii) developing a comprehensive program to address educational needs of children in urban slums; (iii) scaling up successful stipend schemes; and (iv) working in close partnership with the non-government sector.
- **Expedite development of quality Early Childhood Development (ECD) programs.** Good quality ECD can be pursued through close coordination with the non-public sector that has been a principal provider of these services. ECD will contribute to equalizing education outcomes of children from the various backgrounds.
- **Support important initiatives for improving and ensuring equitable access to education by increasing education financing.** The government could implement such enhancements by: (i) pursuing efficiency gains; (ii) allocating more funds to secondary education, and (iii) facilitating resource mobilization in higher education.

1. Overview of Education Sector Performance

Bangladesh has weathered many storms in the last decade—physically, politically, and economically. Their perseverance is paying off. The principal drivers of Bangladesh’s economic growth are the labor-intensive exports in the garments sector and remittances provided to enable greater educational access. Skilled and unskilled labor required in the garment industry and those needed for international migration are (to some extent) a byproduct of Bangladesh’s education system, thereby placing education in the driver’s seat for steering a fast-growing economy. To better contextualize what Bangladesh has accomplished in recent years, and how that informs future prospects, it is important to consider the education sector’s performance over the last 10 years, and to analyze the factors that led to increases in primary and secondary enrollment. Ultimately, this Policy Note will discuss where greater educational access and equity is needed (and how to meet such challenges) to ensure Bangladesh’s transition into a middle-income economy. This Policy Note attempts to address these critical points through evidence based on rigorous studies, a rich set of data, and regional and international comparisons.

Bangladesh’s Macroeconomic Profile

I.1. Over the last decade, Bangladesh has sustained a track record of economic growth and progress in the social sectors, notably in education and health, despite recurrent political turbulences and vulnerability to natural disasters. The country has averaged a steady economic growth rate of more than 5 percent annually over the last 10 years, with relatively low inflation, and stable domestic debt, interest, and exchange rates. Bangladesh’s population growth rate is also on the decline, from 2.5 percent in the 1980s to 1.4 percent in 2000–2010. Such factors have led to the annual per capita GDP growth nearly tripling, from 1.6 percent in the 1980s to over 6 percent in late 2000s (see table 1). As a consequence, poverty is declining—from 57 percent in the early 1990s to 31.5 percent in 2010—and the country has mostly met its Millennium Development Goal (MDG) of halving the poverty rate by 2015.

Table I. 1: Macroeconomic Performance Indicators of Bangladesh (2000–2011)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GDP growth (annual, %)	5.9	5.3	4.4	5.3	6.3	6	6.6	6.4	6.2	5.7	6.1	6.7
Inflation (%)	2.2	2	3.3	5.7	7.6	7	6.8	9.1	8.9	5.4	8.1	10.7
Remittance (% of GNI)	4%	4%	6%	6%	6%	6%	8%	9%	11%	11%	10%	10%
Population growth (%)	1.9	1.8	1.7	1.7	1.5	1.4	1.2	1.1	1.1	1.1	1.1	1.2
GNI per capita (PPP, US\$)	890	940	990	1060	1140	1220	1350	1470	1600	1700	1800	1940
Population size	130	132	134	137	139	141	142	144	145	147	149	150

Source: World Development Indicators 2012.

Note: GDP = gross domestic product; GNI = gross national income.

I.2. Bangladesh’s macroeconomic environment has been characterized by investment rates being relatively high (about 22 percent of GDP), and the emergence of an export-oriented private sector, which continues to expand despite the recent financial crisis. The garment industry now employs more than 3 million workers, 90 percent of whom are women. This widespread entry of women into the labor market has been a leading factor in the rapid expansion of the garment industry and has also contributed to reducing poverty.

I.3. The fiscal deficit went from 5.1 percent of GDP in 2002 to being contained at 3.6 percent in 2010. However, the recent wage increase in the public sector has slightly worsened the fiscal deficit, raising it to about 4.5 percent of GDP in 2011.

I.4. Over the last 10 years, foreign reserves have substantially increased because of the large inflows of remittances and foreign aid in Bangladesh, providing important support to domestic demand. Consequently,

the amount of remittances as a share of GNI has increased from 4 percent in 2000 to 11 percent in 2008 (table 1). However, recent slowdown in remittance growth to 10 percent of GNI in 2010 (because of the financial crisis), accelerated import growth driven by higher food and fuel bills, and capital goods imports for new power plants and cotton/textile imports for the garment sector have put considerable pressure on the foreign reserves. The overall deficit of the balance of payments amounting to US\$635 million in 2011 has led to reserve losses and weakening of the Taka against the US dollar.

I.5. **However, strong and steady GDP growth and improved fiscal balances have reversed the rise in government debt, which has dropped to 45.3 percent of GDP at the end of 2009.** Greater interest and exchange rate flexibility, strengthening financial sector supervision, and deepening interbank markets are likely to help mitigate macroeconomic and financial vulnerabilities.

Education Sector Background

I.6. **Besides reducing poverty, Bangladesh increased primary and secondary enrollment during the last 10 years.** According to the Household Income and Expenditure Survey (HIES) conducted by the government of Bangladesh, from Bangladesh's independence in 1971 to 2010, the gross enrollment rate (GER) in primary schooling has reached 101 percent, while the secondary school enrollment has more than doubled to 63 percent. Also, Bangladesh achieved gender parity for educational access in both primary and secondary education (well in advance of their 2015 MDG). To better understand and assess these performances, this section outlines the Bangladeshi education system's management structure, spanning both secular formal (registered) and religious informal (unrecognized) schools.

Bangladesh's education system

I.7. **The education system in Bangladesh is comprised of a mix of heterogeneous providers, ranging from secular formal schooling to religious informal education.** A variety of schools operate within the country: government-run schools, privately managed secular schools, madrasahs (Islamic religious schools, both registered and non-registered), and schools run by non-governmental organizations (NGOs). Table 2 provides a comprehensive list of education providers from the primary to tertiary levels.

Table I. 2: Bangladesh's Education Providers

Sector	Institutions		Teachers		Student	
	Number	% of total	Number	% of total	Number	% of total
Primary education (grades 1–5)						
Government primary school (GPS)	37,672	48	212,653	54%	9,904,254	58
Registered non-government primary school (RNGPS)	20,061	25	73,580	19%	3,650,624	22
Non-register non-government primary school	666	1	2,730	1%	105,434	1
Experimental school	55	0	280	0%	9,080	0
Community school	3,169	4	10,006	3%	462,995	3
Kindergarten	4,418	6	41,129	10%	535,127	3
Non-governmental organization (NGO) school	361	0	1,334	0%	42,507	0
Ebtedaye madrasah	2,305	3	8,405	2%	243,211	1
High madrasah-attached Ebtedaye madrasa	9,120	12	32,843	8%	1,719,228	10
High school-attached primary school	858	1	11,226	3%	285,434	2
Total	78,685	100	395,281	100%	16,957,894	100
Secondary education						
Junior secondary school, private	2,989	16	22,235	10%	444,751	6
Secondary school, private	15,085	79	179,156	80%	6,381,472	85
Secondary school, public	306	2	7,110	3%	215,415	3
School and college (school section), private	679	4	14,602	7%	455,753	6
School and college (school section), public	11	0	452	0%	12,827	0
Total	19,070	100	223,555	100%	7,510,218	100
Madrasah education						
Dakhil, private	6,669	71	64,471	60%	1,246,436	57
Alim, private	1,401	15	20,895	19%	402,431	18
Fazil, private	1,056	11	17,432	16%	418,213	19
Kamil, public	3	0	115	0%	4,273	0
Kamil, private	201	2	4,264	4%	126,524	6
Total	9,330	100	107,177	100%	2,197,877	100
Technical and vocational education						
Polytechnic institute	171	6	3,310	14%	102,112	20
Technical school and college	90	3	1,376	6%	38,436	8
Commercial college	25	1	118	1%	7,669	2
Glass and ceramic institute	1	0	18	0%	1,011	0
Graphic arts institute	1	0	14	0%	550	0
Survey institute	2	0	35	0%	822	0
Technical training center	43	1	861	4%	9,746	2
Textile institute	29	1	297	1%	10,005	2
Textile vocational	50	2	366	2%	5,848	1
Agriculture training institute	109	4	870	4%	27,326	5
Marine technology	1	0	50	0%	666	0
SSC vocational (independent)	138	5	2,079	9%	22,007	4
SSC vocational (attached)	1,156	39	6,112	27%	112,669	22
HSC vocational/Bachelor's Management (independent)	580	19	5,089	22%	97,729	19
HSC vocational/Bachelor's Management (attached)	585	20	2,324	10%	69,960	14
Total	2,981	100	22,919	100%	506,556	100
College education						
School and college, public	11	0	32	0%	1,610	0
School and college, private	679	20	12,715	13%	198,042	7
Higher secondary college, public	11	0	175	0%	6,928	0
Higher secondary college, private	1,227	35	22,959	24%	318,863	11
Degree (pass) college, public	113	3	2,536	3%	164,114	6
Degree (pass) college, private	1,157	33	41,975	44%	969,718	33
Degree (honors) college, public	60	2	2,251	2%	249,018	9

Degree (honors) college, private	112	3	5,349	6%	180,751	6
Master's college, public	70	2	5,439	6%	709,860	24
Master's college, private	35	1	2,189	2%	116,947	4
Total	3,475	100	95,620	100%	2,915,851	100
University education						
Public university	31	38	7,599	60%	182,317	41
Private university	51	62	4,986	40%	257,089	59
Total	82	100	12,585	100%	439,406	100

Source: Bangladesh Bureau of Educational Information and Statistics (BANBEIS), 2011.

Note: The flow diagram of the education structure is attached in annex 3. SSC = Secondary School Certificate; HSC = Higher Secondary Certificate.

I.8. Primary education in Bangladesh spans grades 1–5, and falls under the purview of the Ministry of Primary and Mass Education (MoPME). MoPME formulates policies, whereas the Directorate of Primary Education (DPE) is responsible for program implementation. Although most primary school children attend government and registered non-government schools, there is a significant share of NGOs and non-registered madrasahs⁴ that operate primary schools in Bangladesh. MoPME oversees the primary education system for government-recognized schools, while the Ministry of Education (MoE) oversees all post-primary education for government-recognized schools. This management model excludes schools that are not recognized by the government. For example, primary school students in non-government madrasahs do not fall under the responsibility of the MoPME. Government schools support the majority of Bangladesh's primary education students (over 45 percent in 2011, according to the Bangladesh Bureau of Educational Information and Statistics [BANBEIS]), whereas secondary education is dominated by non-government schools that account for 98 percent of all schools and 97 percent of the total enrollment in 2011 (BANBEIS). NGO schools cover 4 percent of total primary school enrollment, while 3 percent of primary students attend private non-funded schools and community schools. A strong culture of public-private partnerships exists in Bangladesh, which has contributed greatly to educational access in the country (see box 1).

⁴ The religious education sector comprises both state-regulated private madrasahs as well as independent, private madrasahs. The former are popularly known as *Aliya* madrasahs, where general education is provided alongside Islamic education. Because the majority of these private registered madrasahs operate with public funding, they are regulated in terms of curriculum content and teacher recruitment policies under a unified government entity recognized as the Madrasah Education Board (MEB). *Qaumi* madrasahs are not registered with the government, but may or may not be under informal independent networks/boards. *Qaumi* madrasahs teach religious subjects, and are financed via various non-state sources (such as private charities or foreign private funding). Outside the primary/secondary sector, there are a large number of pre-primary Islamic education institutions that fall into one of two categories: *Maktab* (or *Nourani* madrasahs) and *Furqania/Hafizia* madrasahs.

Box I. 1: Non-Governmental Organization Schools in Bangladesh

Non-governmental organization (NGO) schools have helped increase access to education among hard-to-reach groups. More than 1 million children are currently enrolled in NGO primary schools. By reaching out to disadvantaged children, NGOs have contributed to a drop in the number of out-of-school children. In 2000, about 6.2 million out-of-school children were from poor households, and by 2010, the number decreased to 3 million. The following are some characteristic features of NGO schools:

- smaller classroom sizes—on average they have 30 students per classroom, compared to 55 students on average in government schools;
- a higher share of female teachers;
- strong parent and teacher associations (PTAs)—parents and teachers decide together on timing, lessons, and vacation schedules;
- teachers have higher training levels, but lower levels of qualifications or experience; and
- lower teacher absenteeism than other types of schools.

One of the most successful NGOs in Bangladesh is the Bangladesh Rural Advancement Committee (BRAC).

The Bangladesh Rural Advancement Committee

BRAC was started in 1972 to help relocate refugees in the Sylhet district after Bangladesh's independence in 1971. Their focus was, and still is, the eradication of poverty. The Non-Formal Primary Education Program began in 1984, after adults in a literacy class asked about their children, wondering why their children should have to wait until they were adults before they would be able to learn how to read. The education program started with just 22 pilot schools. Today, there are more than 30,000 BRAC schools attended by 1.2 million children. Many NGO schools not run by BRAC tend to follow the BRAC model. Other key players include the Center for Mass Education in Science (CMES), Dhaka Ahsania Mission (DAM), Gonoshahajjo Sangstha (GSS), PROSHIKA, Friends in Village Development (FIVDB), Save the Children-USA, and the Underprivileged Children's Education Programs (UCEP). The majority of Bangladesh's NGOs did not implement programs in primary education until the mid-1980s, but since then the sector has grown to cover approximately 2 million children. So far, BRAC has built schools in 50,000 out of 84,000 villages.

I.9. Secondary education in Bangladesh spans grades 6–10, whereas higher secondary education covers grades 11 and 12; these are all under the purview of the Ministry of Education (MoE). In the secondary education sector, Bangladesh has pursued a service-delivery strategy that adopted a public-private partnership model by combining public financing with private provision. Given the historical continuity of this policy strategy since the British period, it is not surprising that today the secondary education sector is dominated by private schools (close to 97 percent of secondary and higher secondary enrollment). There is also a strong historical precedent of engaging various types of non-state providers in the provision of secondary education. Madrasah education also supports an additional 1.6 million students at the secondary level (Dakhil and Alim).

I.10. Technical education and vocational training (TVET) is a relatively small subsector, heavily subsidized and overly centralized. Bangladesh has three levels of TVET, which include: (i) basic programs focusing on providing manual skills; (ii) certificate-level training, which is a two-year program (equivalent to grades 9 and 10) that provides students with a Secondary School Certificate in vocational programs called the Vocational Secondary School Completion Certificate (SSC vocational); and (iii) two-year post-secondary vocational programs (equivalent to grades 11 and 12) or four-year diploma programs. Students also have the option to complete the two-year program and earn a Higher Secondary Certificate in vocational programs (HSC vocational) or pursue a four-

year diploma program. The minimum requirement for entering any of these three programs is completion of grade 8 in the general education stream. These TVET programs are offered by a mix of school-level initiatives (SSC vocational and HSC vocational), polytechnics (diploma-level programs), and other types of institutions (basic skills). About 70 percent of formal TVET students are enrolled in non-government institutes and the rest attend public institutes. Although the overall annual intake capacity is about 200,000 students in both public and private training institutions, the education's quality and relevance remain low (see the Policy Note on Education Quality for further details).

I.11. For higher education, traditionally the public sector has dominated tertiary education, but in recent years, private universities (of greatly varying quality) have proliferated. Of the 82 universities, 51 are currently privately operated. The majority (75 percent) of tertiary students attend 1,490 affiliated colleges, about 17 percent attend universities (public and private), and the remaining 8 percent are enrolled at the Open University (HEQEP 2009). The MOE has the overall responsibility for formulating policy, strategic leadership, and preparing the national budget for public funding in higher education. Both public and private universities are managed by an autonomous University Grants Commission (UGC)—the oversight apex body for all universities—which was commissioned in 1973 as an intermediary between the government and universities to regulate university affairs. The UGC is technically under the MoE, and all public tertiary funding is channeled through the MoE, but the UGC has considerable influence over major academic decisions. Four streams of higher education are offered in Bangladesh: (i) general education; (ii) science, technology, and engineering education; (iii) agriculture education; and (iv) medical education.

Management structure

I.12. Bangladesh's education system is highly centralized, with fiscal and administrative powers concentrated in Dhaka across all subsectors. The centralized management makes it hard to supervise schools properly: in secondary education, supervision of teachers in government schools is minimal, with visits from Upazila Secondary Education Officers (USEOs) usually taking place once a year. Few of the USEOs have had actual classroom experience, and their training and backgrounds do not always qualify them as supervisors. Consequently, there is a lack of accountability in schools' management and supervision. Moreover, there is little coordination between MoPME and MoE on issues such as primary and secondary stipend programs, public examinations, or learning assessment practices.

I.13. Secondary schools are under regional education boards that organize examinations and define curricula and syllabi (along with the National Curriculum and Textbook Board, or NCTB). The Madrasah Education Board (MEB) controls religious education in government-registered schools, while the Technical Education Board (TEB) is responsible for technical and vocational training at the secondary level. The Boards of Intermediate and Secondary Education (BISE) are responsible for conducting public examinations (for instance, they organize the SSC and HSC examinations) and granting recognition to non-government secondary schools.

I.14. In registered non-government primary and secondary schools, a School Management Committee (SMC) or a Madrasah Managing Committee (MMC) is responsible for hiring staff (including teachers), controlling expenditures, approving budgets, and mobilizing resources.⁵ Government schools, on the other hand, may not have fully established SMCs and do not have such a well-defined role for SMCs. Both primary and secondary school teachers are recruited centrally by DPE for primary education and the Directorate of Secondary and Higher Secondary Education (DSHE) for secondary education, and the head teacher runs the school with support from DPE officers (DPEOs) and the Directorate of Education officers (DEOs).

I.15. Bangladesh has one of the most centralized public education systems in South Asia. Compared to Pakistan (where provincial governments primarily oversee education), India (where local governments are constitutionally delegated certain administrative control over schools), or Nepal (where local communities manage

⁵ At the higher secondary level, the corresponding school committees are called *governing bodies* and fulfill a similar role. A typical School Management Committee (SMC) has, as its members, the head teacher as member secretary, two teacher representatives, four guardians, a donor and a founder as representatives, and a female representative from the community. All of these members gather to elect the chairperson among them or another person who is well-respected in the community.

the schools), Bangladesh’s education system is centralized fiscally and administratively across all subsectors. However, despite the system’s centralization and lack of coordination across ministries, a heterogeneous mix of providers have increased access to primary and secondary education.

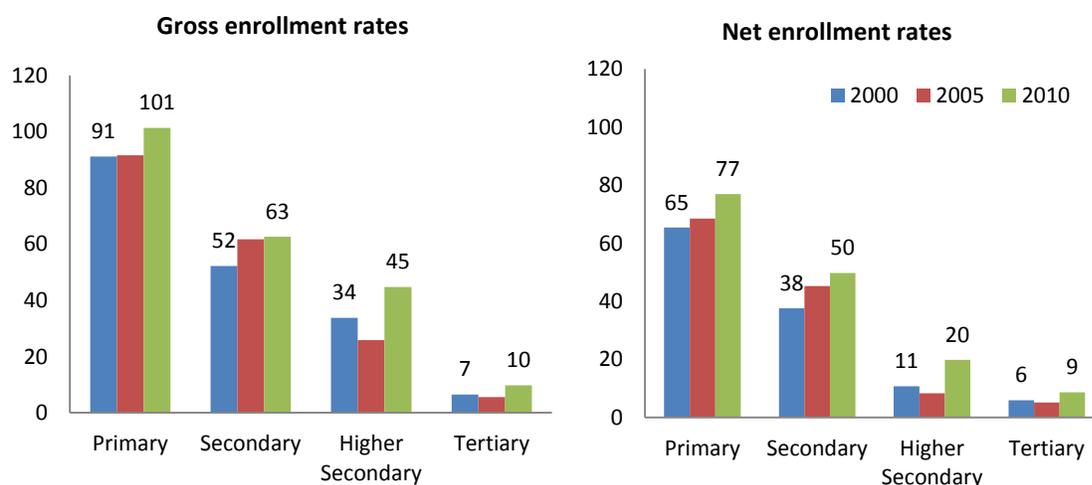
Enrollment in Pre-Primary, Primary, Secondary, and Tertiary Education

I.16. **Through a combination of public and private provisions and unique financing schemes, Bangladesh improved access to pre-primary, primary, and secondary education.** As figure 1 shows, the GER has steadily increased over the last 10 years across all levels of education. For instance, according to HIES, from 2000 to 2010⁶:

- the pre-primary GER was 23 percent in 2009;
- the primary GER increased from 91 to 101 percent;
- the lower secondary (grades 6–8) GER rose from 52 to 62 percent;
- the higher secondary (grades 11 and 12) GER expanded from 33 to 44 percent; and
- the tertiary GER improved from 7 to 10 percent.

Similarly, net enrollment rates (NERs) have risen over time—even at a slightly higher pace than GERs, at least at the primary and lower secondary levels (figure 1).⁷ The increase in access to primary and secondary education is the result of: (i) the government’s considerable investments in primary education programs (the Second and Third Primary Education Development Programs, PEDP 2 and PEDP 3); (ii) female secondary stipend programs that are supported by the government, the International Development Association (IDA), and Asian Development Bank (ADB); (iii) provision by NGOs supporting disadvantaged groups; and (iv) the increase of religious schools (several religious schools emerged or grew as a result of receiving financial incentives from the government) (Asadullah et al. 2008).

Figure I. 1: Gross and Net Enrollment Rates (%) by Education Level in Bangladesh (2000–2010)



Source: Authors’ calculations from Household Income and Expenditure Survey (HIES) 2000–2010.

I.17. **Although these enrollment data express trends in school enrollment, they do not detail differences across gender, region, or socioeconomic background.** Section 2 will analyze data related to the equity of educational access with regard to such factors.

⁶ Pre-primary enrollment rate is calculated based on the Multiple Indicator Cluster Survey (MICS 2009). Post-pre-primary enrollment calculation is based on Household Income and Expenditure Survey (HIES) 2000, 2005, and 2010. Three rounds of HIES are used throughout this Policy Note for consistency when comparing the statistics between years.

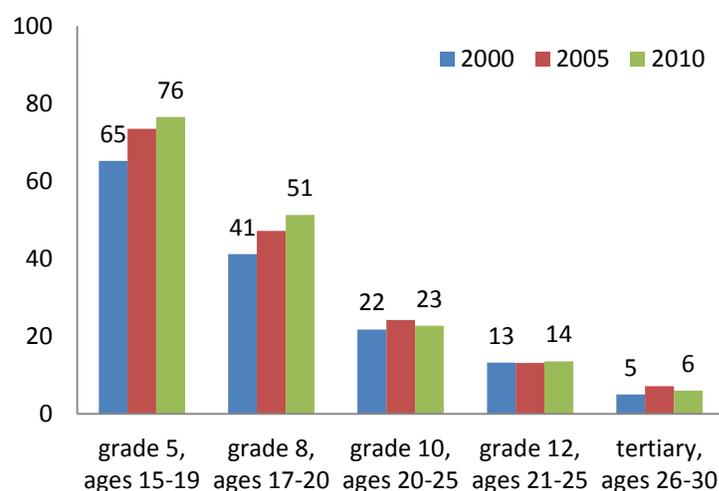
⁷ Recent data have indicated that the NER at the primary level has increased to 93 percent, as of 2013 (Annual Sector Performance Report [ASPR 2012])

I.18. **Enrollment in higher education has increased in the last decade, with most students enrolled in colleges affiliated with the National University (NU).** About 79 percent of tertiary students are enrolled in 1,490 colleges, but only 126 of them offer bachelor’s programs (World Bank 2013a).⁸ According to HIES 2010, of the population aged 18 years and older in Bangladesh, only 4.7 percent have ever been enrolled in tertiary education. This is, however, up from 3 percent in 1990. Part of this 1.7 percent increase in tertiary enrollment can be explained by the rapid growth of both private and public universities. Between 2000 and 2006, the number of private colleges tripled from 16 to 51 (World Bank 2013a). At the university level, 29 public institutions are currently operating (with the majority of students enrolled in arts and humanities, science, and social science), while in 51 private universities there are more students in business administration and engineering. Overall, the GER in tertiary education has increased from 5 percent in 2005 to about 8 percent by 2010 (HIES).

Completion Rates in Primary and Secondary Education

I.19. **Primary school completion in Bangladesh increased from 65 to 76 percent between 2000 and 2010.** Similarly, junior secondary (grade 8) completion rates improved by about 10 percent in the same period (see figure 2). However, secondary (grade 10), higher secondary (grade 12), and tertiary completion rates remained at almost the same levels. Although primary school completion rates have improved by more than 10 percent over the last decade, the overall rates are still low for secondary and tertiary education.

Figure I. 2: School Completion Rates (%) by Education Level in Bangladesh (2000–2010)

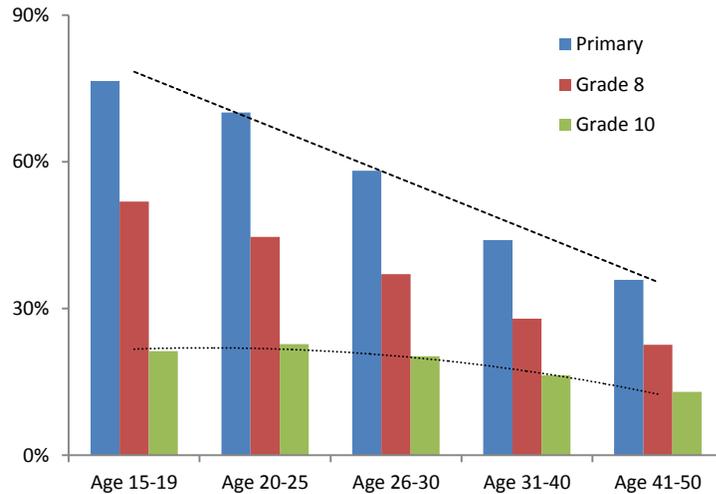


Source: Authors’ calculation from HIES 2000–2010.

I.20. **Looking at completion rates across age groups, a trend emerges, showing that primary, lower secondary, and secondary education completion have increased over time.** For instance, 36 percent of people aged 41–50 in 2010 have completed primary education, whereas the share among people aged 31–40, 26–30, 20–25, and 15–19 is respectively 44, 58, 70, and 76 percent. The share of primary school completers has more than doubled in 30 years. Figure 3 shows the same phenomenon for grade 8 completion rates—the two curves’ slopes display a similar steepness. On the other hand, the slope of grade 10’s completion rate is relatively flatter, suggesting that the dropout before completing grade 10 has been a recurrent phenomenon in Bangladesh for the last 30 years. (For information on the examination pass rates for Grades 5, 8, and 10, see table 1 in the Policy Note on Education Quality.)

⁸ There are 239 public colleges and 1,251 private colleges affiliated with the National University (NU), and they also offer bachelor’s, master’s, and PhD courses. There are also various types of professional colleges, institutions, and madrasahs that provide tertiary-level education.

Figure I. 3: Primary and Secondary School Completion Rates across Age Groups (2010)

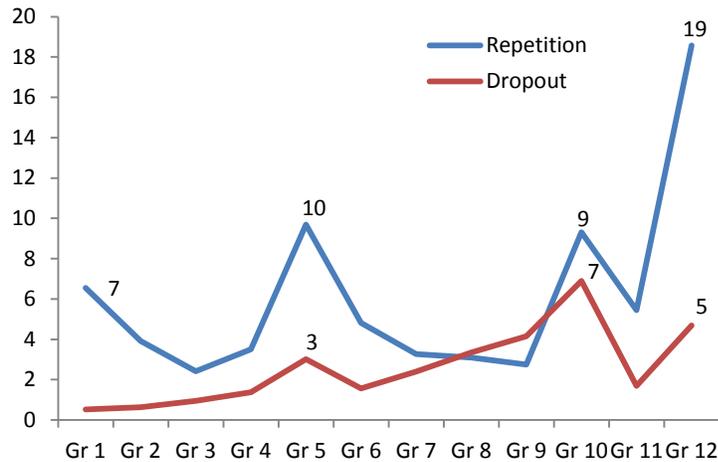


Source: HIES 2010.

Repetition and Dropout, Survival, and Transition Rates

I.21. **School repetition and dropout are indicators of an education system’s internal efficiency; in Bangladesh, the average repetition rate in primary school is 5 percent, with the most serious instances occurring at grade 1 and grade 5.** An alarmingly high repetition rate of grade 1 students—7 percent—raises concern about their academic preparedness. A significant number of grade 5 students—10 percent—repeat the grade, suggesting many are not ready to complete grade 5. The significant repetition rate at grade 5, along with a high dropout rate of 3 percent (see figure 4) could also be explained by the government’s requirement in recent years to have students take a national grade 5 exam. Both repetition and dropout rates increase significantly at the grades when students are required to take national examinations—the primary school exam at grade 5, the secondary school exam at grade 10, and the high school exam at grade 12. This raises concerns about the efficiency of the current education system, as well as the students’ learning levels in a given period of time. In addition, although the dropout rate of GPSs and RNGPSs has declined from 47 to 40 percent between 2005 and 2010, the dropout and repetition rates for GPSs and RNGPSs (45 and 12 percent in 2009, Annual Sector Performance Report [ASPR 2012]) are significantly higher than the national average of 6 percent and 5 percent in 2009, respectively (MICS 2009).

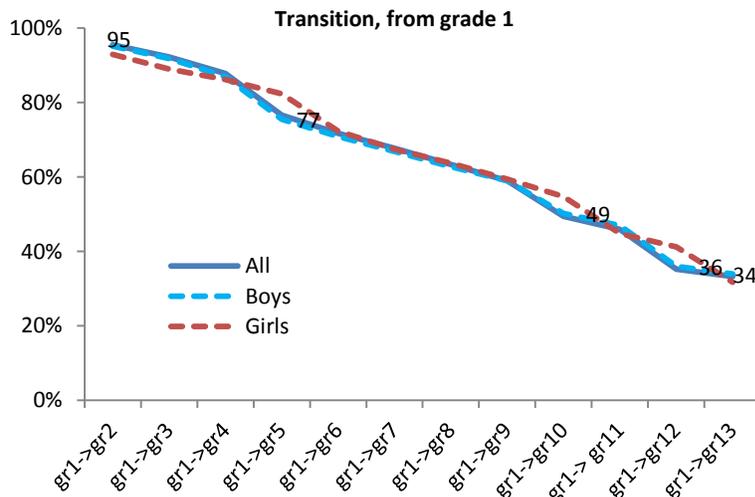
Figure I. 4: Repetition and Dropout Rates (%) in 2008–2009



Source: Multiple Indicator Cluster Survey (MICS 2009).

I.22. **Early grade repetition and continuous repetition and dropout throughout the system result in a substantially low rate of timely transition across the education system.** A significant percentage of children aged 6–17 dropped out of school in the early stages of learning; 6 percent of children stop at the pre-primary level, another 6 percent complete only grade 1, and 24 percent complete grade 5 but never enroll in secondary education (MICS 2009). Regarding the repetition and dropout rates in 2009, it is estimated that out of 10 primary school students, only 7 or 8 will reach grade 5; 6 to 7 students will transition to grade 6; 5 students will reach grade 10; and 3 or 4 students will complete higher secondary without any repetition (figure 5).

Figure I. 5: Survival Rate Throughout the Education System in 2009, Starting from Primary



Source: MICS 2009.

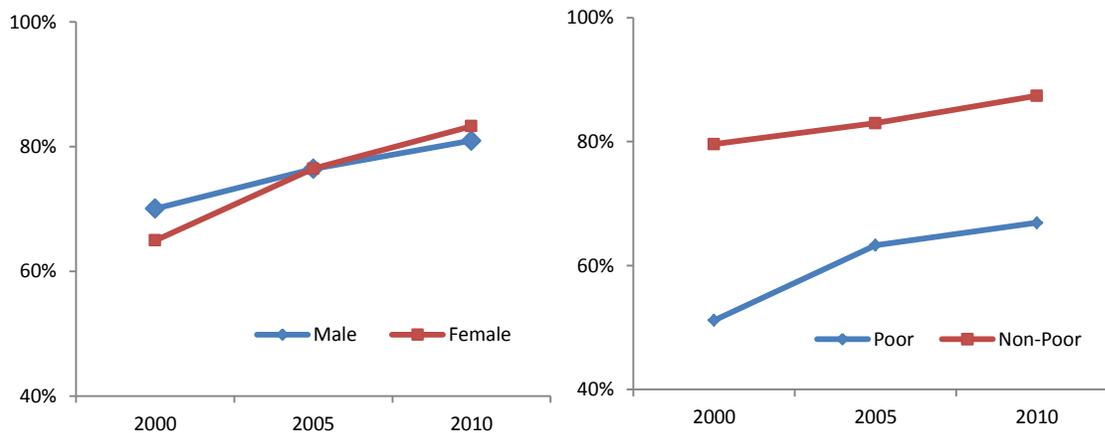
Note: Calculated based on the 2009 grade progression rate across all grades.

Literacy Rates

I.23. Since 2002, Bangladesh has engaged in various non-formal education programs—including two Post-Literacy and Continued Education Projects for Human Development (PLCE-1 and PLCE-2). Prior to PLCE-1, the Bureau of Non-Formal Education (BNFE) implemented four major literacy projects, targeting about 34.4 million learners aged 8–45. However, the strategy of focusing on providing literacy skills to the projects’ target groups was not accompanied with continuing education classes that provide life and vocational skills training, or income-generation and micro credit programs. For this reason, after about a decade, the PLCE was rated as moderately unsatisfactory when the project completed, although close to 1.3 million people were trained in basic literacy skills. ADB implemented a similar post-literacy program, while the United Nations Children’s Fund (UNICEF) ran a non-formal basic literacy program for hard-to-reach urban working children. The National Plan of Action (NPA II, 2003–2015) for Education for All (EFA) had programs for specific groups covering preschool and school-age children, adolescents, young adults, and adults, as well as literacy and NFE leading to lifelong learning. It also emphasized the high value of livelihood skills as part of literacy, along with NFE to make learning meaningful and ensure that learners have access to wage or self-employment and micro-finance as needed to improve the quality of their lives.

I.24. These efforts by the government of Bangladesh and its development partners, along with NGOs’ contributions in the non-formal sector, have led to higher literacy rates. The national literacy rate increased from 68 percent among young adults aged 15–24 to more than 82 percent between 2000 and 2010 (HIES). Similarly, both male and female literacy rates are increasing, with women aged 15–24 recording the largest improvement between 2000 and 2010. Specifically, female literacy rates progressed from 65 to 83 percent and male literacy rates rose from 70 to 81 percent in the same period (see figure 6). When we look at literacy rates by poverty status, the poor benefited the most from literacy programs; literacy rate increased by 16 percentage points for the poor and 7 percentage points for non-poor (figure 6). This may be partly explained by the focus of various literacy programs on poor and hard-to-reach households and individuals. (See annex 2 on education projects by development partners and NGOs, and box 1 on NGOs.)

Figure I. 6: Literacy Rates (Ages 15–24) in Bangladesh by Gender and Poverty Status (2000–2010)



Source: HIES 2000–2010.

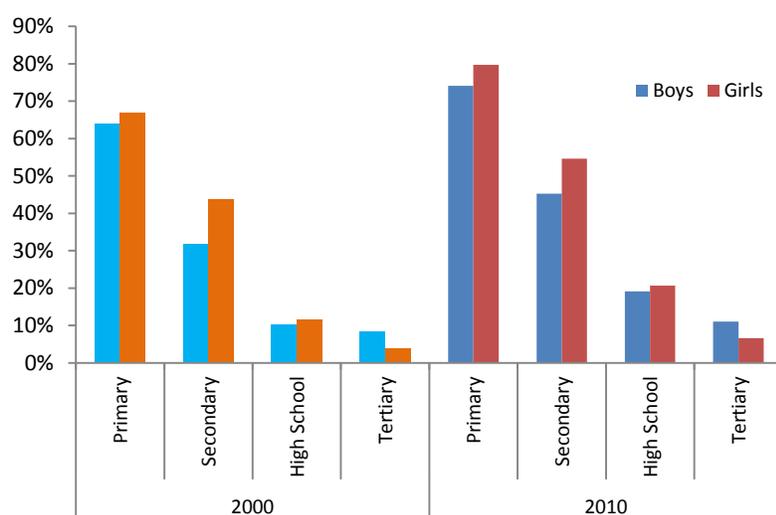
2. Equity in Education Outcomes and Dropouts in Bangladesh

Although Bangladesh has increased access to education, with improved participation, literacy, and completion rates, more improvements are needed. Using HIES 2000 and 2010, this section provides further analysis to reveal the levels of equity that have been attained or that are still lacking in educational access.

Gender Inequities in Education Outcomes

I.25. **Similar to other neighboring countries in the region, Bangladesh’s gender inequity in primary education is minimal, but unlike many developing countries, its gender inequity in secondary education enrollment is biased against males.**⁹ As figure 7 shows, several patterns are notable. First, in primary education, the NER shows similar levels for females and males—there are no gender differences. Second, between 2000 and 2010, both groups have recorded similar growth in terms of percentage-point increases (for example, the NER increased from 67 to 80 percent for females and from 64 to 74 percent for males). Third, there were large differences in secondary education enrollment levels in 2000 between males and females (the female NER was 55 percent compared to the male NER of 45 percent). Fourth, despite recording a large increase in secondary enrollment rates between 2000 and 2010, males still lag behind females.

Figure I. 7: Net Enrollment Rates by Gender in Bangladesh (2000 and 2010)

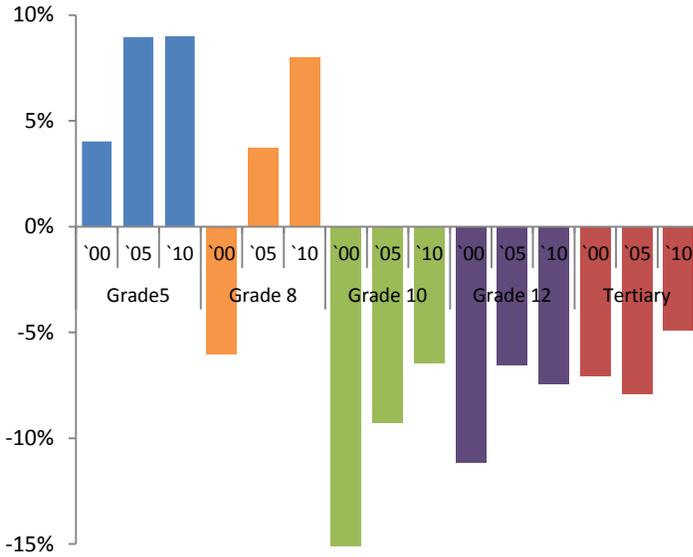


Source: Authors’ Calculations, HIES 2000–2010.

I.26. **Females are outperforming males in completing primary- and junior secondary-level education, but are still lagging behind in completing secondary or higher secondary education.** At the primary and junior secondary level, the completion rates of females are 8 to 9 percentage points higher than that of males in 2010, and the gender gap in completion at the junior secondary level has reversed between 2000 and 2010, favoring females. However, at the secondary or higher education level, the gender difference is favored toward men; men are 5 to 7 percentage points higher in their completion rates than women, although the gap is decreasing (figure 8).

⁹ There is evidence of a reverse gender gap in secondary education (for more details, see Asadullah et al. 2009).

Figure I. 8: Difference in Completion Rates (%) between Females and Males in Bangladesh (2000–2010)

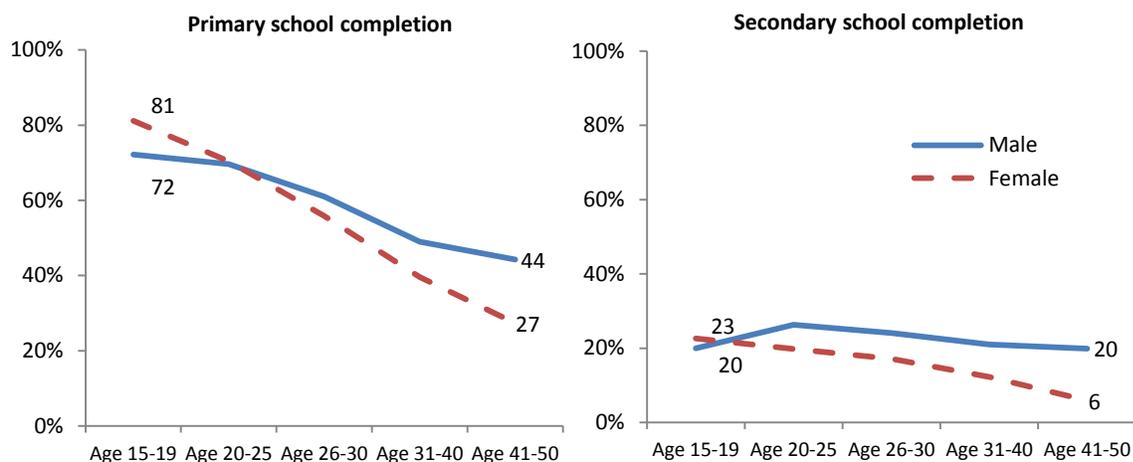


Note: A positive gender gap indicates higher completion rates for females and a negative gender gap indicates higher completion rates for males.

Source: Authors' calculations, HIES 2000–2010.

I.27. **Females have increased school completion rates over the last 30 years at the primary and secondary levels.** Specifically, female primary completion rates have increased from 27 percent for those aged 41–50 to about 81 percent for younger females aged 15–19 in 2010; whereas the respective rates for males are 44 and 72 percent (figure 9). The female primary completion rate caught up with the male primary completion rate about four or five years ago and has now exceeded the latter. For grade 10 completion rates, males still dominate the distribution over time across various age groups (figure 9). If we abstract from the age group 15–19—which includes children who might be enrolled in grades lower than 10 because of belated enrollment or repetition—females are still behind in secondary school completion, despite the progress achieved over the last 30 years.

Figure I. 9: Primary and Secondary School Completion Rates across Age Groups by Gender (2010)



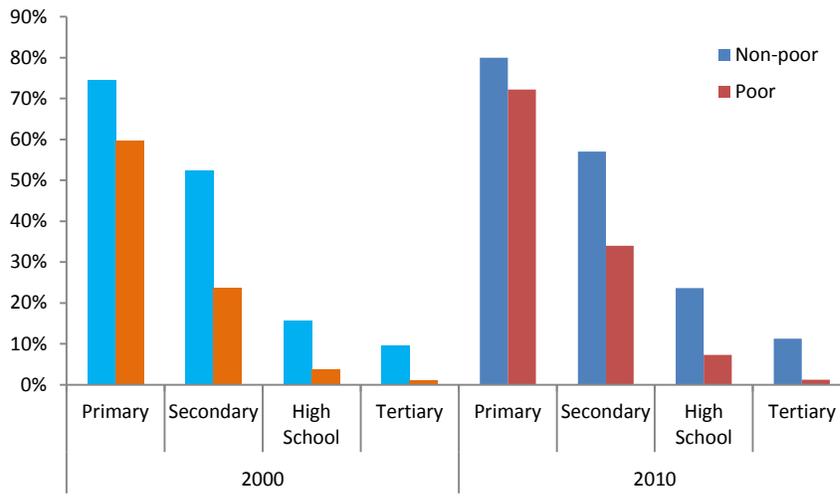
Source: Authors' calculations, HIES 2010.

I.28. **In higher education, gender inequity exists—only about 45 percent of tertiary students are female.** College enrollment, which represents 87 percent of tertiary enrollment, totals 2.9 million students, 1.9 million of which are female. The number of female students is even lower for public and private universities, at around 26 percent.

I.29. **Enrollment gaps between children from poor and non-poor households are systematically large across all education levels, especially at the higher education levels.** Inequity in primary enrollment because of household poverty has been reduced by half between 2000 and 2010. For example, the gap in the primary NER has declined from 16 to 6 percentage points between 2000 and 2010 (figure 10). However, secondary school's NER gap between the two groups has exceeded 20 points over the last 10 years, despite a 10 percent increase in the NER for the poor. Clearly, challenges remain at the secondary level in reducing enrollment gaps associated with poverty, while efforts are underway to deal with the last mile in primary education.¹⁰ In tertiary, the NER for the non-poor increased from 9 percent to 11 percent, while the NER for the poor stays at the same level as 10 years ago, thereby widening the gap between two groups.

¹⁰ For instance, the Reaching Out-of-School Children (ROSC) program has recently expanded its scope with 100 upazilas added to the original 90 upazilas, to provide primary education opportunities to more children from disadvantaged households.

Figure I. 10: Enrollment Rates of the Poor and Non-Poor (2000 and 2010)

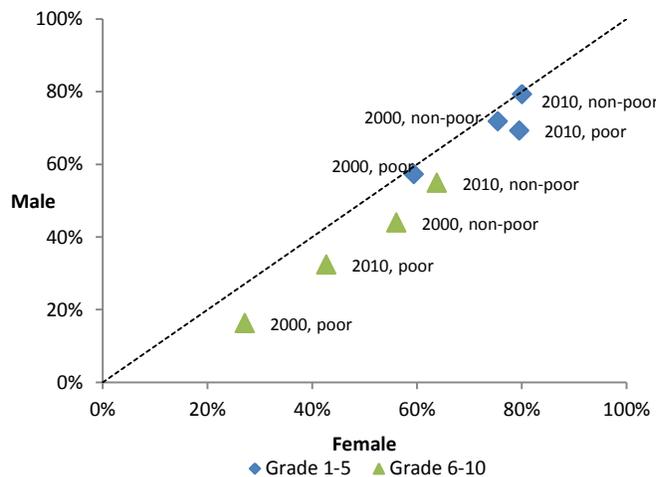


Source: HIES 2000 and 2010.

Note: “Poor” denotes households of the lowest 30 percent in per capita consumption distribution.

I.30. **When examining enrollment from gender and poverty perspectives at the primary and secondary levels, the gender bias against males is stronger among poor households.** As figure 11 shows, the 2010 primary-level NER is almost the same for males as females from non-poor households. However, at the secondary level, the NER shows disparities between the children—especially males of poor households—but also those from non-poor households.

Figure I. 11: Net Enrollment Rates of Poor and Non-Poor Students by Gender (2000 and 2010)

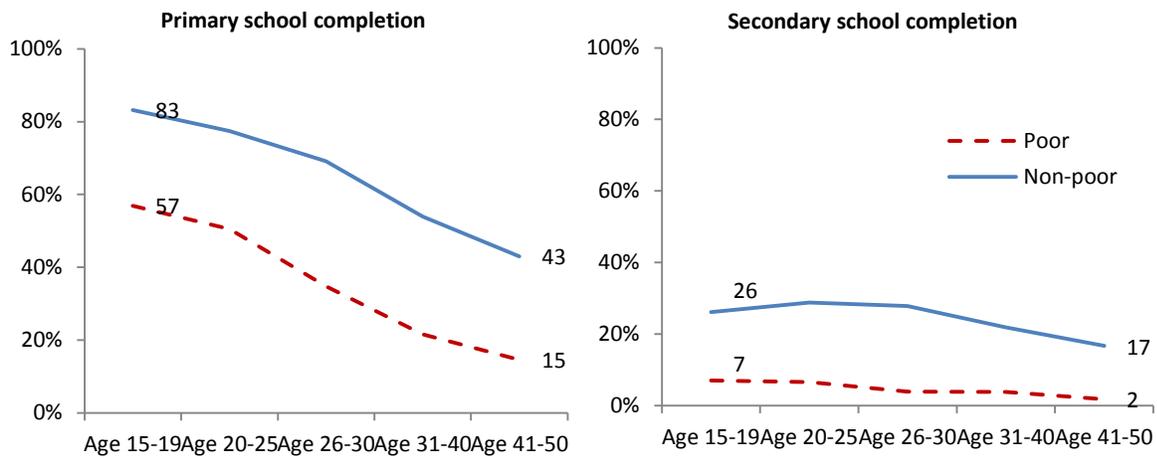


Source: Authors’ calculations, HIES 2000 and 2010.

I.31. **Students from poor and non-poor households show increased completion rates, although there is a long way to go in terms of universalizing completion.** As figure 12 shows, the curve’s slope is slightly steeper for students from poor households than the non-poor, suggesting that the poor’s primary completion rate is increasing in such a way that the gap could be eliminated in one decade. This scenario is plausible, given Bangladesh’s efforts to

provide economic equity in educational access (such as PEDP 3, Secondary Education Quality and Access Enhancement Project [SEQAEP], and Reaching-Out-of-School Children [ROSC 2], among other education programs). In 2010, primary completion rates for the poor have more than tripled between individuals aged 41–50 and those aged 15–19, going up from 15 to 57 percent. For grade 8 completion rates, the rates have quadrupled, increasing from 7 to 29 percent in 2010, while the rates for the non-poor are respectively 17 and 26 percent. At higher levels of education, despite similar progress noted for students from poor households, the gap in completion rates remains sizeable, because financial costs preclude many students from poor households from proceeding beyond grade 10 (see figure A1, annex 1).

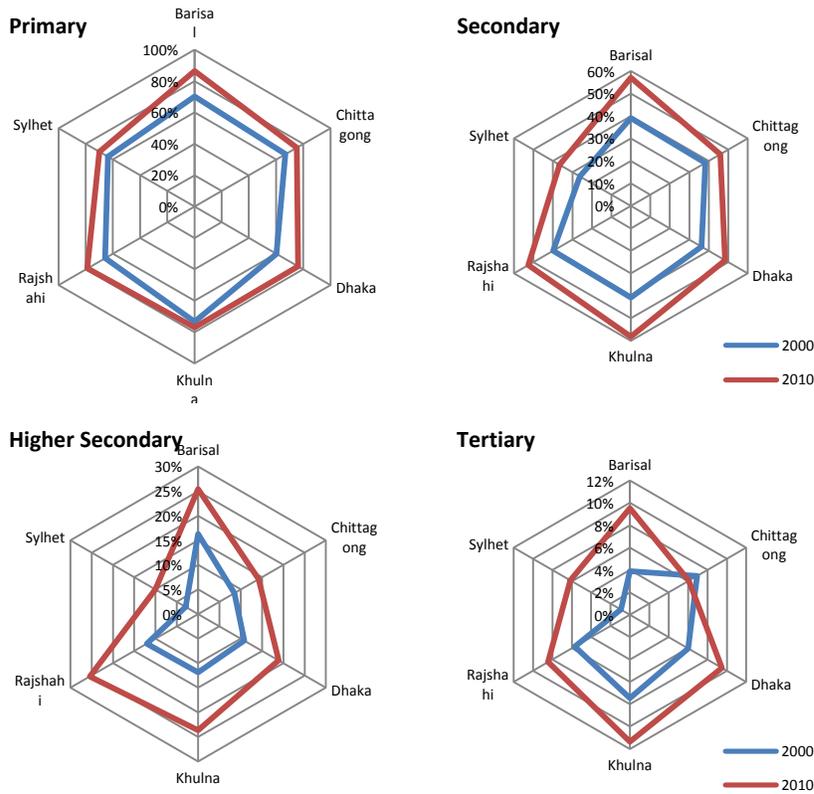
Figure I. 12: Primary and Secondary School Completion Rates across Age Groups by Poverty Status (2010)



Source: Authors' calculations, HIES 2010.

I.32. **There are no notable urban/rural gaps, but there is a significant difference across geographic divisions.** The Eastern divisions—namely Dhaka, Chittagong, and Sylhet—exhibit lower average enrollment rates compared to their counterparts in the west—namely Barisal, Rajshahi, and Khulna, especially at the primary and secondary levels (see figure 13).

Figure I. 13: Net Enrollment Rates by Geographic Division in 2000 and 2010



Source: HIES 2000 and 2010

The Human Opportunity Index

I.33. A variety of indicators that lead to inequity in educational access can be summarized in a metric recently developed by the World Bank, known as the *Human Opportunity Index (HOI)*. The 2006 World Development Report on *Equity and Development* examined factors such as gender, poverty, and geography that are associated with inequity in distribution of educational access. The HOI (see box 2) conceptualizes this notion by effectively measuring such inequities (Barros et al. 2008).

Box I. 2: The Human Opportunity Index

The Human Opportunity Index (HOI) summarizes the educational opportunity (such as available access and the enrollment rate) and its distribution (the dissimilarity index, or D-index) across different population types. Specifically, the inequality of educational opportunities, as measured by the D-index, is the degree to which the distribution of those opportunities is conditional on circumstances that are beyond the control of children—such as gender, household income, parental education, and location. The D-index measures the unequal distribution of currently available resources, ranging from 0 to 100 percent—from a situation with perfectly equal opportunity in education to that of perfectly unequal opportunity.

The D-index can also be described as the share of all available opportunity (enrollment) that must be reallocated to achieve perfect equality. HOI can be interpreted as the percentage of resources needed for universal education that is currently available and allocated equitably.

School enrollment rates among children aged 6–10 and 11–15 and primary completion rates among children aged 15–19 are used to measure access to and distribution of such educational opportunities.

I.34. **Over the last decade, educational access has increased without much improvement regarding the inequality of distribution in access in Bangladesh.** Primary enrollment and completion rates increased by about 10 percent between 2000 and 2010, while inequality—measured by the dissimilarity index (D-index; see table 3)—in school enrollment declined by only 2 to 3 points. In terms of the primary completion, the decline in inequality has been significant; yet 14 percent of current primary school completion opportunity is still unequally distributed.

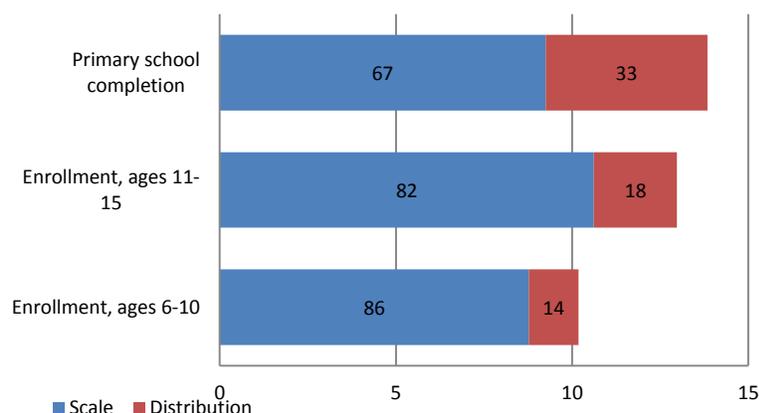
Table I. 3: Human Opportunity Index (HOI) in Bangladesh (2000–2010)

Indicators	2000	2010
Access		
Enrollment, ages 6–10	75	85
Enrollment, ages 11–15	66	78
Primary school completion, ages 15–19	56	67
Dissimilarity (D)-index		
Enrollment, ages 6–10	8	6
Enrollment, ages 11–15	12	9
Primary school completion, ages 15–19	21	14
HOI		
Enrollment, ages 6–10	69	80
Enrollment, ages 11–15	58	71
Primary school completion, ages 15–19	44	58

Source: Authors' calculations using HIES 2000 and 2010.

I.35. **HOI increases were achieved through both an increase in educational opportunity (enrollment and completion) and a decrease in unequal distribution of the opportunity.** While HOI for primary school completion is the lowest among three education indicators, it increased at the highest rate, 13.8 percentage points. Sixty-seven percent of the increase is attributed to an increase in the enrollment or completion rate (scale effect) and 33 percent is attributed to a reduction in unequal distribution (distributional effect). Changes in HOI in school enrollment are largely due to the scale effects—86 percent for primary school and 82 percent for secondary school (figure 14).

Figure I. 14: Decomposition of Changes in HOI between 2000 and 2010



Sources: Authors' calculations using HIES 2000 and 2010.

I.36. **The HOI analysis shows that inequality can be reduced through interventions that directly address household-based constraints or circumstances.** Household income and parents' education are the most important factors contributing to inequality in education, more in secondary than primary school. Gender and urban/rural circumstances contribute the least to inequality in education. This suggests the need to implement demand-side interventions that remove the income constraints of poor households, as this will likely have the largest impact on educational access (A1 in annex 1). The next section provides further discussion of demand-side interventions.

Gender- and Poverty-Targeted Stipend Programs

I.37. **Bangladesh's education sector is characterized by important stipend programs in both primary and secondary education (annex 2).** The Primary Education Stipends Program (PESP), operational since 2002, supports most primary schools by providing stipends to 40 percent of students in grades 1–5. Students from poor families—both males and females—are selected by school authorities. The program has been revised in 2010 to cover more students in economically disadvantaged upazilas through geographic targeting. The success of PESP could perhaps be measured by the fact that access to primary schooling opportunities is close to universal and there is a relatively low level of inequality. More refined poverty targeting might be needed for future interventions, however, as challenges remain in reaching the most economically disadvantaged, as evidenced by lingering income disparities across the country.

I.38. **Preliminary evidence from the interim impact evaluation shows positive results for poverty-targeted stipend programs that increased economically disadvantaged students' enrollment in secondary education.** The female secondary stipend program was introduced in the country in the early 1990s. Providing conditional cash transfers (CCTs) to all secondary school females, combined with the transfer of tuition to the schools they attend (a combination of demand- and supply-side incentives) led to a strong increase in female enrollment in the last 15 years. To address a gender bias against males, the government has now introduced a poverty-targeted stipend program through SEQAEP. Stipend recipients are selected through a proxy means test (PMT) targeting method (see box 3). The SEQAEP is supported by the World Bank in one-fourth of Bangladesh's 500 upazilas. Similar approaches could be extended to areas not covered by SEQAEP to help Bangladesh address remaining secondary enrollment inequality.

Box I. 3: Proxy Means Testing

A proxy means test (PMT) model was developed for targeting both male and female students of poor households. The idea of PMT is to provide information about the correlation between the economic welfare measure considered (in the case of the Secondary Education Quality and Access Enhancement Project, or SEQAEP, household consumption was used) and some individual, household, and community attributes that a social worker can easily verify. Using a limited set of variables and a statistical model, weights are derived and used to compute the economic welfare of each individual or household. Then, individual applicants are ranked according to their respective household scores, and their eligibility is determined according to a fixed threshold or cut-off score. The cut-off point is defined in such a way that the errors of exclusion (for example, wrongly excluding the genuinely poor) and inclusion (wrongly including the non-poor) are minimized.

Results of the SEQAEP project's impact: SEQAEP's PMT-based stipend program led to a 20-percent increase in secondary school retention among males. Females' higher PMT-based stipend amount (compared to the old amount) led to a 15-percent increase in retention. The effects are larger for males and females from poorer households. There is no significant adverse impact of the program taking away stipends from females in relatively wealthier households. Student learning outcomes are low, particularly for children of poor households, and there are no short-run impacts of the PMT stipend program on learning outcomes (Parajuli et al, 2012).

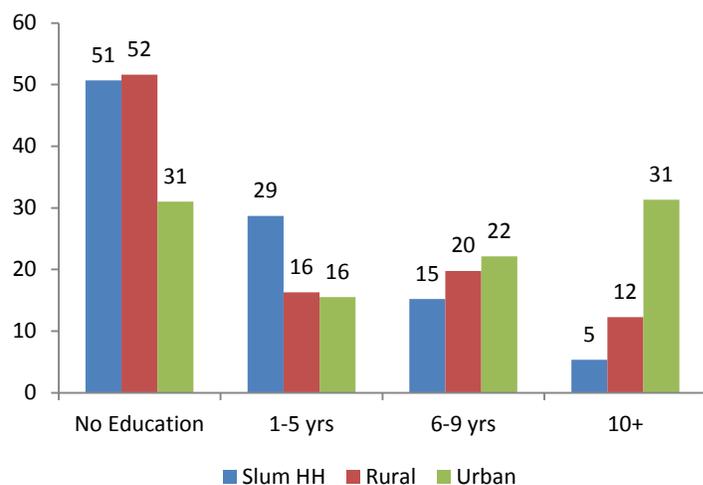
Education in the Slums of Bangladesh

I.39. **The pace of urbanization in Bangladesh has been rapid, and the population in large metropolitan cities is increasing at an even faster rate than countrywide urbanization.** When Bangladesh declared its independence in 1971, only 8 percent of the population lived in urban centers. By 1990, that share rose to 31 percent, and in 2010, about 52.5 million people were living in urban areas. It is estimated that by 2030, about 98.6 million people (44.3 percent of the total population) will be living in cities. About 54 percent of the urban population reside in four large cities—Dhaka, Chittagong, Khulna, and Rajshahi—which is also where most of the slums are located. Dhaka, the capital, contains about 37 percent of the total urban population, with more than 15 million inhabitants.

I.40. **Fast urbanization has been accompanied by a high increase in the slum population, which mostly lacks basic social services such as education, health, water, and sanitation facilities.** While 55 percent of slum households are poor—a share that is even larger than the rural poverty rate (30 percent)—23 percent of slum occupants live in extreme poverty (World Bank 2013b). More than 73 percent of slum inhabitants share toilets and 81 percent share water sources. Because of poverty and limited job opportunities in rural areas, many households are forced to migrate to slums in metropolitan cities for better economic prospects. In most cases, migrants never return to their villages, which explains why the average duration of residency for slum occupants could be as long as 19 years or more.

I.41. **There is also a lack of educational services in the slums, and the education outcomes are low.** About 58 percent of slum inhabitants over the age of 12 are literate compared to the national and urban literacy rates of 60 and 72 percent, respectively. In fact, 55 percent of adult slum inhabitants over the age of 17 have never been to school—and among those who have attended, the educational attainment of adults living in the slums is much lower than that of their rural counterparts (figure 15). Around 20 percent of adult slum dwellers, aged 17 or older, have more than primary education, while 32 percent of rural adults have completed at least primary education.

Figure I. 15: Educational Attainment of Slum Inhabitants, Compared to Rural and Urban Counterparts



Source: The slum household (HH) data are based on the Urban Slum Survey in 2011; the rural and urban data are based on HIES 2010.

I.42. **Similar to literacy rates, primary and secondary enrollment rates in the slums are substantially lower than the national rates, although the gender gap is still the same across all income groups.** The GER in the slums is 91 percent, compared to 101 percent nationwide. Similarly, the NER is 62 percent in the slums compared to the national rate of 77 percent. For secondary education, the current GER and NER in the slums are comparable to the 1995 national rates. The Urban Slum Survey (see box 4) also shows that there is a gender gap in enrollment, favoring females. In particular, the primary school GER is 86 percent for males and 96 percent for females, while in secondary school, it is 31 and 39 percent for males and females, respectively.

Box I. 4: The Urban Slum Survey

The World Bank conducted an Urban Slum Survey in 2011 to assess the gap between supply and demand for education in the slums of Bangladesh. The survey used a stratified two-stage random sampling to produce a representative sample of slums with more than 50 households within the metropolitan cities of Dhaka, Chittagong, Khulna, and Rangpur. First, slums were randomly selected from a 2005 database of the Center for Urban Studies (CUS) in Bangladesh; then, a census of households with at least one schooling age child in the randomly selected slums was conducted to draw the final random sample of households. CUS's definition of slums is settlements with a minimum of 10 households and satisfying at least four of the following criteria: (i) predominantly very poor housing; (ii) very high population density and room crowding; (iii) very poor environmental services, especially water and sanitation; (iv) very low socioeconomic status; and (v) a lack of security of tenure.

The Urban Slum Survey included 2,464 slum households and 251 non-slum households living adjacent to the surveyed slums; schools adjacent to the surveyed slums (within a 1-km radius from the slum entrance); and focus group discussions in 30 slums of Dhaka, 10 slums of Chittagong, 5 slums of Khulna, and 5 slums of Rangpur. Enrollment rates of slum children are a lot lower than those of their urban and rural counterparts (see table 4). Overall, the survey revealed that the slums have supply constraints, with less access to educational resources and schools, and that they have the highest rate of out-of-school children (who have either never enrolled or dropped out) (World Bank (b), 2013). See Section 2.4 on "Education in the Slums of Bangladesh" for further details.

Table I. 4: Enrollment Rates of Students—Slum Children versus Urban and Rural Average

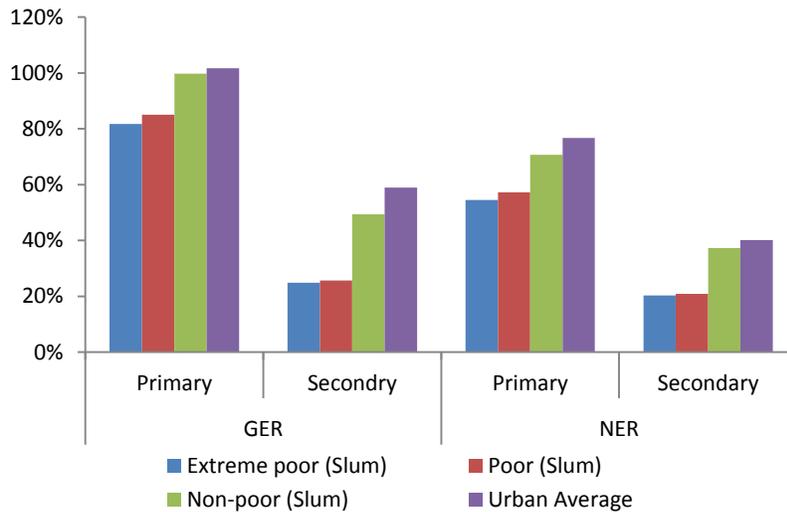
Students	GER (%)		NER (%)	
	Primary	Secondary	Primary	Secondary
Slum	91	36	62	28
Slum, boys	86	31	59	24
Slum, girls	96	39	66	31
Urban average	102	59	77	40
Rural average	100	63	77	43

Source: Urban Slum Survey in 2011 and HIES 2010.

Note: GER = Gross Enrollment Rate; NER = Net Enrollment Rate.

I.43. **There are significant differences in access to primary and secondary school between the poor and the non-poor living in the slums, although the enrollment rate of the non-poor is still below the national average.** Figure 16 shows a gap of 18 percentage points between the primary school GER of extremely poor households versus the non-poor, while for secondary education, the gap is even wider (24 percentage points). A similar scenario is noticeable for the NER: 20 percent of secondary school-aged children of extremely poor households in the slums attend secondary school, while the number is 37 percent among the non-poor slum children.

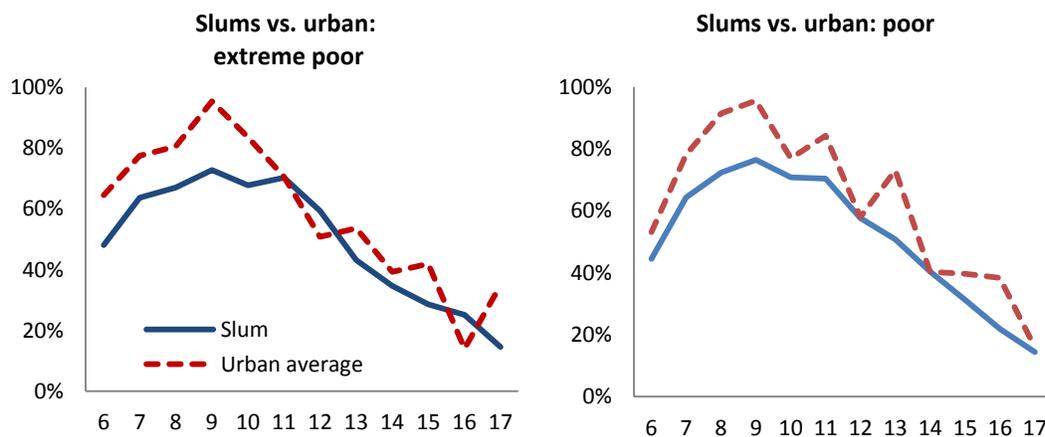
Figure I. 16: Gross and Net Enrollment Rates in the Slums by Poverty Status



Source: Authors' calculations based on the Urban Slum Survey 2011 and HIES 2010.
 Note: GER = Gross Enrollment Rate; NER = Net Enrollment Rate.

I.44. **On average, slum children participate less in schooling than non-slum or urban children, regardless of their socioeconomic status—especially at earlier grades.** Figure 16 shows that living in the slums increases the likelihood that a child will never enroll or will drop out of school, compared to children living in non-slum urban areas. While many children (in the slums as well as non-slum urban areas) who start school late tend to drop out by age 9, by the time they reach age 11, their enrollment rate declines sharply (figure 17). Children from poor and extremely poor households in the slums attend school far less than their non-slum urban peers, especially at earlier ages of schooling.

Figure I. 17: School Enrollment by Poverty Status



Source: Authors' calculations using the Urban Slum Survey 2011 and HIES 2010.

I.45. **There is a supply constraint for school accessibility.** Evidence points to a shortage of accessible schools for slum children, especially at the secondary level. For instance, there is one primary school near the entrance of a slum for every 121 primary school-aged slum children and one secondary school for every 678 secondary school-

aged slum children. Children attending these schools are from both slum and non-slum areas, and 69 percent of the available secondary schools are private schools, making it difficult for children from poor households to access education. This indicates serious supply-side constraints at the secondary level, considering that the national averages of enrolled students per institution are 215 for primary and 394 for secondary.

I.46. **The largest share of education spending goes to private tutoring for both poor and non-poor slum children.** The monthly education expenditure for a primary student is about Taka 370, while it is Taka 930 for a secondary student. No statistical difference is found between males and females. The largest share of education spending for slum children goes to private tutoring, both in primary and secondary education. The breakdown of education expenditures shows that transportation, uniforms, and admission fees represent a slim portion of the total spending. The share of tuition fees, although relatively higher than these fees, is much lower than that of private tutoring. Poor slum children also devote a fair amount of their education spending on private tutoring—21 percent at primary and 31 percent at secondary. Non-poor students currently spend almost twice as much as poor students on education.

Out-of-School Children in Bangladesh

I.47. **Because of Bangladesh's investments in primary and secondary education in the last two decades, most school-aged children are now enrolled in school.** Many poor children have never enrolled in school and are hard to reach, while non-poor children who are out of school are mostly dropouts. Although there is little or no gender disparity in primary and secondary education, many females and poor males do not proceed beyond high school for various social, cultural, and economic reasons.

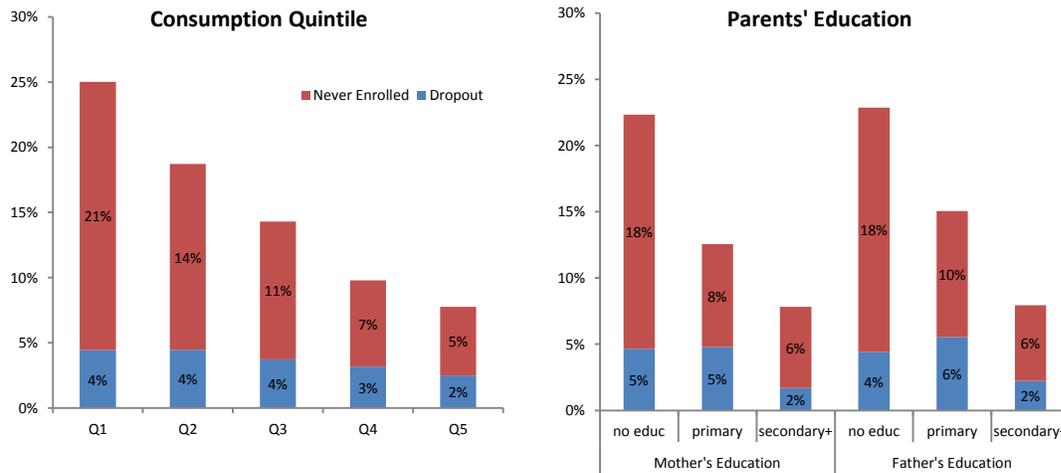
I.48. **The total number of out-of-school children aged 6 to 14 are about 5.5 million in 2010, largely declined from 7.7 million in 2000.** These 5.5 million children represent 16 percent of the total population in that same age group, and the poor represent 54 percent of the out-of-school children, declining from 72 percent (HIES 2010). This large decline, however, can also partly explained by the reduction in national poverty rate. Similarly, for the age group 6–17, the number of out-of-school children has decreased from 12.7 million to 9.2 million, and the share of the poor among them has dropped from 68 to 48 percent.

I.49. **The majority of out-of-school children aged 6 to 14 either never enrolled in school or did not complete grade 1, and income and the parents' education are the most important risk factors.** Sixteen percent of children aged 6 to 14 were out of school in 2010—and among them, 59 percent were never enrolled or did not complete school. A higher percentage of boys is out of school compared to girls—20 percent versus 13 percent (HIES 2010). The parents' education and household income are the two most significant risk factors for children being out of school, among multiple risk factors (see figure 18 and annex 1, table A1). Regression result shows that the poorest children (the bottom 20 percent) are 12 percent more likely to be out of school, compared to the richest 20 percent, and this difference is mostly due to a lower chance of ever enrolling or completing grade 1. Parents' educations are the next important risk factor; having a mother with more than a secondary education reduces the chance of being out of school by about 8 percent, compared to a mother with no education, after taking into account other risk factors (see annex 1, table A2).

Slum children have limited access to schools, with one primary school near the entrance of a slum for every 121 primary school-aged slum children, and one secondary school for every 678 secondary school-aged slum children.

Children attending these schools are from both slum and non-slum areas, and 69 percent of the available secondary schools are private schools, making it difficult for children from poor households to access education.

Figure I. 18: Percentage of Out-of-School Children by Consumption Quintile and Parents' Education

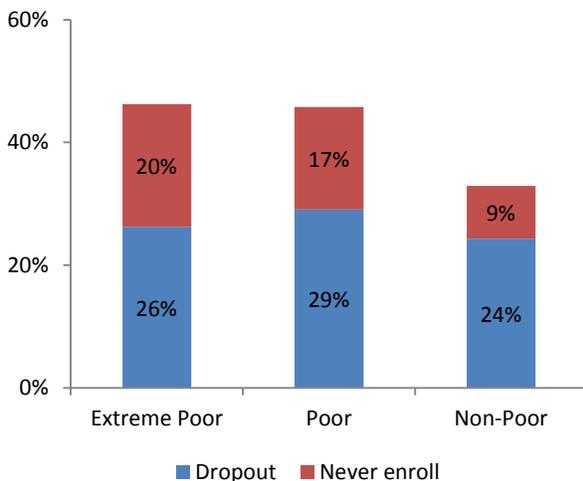


Source: Authors' calculations using HIES 2010.

Note: "Q" stands for quintile group, based on per capita household's consumption. "Never enrolled" children include children who have enrolled in school but have not completed grade 1, due to limited information on such students in HIES 2010.

I.50. **The slum survey shows that a large proportion of extremely poor children who are not in school have never enrolled in school, while the majority of non-poor slum out-of-school children dropped out of school.** About 47 percent of extremely poor slum children aged 6–17 do not attend school (compared to 33 percent of non-poor slum children). The Urban Slum Survey conducted for this Policy Note shows that 43 percent of extremely poor children have never been to school (see figure 19). For the extreme poor, similar proportions of out-of-school children are either dropouts or never-enrolled students, while most non-poor out-of-school children are dropouts.

Figure I. 19: Out-of-School Slum Children by Poverty Status

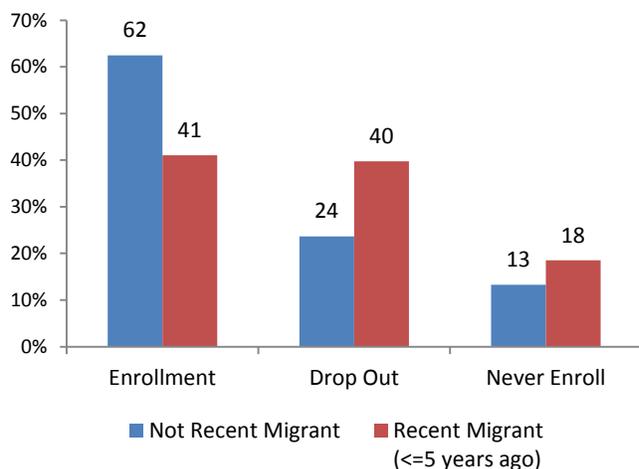


In the slums, about half of extremely poor children are out of school, and 43 percent have never been to school.

Source: Authors' calculations, Urban Slum Survey 2011.

I.51. **Children whose households migrated recently to the slums are more likely to drop out.** The slum data show that having recently migrated to slums lowers the school enrollment rate by 21 percentage points. The share of enrollment is 41 percent for the children of recent migrant families, while it is 62 percent for those who did not migrate recently. This is mainly attributable to the high probability of the children of recent migrants dropping out. There is a 40 percent dropout rate for children of recent migrants, compared to 24 percent for the children of non-recent migrants (figure 20).

Figure I. 20: Migration and Children’s Schooling Status



Government or private schools cater less to the needs of slum children than NGO schools.

Source: Authors’ calculations using the Urban Slum Survey 2011.

I.52. **Analysis also shows that like migration, household income, parental education, and the availability of NGO schools are strongly associated with the probability of slum children getting enrolled in school.** There is heterogeneity across slums in terms of the population’s poverty incidence and composition, and these are correlated with school dropout. At the individual level, children with educated fathers and mothers are respectively 1.4 and 3.2 percent more likely to get enrolled in secondary school. At the social level, having more NGO schools in the slums’ vicinities is likely to raise school participation by 2.1 percent and secondary enrollment by 5.6 percent. In contrast, private schools attract fewer children from the slums, given the relatively higher cost of attendance, as well as government and non-government schools located near slums, which generally do not cater to their needs (see annex 1, table A2).

I.53. **Recent evidence shows that targeted grants delay the time before students drop out of school, especially for females.** An impact evaluation analysis shows that in areas where ROSC offers grants, the project delays dropping out by 2 percent for students aged 7–14, 8 percent for students aged 6–8, and 15 percent for students aged 6–10 (Dang and Sarr 2013). When ROSC combines grants with a student allowance,¹¹ it further increases enrollment while decreasing dropout rates, although this only affects students aged 6–10. Females are found to benefit more from the ROSC program than males, as it delays females dropping out by 3 to 5 percent more than males, respectively, for the age groups 6–8 and 6–10. (Further information on the ROSC program is detailed in box 5 and the next section.)

¹¹ The ROSC project provides grants to schools (along with student allowances) in 37 upazilas, and offers grants (with no student allowances) in the remaining 23 upazilas. ROSC recently expanded the provision of grants and education allowances to an additional 100 upazilas.

Box I. 5: Education for Vulnerable Urban Children

To cater to the education needs of vulnerable groups in urban areas, many non-governmental organizations (NGOs) and other non-formal education providers have established schools near scatter settlement areas with limited access to formal education. The Urban Slum Study finds higher rates of school enrollment for slum children that live near NGO schools, especially at the secondary education level. The following are features of NGO schools within the vicinity of slums: (i) NGOs schools are located in areas where there are not many government schools; (ii) a large percentage of NGO schools (50 percent) are funded through foreign aid; and (iii) the schools have a higher percentage of multi-grade classrooms.

The second Reaching Out-of-School Children (ROSC 2) project initiated a pilot program in 2013 to meet the education needs of vulnerable slum children in selected areas of Dhaka. The program's features include: (i) providing education allowances to children that are conditional upon school attendance; (ii) school grants to the community for renting school venues and other school operating costs; (iii) multi-grade systems, and (iv) flexible schooling hours.

3. Public Expenditures, Outcomes, and Education Financing

To better understand factors that have led to increased educational access, this section analyzes various educational providers' costs and financing in comparison to the benefit incidence of education outcomes. Particular consideration is given to identifying areas that might need further resources.

Public Financing of Primary, Secondary, and Higher Education

I.54. **The government finances both recurrent and development education expenditures through revenue and development allocations in the national budget.** While the revenue allocations correspond to earnings drawn from internal revenue sources, a significant amount of development allocations come from external aid in the form of loans and grants, mainly from development partners. For example, the developing partners' contribution amounts to 14 percent of the total PEDP 3 expenditure. The government's revenue budget in secondary education covers the cost of establishing government schools, as well as teacher salaries and school maintenance and repairs for government and non-government schools. More than 90 percent of the revenue budget goes to finance teacher salaries in primary and secondary education (analysis on teacher salaries are discussed in the Policy Note on Quality Education). On the other hand, the development budget is mainly used to cover expenses related to new classrooms, new schools, new laboratories, information and communication technologies (ICT), multimedia, teachers' training, and so on.

I.55. **Both Education Ministries (MoPME and MoE) receive their annual block allocation from the Ministry of Finance and then allocate the resources to their respective agencies.** MoPME distributes funds to the Directorate of Primary Education (DPE), the National Academy for Primary Education (NAPE), and the Bureau of Non-Formal Education (BNFE). MOE's funds are distributed to the DSHE, the Directorate of Technical Education (DTE), and the project upazilas. The National Curriculum and Textbook Board (NCTB), charged with developing and distributing all textbooks free to all students of all types of primary and secondary schools, is under the mandate of the MoE but also receives a block allocation. Both the revenue and development budgets cover the administrative costs of these agencies and distribute funds to all of the upazilas. Four times each year, the fund is released from the Ministry of Finance so that it can go toward every educational project that the government has with various development partners.

I.56. **All government schools and registered non-government schools are fully funded by public resources at both the primary and secondary levels.** At the primary level, all GPSs and RNGPSs receive financial support from the government to cover teacher salaries and limited allowances and, through the government funding these non-government primary schools, it also provides stipends to 40 percent of students from rural areas and free textbooks to all students. At the secondary level, government and non-government schools and madrasahs receive public funds in the form of Monthly Pay Orders (MPOs) to cover teacher salaries to provide free tuition and a

stipend to rural students. Non-government schools also receive private contributions to set up schools. In tertiary education, about 92 percent of colleges are privately managed and over the half of them receive government support in the form of MPOs.¹² Non-registered schools, private schools, and NGO schools across the levels do not receive any government funding, but students receive free textbooks regardless of the type of schools they are attending (details are in annex 1, table A4).

I.57. The legal framework under which government primary schools operate precludes them from directly charging fees to their students, with the exception of examination and scholarship fees, given that they receive full public financial support. Although there is some scope for SMCs to raise contributions from the local community for school development, a school's ability to raise funds for operating expenses is severely constrained. Therefore, these schools are heavily dependent on government funding for most of their operating expenses. Two recent initiatives have implications for funding arrangements going forward: (i) the recently declared nationalization of RNGPSs, and (ii) the initiative to provide schools and upazilas grants for addressing school- and upazila-level issues.

I.58. Differences in government funding among education providers are mainly driven by levels of teacher compensation and the pupil-teacher ratios. Given that there are more than 30,000 non-government schools in Bangladesh, a substantial number of these still require inspection visits to assess the extent to which they fulfill the criteria to receive government funding. However, MoPME and MoE only have a limited capacity to monitor the recognition process of such schools and ensure that the recognized schools have adequate funding.

Private Sector and Government's Role in Financing the Private Education Sector in Bangladesh

I.59. Much of the achievement in enrollment stems from public-private partnership in providing and financing education services. In the last two decades, Bangladesh has benefited from a combination of factors, ranging from supply-side incentives to demand-side interventions to promote education in rural areas, modernize religious schools, and promote girls' education. As a result of these incentives, a private sector comprised of both non-religious and religious schools has emerged, especially in secondary education, to cater to the needs of various groups and increase access to education in Bangladesh (see Asadullah et al. 2008).

I.60. There are only seven more government primary schools now than there were 20 years ago (37,672 in 2010 versus 37,665 in 1990); in contrast, the number of non-government schools (both non-religious and religious) has increased. According to BANBEIS, in 2011 the number of non-government schools operating in primary education was around 41 and the number in secondary education was about 18,753. On the other hand, the number of non-government religious schools (madrasahs) was estimated at 9,327. Within the non-religious and religious non-government schools, the registered schools recognized by the government have benefited from financial support over the last two decades. Much of the increase in primary and secondary enrollment could be attributed to the growth of non-government schools, especially in secondary education. This enrollment growth has been the result of supply-side incentives offered to private education service providers. For instance, initially incentives were given to traditional non-registered all-male madrasah secondary schools to register and include subjects such as Mathematics, and later the government provided financial incentives to registered madrasah secondary schools to start admitting female students. Today, most madrasah secondary schools in Bangladesh are registered, follow a modern curriculum alongside traditional religious subjects, and are co-educational.¹³

Equity in Public Spending on Education

I.61. While the amount of public education spending is an important factor in improving education outcomes and fostering economic growth, how resources are distributed across groups is equally central. Although the Bangladeshi government has prioritized education as one of the key sectors of public investment over the last decade, education spending as a share of the GDP is still relatively low in Bangladesh compared to many

¹² In Bangladesh, colleges provide various programs, including three-year bachelor's programs, four-year honors programs, and master's programs.

¹³ Some estimates suggest that 50 percent of students enrolled in madrasah high schools are now female (Asadullah et al. 2009).

other countries at a similar level of development. If spending more on education is desirable for economic growth, it is also critical (from an equity viewpoint) to take into account how resources are distributed to ensure universal access to education. Benefit incidence analysis helps understand the distributional implications of public spending.

I.62. **According to the benefit incidence analysis,¹⁴ the poorer households are receiving more public education spending at the lower education levels, but the higher education spending is directed more toward the richer population.** The poorest 40 percent in Bangladesh received 50 percent of public primary spending, rising from 32 percent in 2005. At the secondary level, the benefit incidence goes down to 31 percent, then to 12.5 percent at higher secondary education, and then to 6.6 for the same population (the poorest 40 percent). However, the top 40 percent of Bangladeshi receive about 80 percent of public spending directed to tertiary education (see annex 1, tables A5 and A6).

I.63. **Despite the increase in primary and secondary enrollment over the last two decades, Bangladesh continues to display the lowest amount of public spending on education as a percentage of GDP compared to neighboring countries.** The amount Bangladesh spends on education has remained relatively stable in the last 10 years, oscillating between 2.2–2.5 percent of GDP over 2000–2008, while countries like India and Nepal have had ratios ranging from 3.1–4.4 percent and 3.0–4.6 percent, respectively, in the same period (World Development Indicators 2011). The average public education spending of low-income countries is also consistently higher than that of Bangladesh over the last decade, at around 3.2–3.7 percent.

I.64. **Thus, more resources are needed in the education sector to tackle remaining challenges—including access equity, improving the quality of education across the board, and addressing systemic governance issues in the education system.** Between 2000 and 2008, Bangladesh demonstrated its commitment to education by devoting 14 to 16 percent of the government’s total budget on education. Also, if the economic growth achieved over the last decade is taken into consideration—an average 5 percent growth in real terms per annum—then this translates into a 50 percent increase in real public education spending. By comparison, India and Pakistan invested a lower percentage of their total government budgets (between 10.7–12.7 percent and 6.4–11.2 percent, respectively). However, the average share of public spending going to education for all developing countries was around 18.7 in 2008, further reinforcing Bangladesh’s need to boost expenditures in the education sector—especially in secondary, TVET, and higher education—to position Bangladesh as an emerging economy in the next 10 years.

Public Expenditure Tracking Survey in Education: The ROSC Case

I.65. **Spending more funds does not always yield a higher-quality education; ROSC is an example of an inexpensive, yet successful program that focuses on reaching children who are over the school age but never enrolled, as well as those who dropped out in primary school.** Box 6 details some of the specifics of the program, analyzing the benefit incidence and exploring how information and accountability are key to measuring a program’s efforts.

Between 2000 and 2008, Bangladesh’s total spending on education was between 14 and 16 percent of the government’s budget.

However, the average amount of public spending on education for all developing countries in 2008 was around 18.7 percent, reinforcing Bangladesh’s need to boost expenditures in the education sector—especially in secondary, technical, and vocational education, as well as higher education—to position Bangladesh as an emerging economy in the next 10 years.

¹⁴ The benefit incidence analysis focuses on recurrent expenditures.

Box I. 6: The Reaching Out-of-School Children Project

Designed and implemented in 2005, the Reaching-Out-of-School Children (ROSC) project is a unique and innovative model in that it combines both supply- and demand-side interventions targeted towards children aged 7–14 who were left out of the formal primary education system, especially those from disadvantaged areas and groups. Two major interventions have been designed and implemented: (i) a school-only grant ranging between Taka 55,000–65,000 per year in 23 selected upazilas, and a school grant plus an education allowance to students in the remaining 37 selected upazilas. In the latter category of schools, the grant ranges from Taka 25,000 for grades 1–3 to about Taka 31,000 for grades 4–5 per year. During project implementation (2003–2008), close to 500,000 out-of-school children were enrolled in about 15,000 learning centers set up under the project in 60 upazilas. Currently, the project has expanded to 30 new upazilas to cover more out-of-school children. An evaluation of the program shows increased enrollment of children from disadvantaged households and a decreased number of dropouts (Asadullah et al. 2011; Dang et al. 2011; Dang and Sarr 2013).

Benefit Incidence Analysis

Relative to government and non-government schools, ROSC schools spend less per child across all income groups. For instance, in 2005 the government spent about Taka 2,991 annually for each enrolled child coming from the poorest households. ROSC spends less than half that amount for the same income group—about Taka 1,307 (see tables 5 and 6). However, both formal primary schools and ROSC schools have similar shares of children from the poorest two quintiles enrolled in primary school (about 23 percent). From a cost-effectiveness perspective, the ROSC intervention is doing better than the government’s formal primary education program.

Table 5 shows that the benefit incidence of ROSC spending is not progressive, but rather weakly pro-poor. As a result, the school grants and student allowances are not efficiently targeted toward the poorest. However, government spending per student is even more regressive than ROSC spending, because the share of the non-poor is higher and that of the poor is lower than the corresponding shares of ROSC spending per student (compare tables 5 and 6).

Table I. 5: Benefit Incidence Analysis of ROSC Public Expenditure Tracking Survey in Bangladesh

Consumption quintiles	Real per capita consumption expenditure (Taka)	Share of real per capita consumption expenditure (%)	Share of ROSC students enrolled in school (%)	Number of ROSC students enrolled in primary school	ROSC annual spending per student (Taka)	Share of ROSC annual spending per student (%)
Poorest	715	10	22	111,943	1,307	18
Second	968	14	23	115,778	1,264	17
Third	1,213	17	20	102,082	1,434	19
Fourth	1,582	23	18	87,655	1,669	22
Richest	2,510	36	17	82,542	1,773	24
Total	6,988	100	100	500,000		100

Source: Authors’ estimations, 2011.

Note: ROSC = Reaching Out-of-School Children.

(continued on the next page)

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Table I. 6: Benefit Incidence Analysis of Government Public Expenditure in Primary Education

Consumption quintiles	Real per capita consumption expenditure (Taka)	Real per capita consumption expenditure (%)	% of students enrolled in primary school	Number of students enrolled in primary school	Annual spending per student (Taka)	% of annual spending per student
Poorest	701	9	23	3,729,732	2,991	17
Second	968	13	23	3,686,318	3,026	17
Third	1,209	16	21	3,460,034	3,224	18
Fourth	1,580	21	18	2,978,327	3,746	21
Richest	3,110	41	15	2,485,272	4,489	26
Total		100	100	16,339,683		100

Efficiency of Public Spending

The role of information and accountability in reducing inefficiency for generating a quality education (as measured by test scores) in ROSC schools are strongly correlated. The determinants of technical efficiency tend to suggest that displaying information about grants received by learning centers (LCs) is strongly associated with improved efficiency. Similarly, schools in which students' guardians elect the Center Management Committee (CMC) chairperson tend to be more efficient than schools in which the local elite initiate the CMC's formation. The latter are likely to be less accountable, and thus more prone to spending school resources inefficiently. Table 7 highlights the positive relationship between dropouts and inefficiency. Overall, schools with high dropout rates tend to be less-efficient schools. Similarly, schools with a higher physical-quality infrastructure exhibit higher efficiency scores.

Table I. 7: Distribution of School Efficiency Score by Treatment Status, Quality of School, and Dropout Rate

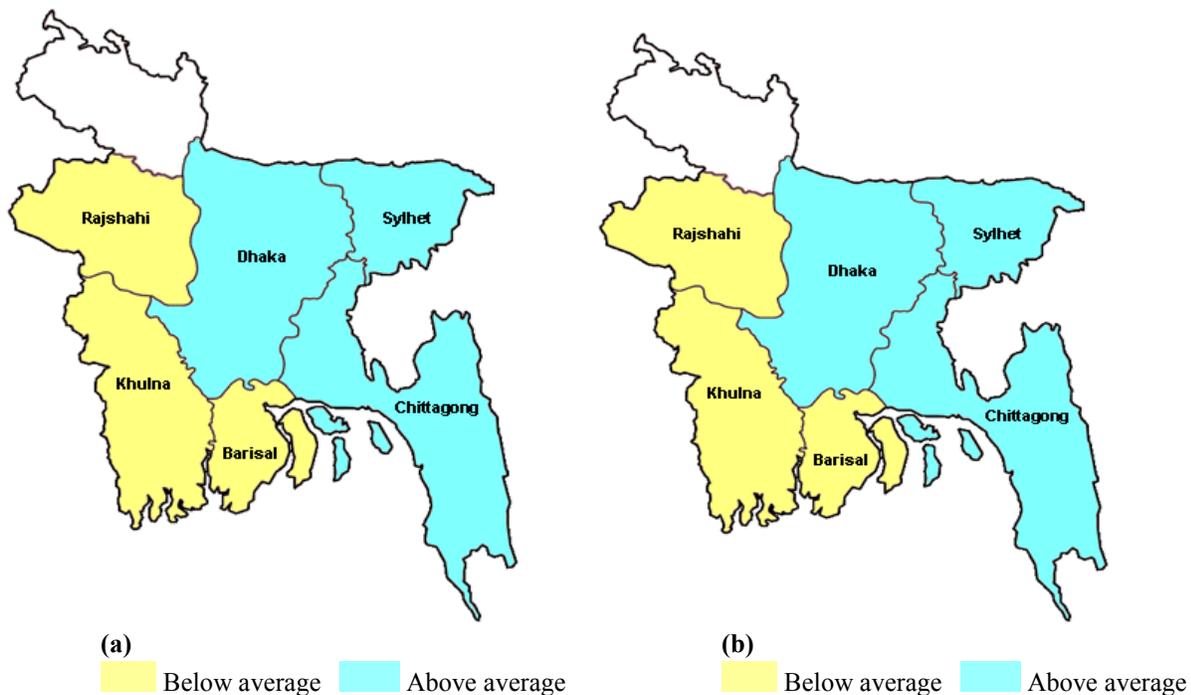
Test score	Grant	Grant+Allowance	Low school quality	High school quality	Low dropout	High dropout
Overall score	0.589	0.534	0.488	0.570	0.611	0.508
Math	0.642	0.535	0.486	0.600	0.580	0.499
English	0.542	0.542	0.500	0.546	0.580	0.499
Bangla	0.713	0.644	0.634	0.684	0.728	0.625
Science	0.627	0.541	0.571	0.587	0.624	0.541

Source: Author's estimations from efficiency frontier models.

Efficiency in Public Education Spending

I.66. Over the last two decades, while the Bangladeshi government and its development partners have spent significant amounts of resources to increase access to primary and secondary education and improve the quality of the education system, less attention has been paid to understanding how efficiently public resources are used. Using district-level data from BANBEIS, this Policy Note estimates the efficiency of secondary and higher secondary schools in Bangladesh with two inputs (the *total number of teachers* and *total number of toilets* in the district) and one output (*enrollment* in the district). Two maps (figure 21) present the distribution of school technical efficiency across Bangladesh's six divisions. An East/West divide becomes apparent in terms of the schools' quality, with Dhaka, Sylhet, and Chittagong exhibiting an efficiency index above the national average, and with Rajshahi, Khulna, and Barisal showing less efficiency (Laborda and Sarr, 2013). Table A2 (in annex 1) shows school efficiency levels by district, using a Data Envelopment Analysis methodology developed by Charnes, Cooper, and Rhodes (1978).¹⁵

Figure I. 21: Technical Efficiency by Division: Bias-Corrected Index for (a) Secondary and (b) Higher Secondary



Note: (a) The average is 0.7618 for higher secondary and 0.6901 for secondary. (b) The average is 0.7659 for higher secondary and 0.70141 for secondary.

I.67. Evidence indicates an inverse relationship between a school district's efficiency level and its number of MPO teachers. There is a noticeable statistical difference between the top third of districts with high technical efficiency and the lowest third, suggesting that secondary MPO teachers could be associated with a low school efficiency level. This seems to point to a disconnect between MPOs received and teachers' performance; thus, there is a need to strengthen accountability mechanisms in the education system to ensure that future MPOs are closely tied to teachers' performance in schools and within the classroom. Also, certain resources allocated to schools are insufficient in both secondary and higher secondary education. For instance, the availability of toilet facilities per

¹⁵ This method determines the most efficient school in the sample and lets the user compare all other schools with respect to that optimal school.

pupil is low. Moreover, some schools have an inadequate infrastructure due to the high rate of dilapidated toilets, while in some districts, the student–teacher ratio is high.

I.68. **While this analysis provides a snapshot of school efficiency and measures how efficiently public resources are being utilized in secondary and higher secondary education, more disaggregated school data are needed at the district or upazila level on a regular basis, to carry out micro-level analysis and capture changes in efficiency.** Such data could also provide insight about what determines technical efficiency and provide policy guidance on how to optimize allocating public resources. Furthermore, administering systematic cognitive and behavioral tests to assess students’ learning outcomes and collecting feedback on a regular basis at the decentralized level could strengthen the link between public resources and the quality of education provided, and make schools more accountable for the education delivered.

4. Policy Directions

Bangladesh has increased access to education on many levels in the last decade. This Policy Note recommends, going forward, that Bangladesh focus: (i) target the remaining, hardest-to-reach population groups to attain universal access in primary education, (ii) pursue early child development (ECD), (iii) enhance the efficiency of the system; and (iv) increase funding for secondary education and resource mobilization in higher education.

4.1 Target the Remaining, Hardest-to-Reach Population Groups to Attain Universal Access in Primary Education

I.69. **As illustrated in this Policy Note, Bangladesh has done well in reaching the majority of its population, especially at the primary level.** Reaching the goals of universal access in primary and higher enrollments in secondary will be important to help Bangladesh get closer to its goal of reaching middle-income status. This could be pursued through: (i) identifying the remaining, hard-to-reach population and developing specific policies and programs to address their needs; (ii) developing a program to address the educational needs of children in urban slums; (iii) scaling up successful stipend schemes; and (iv) working in close partnership with the non-government sector.

I.70. **Identify the remaining, hard-to-reach population and develop specific policies and programs to address their needs.** This PN identified some of the population groups who are out of school (either due to non-enrollment or early dropout), for whom data was available—children from very poor families, especially boys and those living in urban slums. There are other groups—such as disabled children, refugees, and ethnic minorities—for whom limited data exists, but who are crucial for surmounting access issues in primary and secondary education. It will be important to study these groups and their specific issues before embarking on a policy to enhance their educational access.

I.71. **Develop a program to address the educational needs of children in urban slums.** Given the rural focus of most government education programs in the last two decades, the educational needs of children living in the slums of Bangladesh are largely unmet. Therefore, the government should consider focusing education programs on slums and the poor, thereby laying the human capital foundations for an emergent middle-income economy. Children in urban slums require schooling facilities as well as demand-side support to defray the cost of attending school. This could be provided through enhancing the number of classrooms, allocating more teachers to slum schools, and providing more stipends, which have already proven successful in Bangladesh. It will be important to provide flexible schooling options/timings in the slums, as the children generally work during the day.

I.72. **Scale up successful stipend schemes.** Bangladesh has a lot of experience in providing stipends to its students. For children living in extreme poverty, higher values of targeted stipends need to be considered together with family mobilization, as was done in the past in Bangladesh, to get the children to school and prevent dropout. It will be important to scale up cost-effective models in government primary schools and expand targeted stipends toward the poor (for example, those developed under the SEQAEP project) to other parts of the country as possible ways to reduce enrollment and retention inequalities.

I.73. **Work in close partnership with the non-government sector.** The public-private partnership model characterized by public funding and private provision must be maintained and strengthened in Bangladesh. This will

help the country develop new approaches that respond to the demands for educating the poor, and it will require more balanced funding of government and non-government institutions, including unrecognized schools that contribute to MDG targets. Moreover, NGOs in Bangladesh have played a significant role in providing flexible education programs that cater to the needs of the poor, working children, disadvantaged groups, and slum children. Organizations such as the Campaign for Popular Education (CAMPE) have been instrumental in raising voices for disadvantaged, marginalized groups to advocate for education for all (EFA). The innovative approaches implemented by the pioneering NGOs such as BRAC, which runs more than 30,000 schools with more than 1.2 million children, have considerably contributed to reducing inequality in school access at the primary education level. Similarly, working with development partners to increase educational accessibility will be important.

4.2 Pursue Quality Early Child Development

I.74. **ECD has shown a lot of promise in terms of equalizing learning outcomes, such as enrollment, retention, and cognitive development among children from diverse backgrounds.** The learning gains have been shown to be high for children from the poorest backgrounds (see box 7). In Bangladesh, remaining inequities—which seem to start early and continue throughout a child’s lifetime—are large. And, enrollment in ECD is quite low at present. It is therefore recommended that Bangladesh attempt to provide high-quality ECD to all of its children. Since the non-public sector has been a principal provider of these services, attempts should be made to work closely with them, facilitating expansion of their services, through public financing of these NGO-run programs.

Box I. 7: Early Childhood Development

From birth to age 3, children develop most of their rapid motor, cognitive, sensory, social, and emotional skills, and between the ages of 3 and 6 they expand their linguistic and social-emotional skills and rudimentary analytical skills. Therefore, appropriate stimulation in a caring environment is crucial during this period of development. The Early Childhood Development (ECD) program promotes and ensures that children in this age group receive the care, nutrition, stimulation, and appropriate education to improve their chances for survival, growth, and development (Earth Institute of Columbia University).

More and more economic and scientific evidences suggest that ECD is a major driver of success in school and life, through enhancing cognitive and non-cognitive skills such as attentiveness, motivation, self-control, and sociability (Heckman 2010). One well-known example of ECD programs, the Perry Preschool program in the US for children at risk, is estimated to have generated a 7–10 percent per year return on education, contributed by increased schooling, career achievement, reduced costs in remedial education, health, and criminal activities.

Latin America has recognized the importance of ECD and adopted ECD policies with wide public and private support. For example, Chile Crece Contigo is a program designed to serve Chilean children and their families by providing universal access to health and education services through preschool and child care networks. The program emphasizes the monitoring of children from conception to the age of primary school enrollment. Another important feature of the program is a specialized evaluation mechanism to improve the quality and equity of education. Under the Ministry of Education, the National Performance Evaluation System (NPES) provides funds as an incentive and recognition to high-performing professional education establishments. Colombian ECD programs target vulnerable children through volunteer mothers of community child care centers by providing food and attention to low-income children (Hogares Comunitarios de Bienestar) and providing conditional cash transfers to improve education and nutrition outcomes in rural areas (Familias en Acción). The Colombian government finances ECD programs through the establishment of a business tax on payroll for ECD programs (Earth Institute 2009).

In Bangladesh, 22 percent of boys and 26 percent of girls aged 36 to 59 months attend preschool (table 8; MICS 2009). The low enrollment of preschool, combined with significantly high grade 1 repetition rates (at 7 percent), raise the issue of Bangladeshi primary school entrants' preparedness. At the same time, the high prevalence of malnutrition is another concern: 41 percent of children under 5 are stunted; 16 percent are wasted, and 36 percent are underweight in Bangladesh (DHS 2012). This alarmingly high prevalence of malnutrition can potentially interrupt proper brain development of children during the most critical period for brain development. Quality ECD programs addressing both the preparedness of primary education students and the malnutrition of children would benefit Bangladeshi society in the long run.

Table I. 8: Preschool Enrollment in Bangladesh, Children Aged 36–59 Months

Area	Boys	Girls	Total
Rural	22	23	22
Urban	25	26	26

Source: Multiple Indicator Cluster Survey (MICS 2009).

4.3 Focus on Enhancing Efficiency in the Education System

I.75. **The internal efficiency of an education system is measured through repetition and dropout rates, affecting transition and the number of years it takes to produce a graduate of a certain level of education.** As this Policy Note demonstrates, even though more students are completing higher levels of education, internal efficiency is still a matter of concern. It affects the utilization of public financing—which is, at present, quite limited to education. High levels of inefficiency indicate that increasing expenditures will not necessarily result in better outcomes, and the chances for underutilization of funds, or misuse of funds, remain. Reducing repetition and dropout while improving transition in the education system requires a two-pronged approach—an improvement in the quality and relevance of provision, as well as support to lessen the negative impact of demand-side constraints (such as poverty and learning difficulties). In Bangladesh, both areas must be prioritized. Demand-side constraints can be tackled through some of the aforementioned initiatives—but improvements in the quality and relevance of the system are what will determine, to a large extent, the usefulness that families see in the education system. Measures to improve teacher quality, time on task, curriculum, examination, and others mentioned in the Policy Note on Education Quality are likely to remain important to address in Bangladesh.

4.4 Increase Allocations of the National Budget for Secondary Education and Support Resource Mobilization in Higher Education

I.76. **Bangladesh has achieved steady GDP growth over the last 10 years, but has kept the amount of GDP allocated to education at 2.2–2.5 percent, which is relatively low compared to countries with a similar GDP per capita.** In secondary education, dealing with the task of enhancing access and improving the quality of learning requires more resources than are currently available. However, the lack of reliable information makes it difficult to establish a financing strategy that can meet the challenges of an emerging economy. In this regard, a formula-based funding mechanism should probably be initiated to ensure more efficient use of public resources. For higher education, by increasing the focus on autonomy and decentralization, colleges and public universities could develop their own academic programs to raise education standards and quality. The institutions could charge tuition fees to remain financially sustainable, while allocating scholarships and student aid and deploying adequate student loan schemes to enable access to tertiary education for students from disadvantaged backgrounds.

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Annex I.1. Tables and Figure

Table A1 Rank of Relative Importance of Circumstance Variables for Inequality in Education

Year	Most important	2	3	4	5	Least important
Enrollment, ages 6–10						
2000	Male education	Per capita consumption quintiles	Female education	Number of children	Gender	Urban or rural
2005	Per capita consumption quintiles	Female education	Male education	Number of children	Gender	Urban or rural
2010	Female education	Male education	Per capita consumption quintiles	Gender	Number of children	Urban or rural
Enrollment, ages 11–15						
2000	Male education	Female education	Per capita consumption quintiles	Gender	Urban or rural	Number of children
2005	Per capita consumption quintiles	Male education	Female education	Gender	Number of children	Urban or rural
2010	Per capita consumption quintiles	Male education	Female education	Gender	Urban or rural	Number of children
Primary completion, ages 15–19						
2000	Per capita consumption quintiles	Male education	Female education	Gender	Number of children	Urban or rural
2005	Male education	Per capita consumption quintiles	Female education	Gender	Urban or rural	Number of children
2010	Per capita consumption quintiles	Female education	Male education	Gender	Urban or rural	Number of children

Note: “Most important” indicates the inequality (through the dissimilarity index, or D-index) that contributes the most to this specific variable.

Figure A1 Grade 10 Completion Rates across Age Groups by Poverty Status (2010)

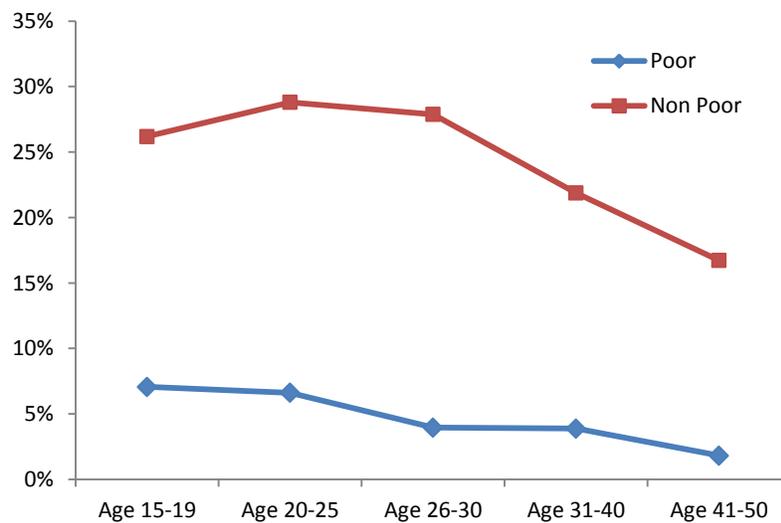


Table A2 Probability of Being Out of School, Never Enrolled, or a Dropout

	Out of school	Never	Dropout
Female	-0.068*** (0.008)	-0.051*** (0.007)	-0.023*** (0.005)
Age	-0.001 (0.002)	-0.019*** (0.002)	0.021*** (0.001)
Consumption quintile1	0.119*** (0.015)	0.090*** (0.014)	0.038*** (0.008)
Consumption quintile2	0.068*** (0.016)	0.046*** (0.015)	0.029*** (0.009)
Consumption quintile3	0.036** (0.015)	0.021 (0.013)	0.016** (0.008)
Consumption quintile4	0.005 (0.012)	-0.000 (0.010)	0.006 (0.007)
Barisal	-0.060*** (0.014)	-0.057*** (0.012)	-0.005 (0.008)
Chittagong	0.027* (0.016)	0.015 (0.014)	0.015** (0.007)
Khulna	-0.045*** (0.015)	-0.041*** (0.013)	-0.007 (0.008)
Rajshahi	-0.040*** (0.013)	-0.031*** (0.012)	-0.012* (0.006)
Sylhet	0.084*** (0.024)	0.068*** (0.021)	0.023** (0.011)
Father's education, primary	-0.049*** (0.013)	-0.060*** (0.010)	0.008 (0.007)
Father's education, secondary +	-0.076*** (0.012)	-0.061*** (0.009)	-0.021*** (0.007)
Mother's education, primary	-0.059*** (0.013)	-0.066*** (0.010)	0.004 (0.009)
Mother's education, secondary +	-0.075*** (0.010)	-0.062*** (0.008)	-0.018*** (0.006)
Rural	-0.053*** (0.014)	-0.028** (0.012)	-0.031*** (0.007)
Constant	0.267*** (0.026)	0.391*** (0.024)	-0.140*** (0.012)
Sample size	11,377	11,377	9,975

Source: Authors' calculations based on HIES 2010.

Table A3 Probability of Enrollment and School Availability in the Slums

Criteria	All children	Primary school	Secondary
Availability of schools: number of schools			
Government/registered non-government schools	-0.001 (0.004)	-0.003 (0.006)	-0.047 (0.045)
Private schools	-0.013*** (0.002)	-0.013*** (0.003)	-0.013*** (0.004)
NGO schools	0.021*** (0.003)	0.019*** (0.005)	0.056*** (0.010)
Madrasahs	0.003 (0.004)	0.010* (0.006)	-0.235*** (0.045)
Individual characteristics			
Age	0.189*** (0.012)	0.595*** (0.076)	-0.269*** (0.057)
Age squared	-0.010*** (0.001)	-0.033*** (0.005)	0.007*** (0.002)
Female	0.049*** (0.010)	0.048*** (0.015)	0.047*** (0.014)
Father's education	0.014*** (0.002)	0.012*** (0.003)	0.014*** (0.002)
Mother's education	0.024*** (0.002)	0.017*** (0.003)	0.032*** (0.003)
Log (adult's earning)	0.166*** (0.011)	0.101*** (0.016)	0.201*** (0.014)
Number of household members	-0.025*** (0.004)	-0.015*** (0.005)	-0.031*** (0.005)
Recent migrant	-0.205*** (0.016)	-0.198*** (0.023)	-0.202*** (0.021)
Experienced shocks	0.041 (0.028)	0.073* (0.041)	0.015 (0.038)
Population of slum children	0.000 (0.000)	0.000 (0.000)	0.000** (0.000)
Constant	-1.557*** (0.114)	-2.712*** (0.337)	1.220*** (0.406)
N	6785	2903	3882
R squared	0.249	0.135	0.286

Source: Urban Slum Study 2011.

Note: Ordinary least squares (OLS) regression. Sample includes slum children aged 6–17. *Significant at 10 percent level; **significant at 5 percent level; ***significant at 1 percent level.

Table A4 Funding Modalities of Various Education Providers in Bangladesh

Sector	Level of government funding
Primary education (grades 1–5)	
Government schools	Fully government-funded.
RNGPS schools	Government provides basic teacher pay and limited allowances; also provides free stipends to 40 percent of rural students and free textbooks to all students. Expected to receive full allowances as schools are nationalized, as per recent government decision.
Government Aliya madrasahs	Fully government-funded.
Independent Ebtedayee madrasahs	Teachers receive Taka 750. Government provides free stipends to 40 percent of rural students and free textbooks to all students.
Recognized non-government Aliya madrasahs	Attached to Ebtedayee sections of higher madrasahs. The government provides basic teacher pay and limited allowances. Provides free textbooks.
Unrecognized madrasahs	No government funding.
Private schools	No direct government funding. Free textbooks for schools following the national curriculum.
NGO schools	No direct government funding. Free textbooks for schools following the national curriculum.
Community schools	Teachers receive Taka 750. Provides free stipends to 40 percent of rural students and free textbooks to all students.
Secondary and higher-secondary education (grades 6–12)	
Government schools	Fully government-funded.
Registered non-government schools	Government provides basic teacher pay and limited allowances. Provides free tuition and a stipend to rural female students.
Government Aliya madrasahs	Fully government funded.
Recognized non-government Aliya madrasahs	The government provides basic teacher pay and limited allowances. Provides free tuition and a stipend to rural female students.
Unrecognized madrasahs	No government funding.
Private schools	No government funding.
NGO schools	No government funding.
Technical education and vocational training (TVET)	
Government institutes	Fully government-funded.
Non-government institutes	Government provides basic teacher pay and limited allowances for most private institutes in this sector.
Tertiary and masters education degrees	
Government colleges	Fully government-funded.
Government universities	Government subvention.
RNG schools	Government provides basic teacher pay and limited college allowances.
Government Aliya madrasahs	Fully government-funded.
Recognized non-government	Government provides basic teacher pay and limited allowances. Alia madrasah allowances.

Source: Adapted from Al-Samarrai 2007.

Table A5 Incidence of Education Revenue Expenditures by Poverty Status, Gender, and Residence (2010)

Quintiles	Primary	Secondary	Higher	Tertiary	All
1	27.4	13.2	4.0	2.0	20.1
2	22.9	17.8	8.5	4.6	19.3
3	19.9	21.0	18.1	14.1	19.8
4	17.0	25.1	28.4	24.5	20.6
5	12.8	22.8	41.0	54.8	20.2
All	100	100	100	100	100
Poor	37.1	20.3	7.5	3.8	28.1
Non-poor	62.9	79.7	92.5	96.2	71.9
All	100	100	100	100	100
Male	49.2	48.4	54.6	57.7	49.9
Female	50.8	51.6	45.4	42.3	50.1
All	100	100	100	100	100
Rural	76.8	74.1	62.3	54.8	73.7
Urban	23.2	25.9	37.7	45.2	26.3
All	100	100	100	100	100

Source: Authors' calculations.

Table A6 Distribution of Household Private Education Spending by Poverty Quintiles (2010)

	Primary	Secondary	Higher secondary	Tertiary
First quintile				
Amount	927	3,086	5,655	6,089
%	5.6	8.5	9.1	8.1
Second quintile				
Amount	1,417	4,482	8,106	8,736
%	8.6	12.4	13.0	11.6
Third quintile				
Amount	1,960	5,404	8,745	11,580
%	11.8	14.9	14.0	15.4
Fourth quintile				
Amount	3,524	7,646	12,325	13,598
%	21.3	21.1	19.8	18.1
Fifth quintile				
Amount	8,723	15,619	27,503	35,074
%	52.7	43.1	44.1	46.7
All				
Amount	16,552	36,237	62,334	75,077
%	100	100	100	100

Source: HIES 2010.

Annex I.2. Government Education-Related Programs and Partnerships

Without a proper account of the various education projects and programs implemented by the government of Bangladesh in the last 15 years, it is difficult to understand how Bangladesh was able to achieve its trajectory in terms of education outcomes. Bangladesh began many initiatives in the years following the World Conference on Education for All (WCEFA), including: (i) the 1993 Compulsory Primary Education Act, which made the five-year primary education program free in all government schools and declared education for females in rural areas free through grade 8; (ii) the establishment of the Ministry for Primary and Mass Education (MPME) in 1992, which set as its objective to universalize primary education and eliminate inequities based on gender and poverty; and (iii) demand-side interventions. Some of the demand-side interventions included: the Free Tuition program for females in the early 1990s; the Food for Education Program (FEP); the Female Primary and Secondary Stipend programs; PEDP 1 (from 1997 to 2003), which was made up of 27 projects (11 of which were co-funded by donors); and PEDP 2, a six-year program beginning in 2003 that aimed to increase access, quality, and efficiency in the primary education sector. PEDP 3 (supported by nine development partners) builds on the successes and failures of PEDP 2 and focuses on accountability, using a results-based approach.

At the secondary level, several projects have been implemented during the last 10 years or are ongoing. Examples include Secondary Education Stipend Project (SESP), Secondary Education Sector Development Project (SESDP), Teaching Quality Improvement (TQI), the Secondary Education Quality and Access Enhancement Project (SEQAEP), the Skill Development Project (STEP), and Capacity Development for Madrasah Education.

These various programs signal that Bangladesh has prioritized equity in access to school through poverty- and gender-related stipends. The focus on teacher training over the last 10 years and more recently on developing skills and improving TVET is also a clear indication that these areas matter to the government. However, in implementing these education projects, less attention has been devoted to building an assessment system that systematically measures and monitors what students are effectively learning in the classroom. The Policy Note on Education Quality addresses this concern at length.

In higher education, Bangladesh has established engineering colleges, created two new science and technology universities, opened ICT courses in 40 post-graduate colleges, and launched eight new public universities (raising the total number to 29 public universities). The government also has plans to modernize library facilities and introduce a unique grading system in higher education by the fiscal year 2016. Thus, it is evident that Bangladesh is shifting toward building a skilled and productive labor force that can compete globally and position Bangladesh as a middle-income country.

A2.1 The Role of Development Partners in Bangladesh's Education Achievements

The World Bank has been a longstanding development partner in Bangladesh's reform initiatives in primary and secondary education. For the last two decades, the World Bank has been one of the leading donors in the education sector, with substantial investments in lending operations as well as in highly rated quality analytical activities that underpinned the policy dialogue on a range of key reforms and critical issues to improve Bangladesh's overall education system.

In primary education, IDA has been involved since the early 1990s, with an investment of US\$150 million in PEDP 1—for an overall project cost of US\$741.7 million covering the period of 1998–2003—of which Bangladesh contributed US\$370 million, and the rest came from other donors. This was followed by PEDP 2, launched in 2003 with the main objectives of improving the quality of primary education through a child-centered approach, supplying textbooks and learning materials free of cost, reforming education management, and strengthening decentralization and the community's role. PEDP 2 was an important step towards coordinating better development-partner support and reducing the government's transaction costs, by adopting a sector-wide approach (SWAp). However, the largest education SWAp in the history of Bangladesh is probably PEDP 3, with a total funding of US\$5.86 billion, of which US\$909.4 million came from development partners and US\$4.950 billion came from the Bangladeshi government. With a total of nine donors, PEDP 3—of which IDA is the second largest contributor—was designed to (i) increase participation and reduce social disparities in primary education; (ii) increase the number

of children completing primary education and improve the quality of the learning environment and measurement of student learning; and (iii) improve the effectiveness of public spending in primary education.

At the secondary level, the government launched a comprehensive reform agenda in 2003 with support from three series of programmatic Education Sector Development Support Credits (ESDCs) provided over three years by the World Bank. The objective of the credits was to support the MoE in instituting critical policy reforms in secondary education to improve governance. With a total IDA investment of US\$300 million, the reform agenda focused on: (i) increasing governance and accountability of secondary schools; (ii) enhancing equity in access; (iii) improving teacher's quality through transparent recruitment and better management of teacher training; (iv) enhancing transparency in textbook production and making curriculum more relevant; and (v) strengthening data monitoring and evaluation capacity.

The Second Female Secondary School Assistance Project (FSSAP 2) was developed in 2002 to improve the quality of, and females' access to, secondary education in rural areas of Bangladesh. It was a follow-up to the IDA-financed FSSAP (1993–2001), and responded to the government's request for IDA assistance to build upon its success. FSSAP 2 managed to sustain the gains in gender equity, and added to the program activities and incentives geared toward increasing the quality of education in participating schools and improving MoE's management and accountability mechanisms at the community and school levels. FSSAP 2 covered rural schools in 119 upazilas across Bangladesh and has been implemented nationwide, with the remaining three-fourths of upazilas being supported by the government, ADB, and the Norwegian Agency for Development Cooperation (NORAD). Despite the project's success in increasing secondary enrollment, especially among females, the quality of education remained low and MoE's monitoring and evaluation capacities were weak. Basic numeracy and literacy tests administered to primary school graduates revealed that 70 percent of them were not competent in writing skills (Greany et al. 1999). Furthermore, many males, especially those from poor families, did not proceed to the post-primary level, with their enrollment rates remaining stagnant or even declining over the years. For instance, between 1995 and 2005, the female–male enrollment ratio among the poor rose from 70 to 120 percent, reversing the gender imbalance in favor of females.

Because of the reverse gender imbalance, in 2008, Bangladesh requested assistance from IDA to deal with this situation, which led to the development of SEQAEP. The cost of SEQAEP was US\$155.7 million and it is still under implementation. Of this total project amount, the World Bank is providing US\$130 million to help raise student learning and improve accountability at the school level, in addition to increasing access to secondary school for both males and females from poor households.

In previous years, the World Bank was involved analytically in higher education—but in recent years, it began engaging operationally with the Bangladeshi government to improve the quality and relevance of university education through the Higher Education Quality Enhancement Project (HEQEP 2009). With a total investment of US\$91.8 million, of which US\$81 million comes from IDA, HEQEP has been designed to address the low level of academic research; low quality of education; weak governance and management practices; establish a credible quality-assurance system; and improve the funding mechanisms of higher education. Another important component of the project is to build a technological infrastructure that enables Bangladesh's universities to become on par with the best universities in the world in terms of access to and use of global knowledge.

A2.2 The Role of NGOs in Bangladesh's Education Sector

Over the last two decades, NGOs have operated in the education sector, catering to the needs of children from disadvantaged families living in remote and hard-to-reach areas. The Bangladeshi government has provided support to these NGOs and let them experiment with a variety of service-delivery mechanisms. Today, some estimates suggest that there are more than 700 NGOs operating more than 30,000 schools in Bangladesh, providing non-formal education. The number of NGO schools has more than quadrupled since the early 1990s, and now comprises 8.5 percent of Bangladesh's primary education system (with an enrollment of around 1.5 million students). Most of these NGO schools are widely considered to be more effective than government schools. The Bangladesh Rural Advancement Committee (BRAC) is one of the largest NGOs in the country working on primary education. BRAC schools make up about 80 percent of all NGO primary schools (see box 1 for more details about BRAC and the NGO model in Bangladesh). To minimize gender inequities, BRAC favors females in their schools and pushes for female attendance. About 70 percent of children attending BRAC schools are female.

One factor behind the success of NGO schools in catering to disadvantaged student's needs is that the cost of providing education is lower than in other types of schools (in particular, government schools). It costs about US\$20 for a year of schooling in a BRAC school. This cost is paid by the school rather than the family, and is less expensive when compared to government schools, which also require private costs. NGO schools are usually one-room mud or bamboo buildings with tin roofs that are rented for a small fee. Therefore, the school building requires minimal expense. Communities are involved in deciding schools' locations and schedules, as well as providing labor and materials to build the schools.

POLICY NOTE II: EDUCATION QUALITY

Key Messages

Key Findings

- **Quality, more so than quantity, is of fundamental importance to any education system.** Recent education literature indicates that it is the quality of an education system, rather than the number of people who have acquired education in the country, that matters for economic and social development.
- **There is a great deal of interest in assessing and improving the quality of education in Bangladesh.** The government has taken major steps in the last few years to measure the “health” of the education system and the performance of students, by undertaking sample-based assessments of numeracy and literacy skills in grades 3, 5, and 8. There is also growing interest in analyzing the results of these assessments and feeding them into the policy-making process.
- **Learning levels are low.** An assessment of literacy and numeracy indicates that 25 percent of grade 5 students master Bangla, and only 33 percent master Mathematics competencies by the end of the primary cycle (grade 5). At the grade 8 level, competencies in Bangla, English, and Mathematics are respectively 44, 44, and 35 percent. While acquisition of non-cognitive skills is not tested, there are many indications that these are limited.
- **Learning is unequal.** Dhaka and Chittagong are performing better than the national average, but performance in Rajshahi and Sylhet is lagging significantly behind. Students in government primary schools (GPSs) perform better than students in registered non-government primary schools (RNGPSs). Students from poor households across the nation perform generally lower than students from wealthy households. It is estimated that the children from poor families are at least three-fourths of a school year behind their richer counterparts in Bangla, and half a school year behind in Mathematics.
- **Learning inequalities start in the early years and persist throughout a student’s lifetime.** The performance difference that appears in grade 3 becomes more severe by the end of the primary education cycle, particularly so in the Barisal and Sylhet divisions. Weak performers are also at a high risk of dropping out and remaining out of school, constraining their acquisition of higher education and skills development.
- **Extensive and frequent public examinations signal the importance of memory recall from textbooks, limiting the focus on acquiring comprehension and competency.** Public examinations are frequent, extensive, and at high stakes, providing strong signals to the education system about what matters most for children’s educational attainment. Because most examinations measure memory recall of textbook content, they neither provide a clear indication of students’ competencies, nor an incentive to develop improved teaching and learning practices in classrooms. The limited time available in the academic year for teaching and learning (much lower than international and regional norms) further constrains time spent on learning.
- **Good policies and interventions can raise the quality of education in Bangladesh.** A very interesting finding of this study is that it is the choice of school that a student attends, rather than a student’s background, which contributes the most to a student’s learning in Bangladesh. This means that going to a “good” school can set a student on a course to better learning, higher educational attainment, and social and economic prosperity. However, schools differ significantly across the country. Improving the situation of significant proportions of these schools by raising their performance to acceptable levels could make notable improvements in the quality of education in the country. This implies that improving the quality of education is well within the purview of public policy.
- **Good teachers are the backbone of the education system.** The single most important school-related factor responsible for better learning is an effective teacher, backed by a supportive system. The current system does not attract, constitute, and retain the most sought-after professionals, and once recruited, it provides little incentive to keep them motivated. Although teachers are better paid than other professionals with similar education levels in Bangladesh, the average teacher is highly unmotivated. Several systemic constraints are identified, which include: a low profile of the profession, limited career progression, limited incentives for good performance or innovating teaching and learning in the classroom, and little or no disincentives for poor performance.

- **Improving governance could enhance the effectiveness of translating good public policies into results.** In many instances, the regulatory regime is reasonably strong, demanding transparency, accountability, and good-quality performance. However, such policies stumble on implementation because of inadequate incentives for compliance and/or disincentives preventing non-compliance. And, additional elements—official or unofficial—at times erode the effectiveness of a good policy. This is of particular concern in the area of subventions provided for teacher pay to secondary schools. Policies regarding subventions have clear criteria linking them to school performance. However, using subvention as a tool to improve the quality of education and to hold the schools accountable for performance has largely failed because there is no strong impetus for the schools to continue performing well, as schools are hardly penalized for underperformance.

Policy Directions

- **Improving quality requires action on many fronts.** Different countries have adopted different paths towards attaining the objective of improved education quality, and there is no single road to attaining this objective. What is clear is that education quality improvement is neither linear nor clear cut, and it requires interventions on many fronts simultaneously. In this Policy Note, several international examples have been provided to support the dialogue on improving education quality in Bangladesh.
- **Recognizing and initiating important policies and interventions.** Many of the challenges documented in this Policy Note are already recognized by the government of Bangladesh. And, important initiatives have been undertaken in the last few years, including improvements in the examination system and monitoring learning consistently through high-quality assessments, merit-based teacher recruitment in primary education, and innovative pilots to support learning among all children.
- **Prioritizing high-quality learning in lower grades and building strong foundational cognitive and non-cognitive skills.** The priority for improving students' learning outcomes is to focus on building foundational competencies and skills in lower grades. The suggested initiatives entail: (i) changing what is valued in the examination system (focusing more on learning competencies) and rationing the number of examinations; (ii) setting national learning goals, which are systematically monitored and fed into the policy-making process (for all aspects of education, including financing, teacher development, curriculum development, and so on); and (iii) developing a national center for monitoring learning.
- **Raising the minimum standard of performance at all schools in the country.** Because the quality of education provision at schools is the most important contributor to student learning, it is important to target interventions at the school level to raise school and teacher performance through: (i) articulating and consistently measuring standards of performance for students, teachers, and schools; (ii) enhancing teacher performance through high-quality pre-service and relevant in-service and continuous education that involves student teaching and programs such as Each Child Learns for promoting cognitive and behavioral skills early; and (iii) enhancing accountability and incentives for good performance of teachers and institutions.
- **Engaging in sector-wide planning to explore synergies.** It is also important to coordinate reforms, exploring all synergies and consequences across the sector. There is limited interface between the subsectors, which are administered by two different ministries, despite the fact that one builds upon the success of the other and provision at one level has considerable implications for other levels. One way to promote coordination is to establish inter-ministerial/interagency task forces, whereby each ministry/agency has a specific responsibility around key thematic areas. Strategic areas for collaboration include teacher education and development, national assessments and examinations, and a curriculum framework, in particular for academic and vocational secondary education.

1. Introduction

Although Bangladesh shouldered a poverty level of 31.5 percent in 2010, this reflects a tremendous decrease from five years earlier, when its poverty level was at 40 percent (Devnath 2011). Through sustained gross domestic product (GDP) growth, investment in health and education, social welfare programs, and remittances, the country is working vigorously at lowering poverty, and it has been identified as a Next Eleven emerging economy. In one regard, the country is excelling through economic development and achievement of its Millennium Development Goal (MDG) for gender parity by employing multiple efforts to promote education and empower women. Yet, to catch up to the needs of the country's mounting educational and technological requirements and to stay afloat on the global economic scene, Bangladesh must take much greater strides in the education sector. This Policy Note considers key factors that currently affect and hinder the quality of education in Bangladesh in meeting these needs. But first, to gain an appropriate context, it is important to consider known factors that foster growth and improvement.

II.1. **Quality, not quantity, in education is the key to economic growth.** Recent international evidence shows that a country's economic growth depends on the education system's quality, rather than the number of people who have **acquired** higher levels of education (Hanushek and Woessmann 2008, 2011). Equal evidence indicates that universal completion of the first six years of education is vital to a country's stability and growth (UNESCO 2005, 2012). Better-quality education also helps to improve social outcomes, including improved, lower infant mortality, and a decline in income inequality (World Bank 2013a). Middle-income countries often extend this benchmark to secondary education, with the implicit understanding that all students should possess a minimum foundation of good-quality secondary schooling (OECD 2011).

II.2. **Defining the quality of an education system.** For the purposes of this study, the *quality of an education system* is defined as a summative measure of the students' learning outcomes, the system's inclusiveness (including equity), and the system's relevance as measured by graduates' employability. Although it is difficult to represent fully what this idea entails, the fundamentals of a good-quality education system could be described as: (i) the quality and availability of teachers; (ii) adequate and relevant use of high-quality curricula, learning materials, and facilities; and (iii) systematic assessments, and analyses of these assessments feeding back into policy. Among these requirements, research points to the effectiveness of teachers as the single most important determinant of high-quality learning (Schacter and Thum 2004; Glewwe and Kremer 2006; Hanushek and Rivkin 2006, 2010). Effective management and accountability mechanisms (including school-based management and stakeholder participation in the system's delivery and monitoring) are also crucial elements. Often incentives, both direct (in terms of rewards and punishment) and indirect (implicit in the policies and practices) function as the glue tying these elements together, enabling optimum results for quality in an education system.

II.3. **Focusing on critical elements.** This Policy Note does not attempt to provide a comprehensive update of all aspects and issues related to the quality of education in Bangladesh. That would be a massive undertaking. Bangladesh's education system is large, involving a multitude of providers and regulators. Therefore, any effort to improve the quality and relevance of the education system overall would require analysis at a macro level, intertwined with student- and institution-level analyses and coordination among various regulators. As such, this report's scope is not to analyze the entire education system. Rather, this PN focuses on the most critical elements that could impact quality, to facilitate a dialogue. Detailed analysis is not conducted on the curricula and the quality of teaching and learning materials, due to limited information. Likewise, data on outcomes in vocational education and training and tertiary education are scarce, limiting rigorous exploration and discussion.

2. Learning Outcomes

Similar to other South Asian countries, Bangladesh has several well-established examinations to assess the performance of students and enable progression from one level of education to another. Investigating the frequency and use of such tests provides a perspective for understanding not only *what* students learn, but also the *way* that they learn.

2.1 Overall Learning Outcomes

II.4. **Although Bangladesh administers a large number of examinations at all stages of the education cycle, it is quite challenging to use these as a measure of learning.** The primary and secondary levels include the following exams (see table 1): grade 5 (the Primary Education Completion Exam, or PECE); grade 8 (the Junior Secondary Certificate, or JSC); grade 10 (the Secondary School Certificate, or SSC); and grade 12 (the Higher Secondary Certificate, or HSC). At the post-secondary level, vocational institutes, colleges, and universities also have their own examination systems. Additionally, primary and secondary schools and institutions also regularly undertake exams (generally occurring monthly, quarterly, semi-annually, and at the end of the year). Some kindergartens have monthly exams, too, adding to the perception that Bangladesh's education system is heavily reliant on examinations to assess students. An added complexity is that examination results are not comparable across different years and with different Boards of Intermediate and Secondary Education (BISEs).¹⁶ As shown in figure 1, pass rates have varied quite significantly between 2010 and 2011, indicating a lack of uniformity in assessing competencies. For example, while the 2010 JSC pass rates were about the same in Dhaka's and Barisal's BISEs, the pass rate jumped in Barisal by 15 percent within a year, while it remained the same in Dhaka. In the absence of any significant difference in input between these two boards during this time period, it is possible that the jump is a result of a change in standards. This wide variance could stem from the JSC being a relatively new exam, but the variance appears to be a common phenomenon. Unstandardized examinations do not allow tracking improvements in students' learning outcomes over time.

¹⁶ There are seven Boards of Intermediate and Secondary Education (BISEs) for general education, one each in each division and then one technical education board and one madrasah board. Although the schools follow the same national curriculum, each Board for general education sets its own public examinations at SSC and HSC levels.

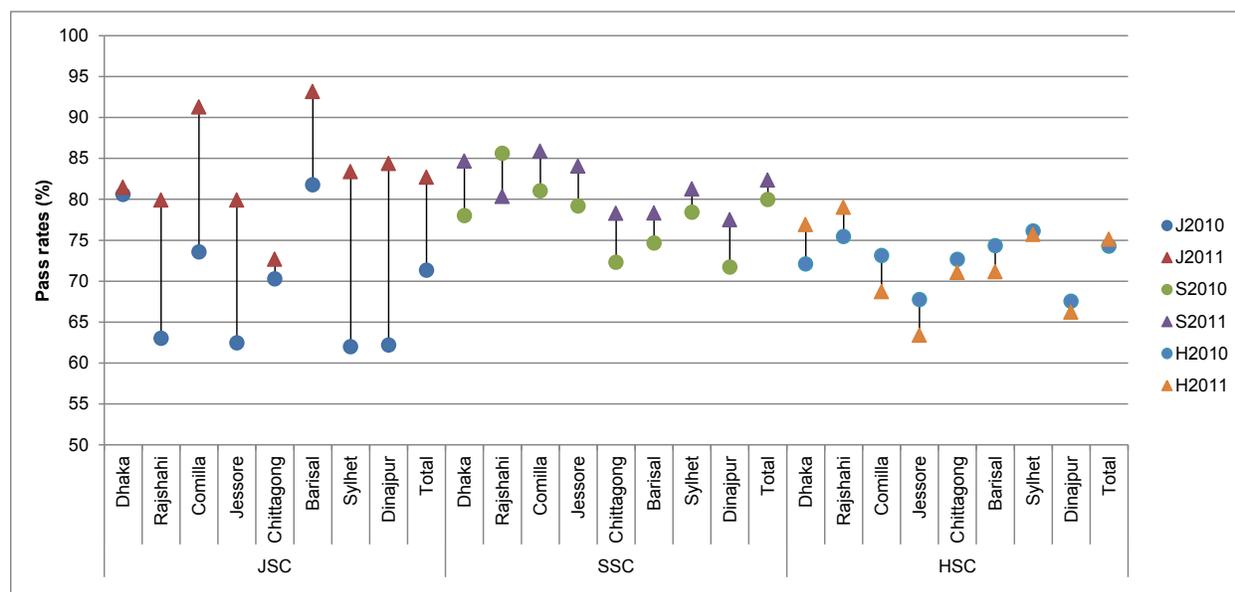
Table II. 1: Number of Examination Takers and Pass Rates, 2012

Grade	Examination	Stream	Appeared	Passed	Pass rate (%)
5	Primary (PECE)		2,481,119	2,415,341	97.35
	Ibtedayee		276,373	255,494	92.45
	Subtotal/Average		2,757,492	2,670,835	96.86
8	JSC		1,507,748	1,298,361	86.11
	JDC		334,051	303,562	90.87
	Subtotal/Average		1,841,799	1,601,923	86.98
10	SSC	Humanities	450,393	365,976	81.26
		Science	231,201	218,444	94.48
		Business Studies	366,550	320,336	87.39
		Vocational	91,170	73,566	80.69
	Dakhil		239,390	210,023	87.73
Subtotal/Average		1,378,704	1,188,345	86.19	
12	HSC	Humanities	368,546	260,726	70.74
		Science	129,645	101,615	78.38
		Business Studies	244,257	205,599	84.17
	Alim		84,246	77,316	91.77
Subtotal/Average		826,694	645,256	78.05	

Source: Directorate of Primary Education (DPE) for grade 5, Bangladesh Bureau of Educational Information & Statistics (BANBEIS) for the rest.

Note: PECE = Primary Education Completion Exam; JDC = Junior Dakhil Certificate; JSC = Junior Secondary Certificate; SSC = Secondary School Certificate; and HSC = Higher Secondary Certificate. Ibtedayee, JDC, Dakhil, and Alim are part of the madrasah (religious) education streams at the primary, secondary, and higher secondary levels, respectively.

Figure II. 1: BISEs' Comparison of Pass Rates between 2010 and 2011 in JSC, SSC, and HSC



Source: Prepared by authors, based on BANBEIS.

II.5. In recent years, Bangladesh has taken bold steps to introduce national system-level assessments to provide information on system performance, and factors contributing to performance—that is, to enable a review of the system’s “health”—to inform policy. The National Student Assessment (NSA) of grade 3 and 5 pupils was conducted by the Directorate of Primary Education (DPE) of the Ministry of Primary and Mass Education (MoPME) in November 2006 and 2008, and again in November 2011. In July 2012, the Monitoring and Evaluation Wing (MEW) of the Directorate of Secondary and Higher Education (DSHE) of the Ministry of Education (MoE) undertook the first-ever learning assessment of students at the secondary education level for grade 8 (Learning Assessment in SEQAEP Institutions, or LASI). These assessments—along with the Secondary Education Quality and Access Enhancement Project (SEQAEP) impact evaluation baseline survey of 2008¹⁷—have provided many insights into the factors contributing to learning in the primary and secondary education system, stimulating a lot of thoughts on the optimum mix of policy, teaching, and learning input for education quality enhancement in Bangladesh. The following sections rely on sample-based assessments of learning, conducted to ascertain students’ competency in literacy and numeracy, along with their determinants for primary and secondary education.

2.1.1 Overall learning outcomes in primary education

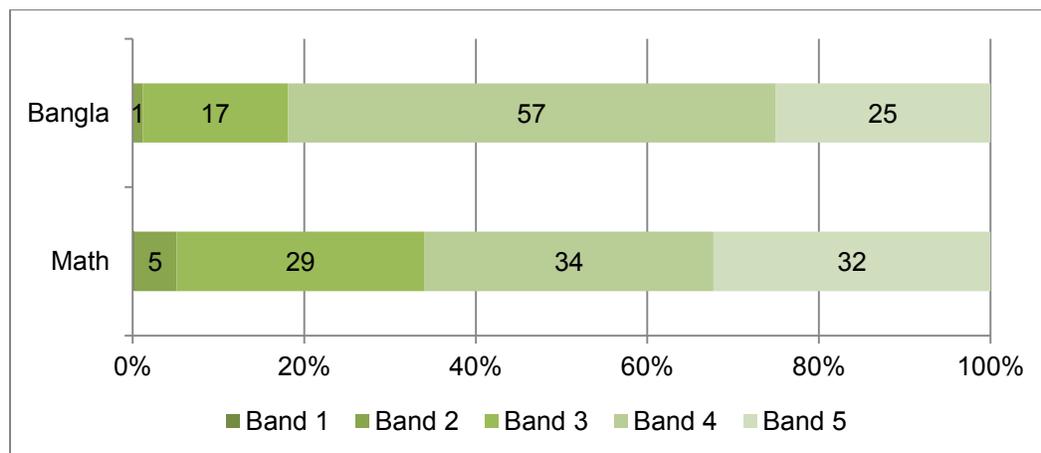
¹⁷ The baseline survey for an impact evaluation study of Secondary Education Quality and Access Enhancement Project (SEQAEP) was used for this analysis. The baseline survey was conducted in October/November 2008 in a sample of 370 schools from 121 upazilas that are covered under SEQAEP and 10 upazilas from SEQAEP. Approximately 6,500 students in grades 6 and 8 took learning assessment tests. The data used for this analysis includes the students who had successfully matched information of teachers and no missing control variables. A regression model includes school, students, and household variables in control.

II.6. Only 25 percent of grade 5 students master Bangla, and only 33 percent of students master Mathematics competencies.¹⁸

The National Students Assessment (NSA) of 2011 drew a representative sample of grades 3 and 5 pupils from 726 schools covering 7 divisions, 32 districts, and 64 upazilas of Bangladesh in 2011. The national sample, which is taken from 548 GPSs and 178 RNGPSs,¹⁹ included 17,626 pupils in grade 3 and 13,854 pupils in grade 5. The result was somewhat alarming. It revealed that only one-fourth of the grade 5 students acquired relevant competency of grade 5 Bangla, and only one-third of these students acquired competency of grade 5 Mathematics (figure 2). The remaining students, although they are at the end of the primary education cycle, are still performing at lower than grade 5-level competencies. In fact, a considerable number of primary school completers are performing much lower than expected at grade 5. The proportions of students in grade 5 with less than grade 3-level competencies are as large as 18 and 34 percent in Bangla and Mathematics, respectively.

The number of students in grade 5 who have not mastered even grade 3-level competencies are as large as 18 percent in Bangla and 34 percent in Mathematics.

Figure II. 2: Proportion of Students in Each Competency Level (Grade 5)



Source: Authors' estimation using NSA 2011.

Note: Bands 1–5 correspond to: 5—equivalent to grade 5; 4—between grades 3 and 5; 3—equivalent to grade 3; 2—below grade 2; and 1—significantly below grade 3.

¹⁸ In Bangla, the following are competencies that grade 5 students are expected to master:

- *Writing:* Write in some detail about relevant experiences, events, information, and ideas in the required range of writing forms, using correct spelling and punctuation.
- *Reading:* Read a range of short, more challenging texts, identifying literal and implied meaning and connecting ideas in different parts of a text.

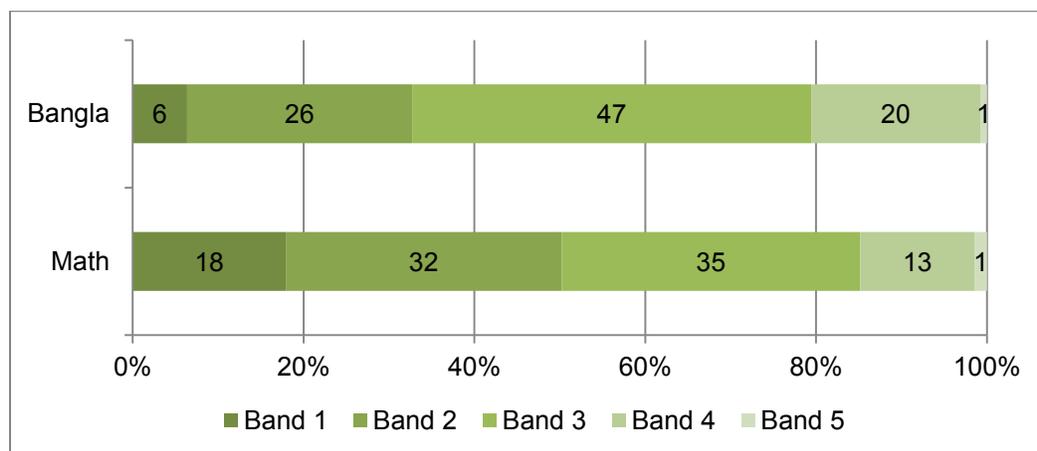
In Mathematics, the following are competencies that grade 5 students are expected to master:

- Apply strategies to simplify numerical expressions and solve word problems on percentages and the unitary method.
- Apply geometric properties and relationships in solving simple problems on angles.

¹⁹ In 2013, there are 13 types of primary education institutions in Bangladesh. The 37,672 government primary schools (GPSs) represent about 46 percent of all schools and 59 percent of total student enrollment. Registered non-government primary schools (RNGPSs), which are privately operated but heavily subsidized, represent about one-third of the schools. In 2012, the government made a decision to convert the close to 3,000 community schools to RNGPSs and then nationalize all RNGPSs to GPSs.

II.7. **Low levels of learning appear to exist from lower grades; 50 percent of the students in grade 3 already fail to meet the competency target for Mathematics, and 33 percent fail to meet the same in Bangla.** The NSA has shown that one in three students in grade 3 falls behind the grade 3 Bangla competency (that is, the proportion of students belonging to Bands 1 and 2 in figure 3). The situation is more severe in Mathematics, where half of the students fail to acquire relevant competencies by the time they are in grade 3. This evidence calls for urgent attention to the issue of low learning achievement at lower grades in primary education. As is evident from the grade 5 assessment results, the proportion of students who keep up with the competency level that is expected in the curriculum reduces as they move up. In other words, students who fall behind at early grades are unlikely to catch up in later years.

Figure II. 3: Proportion of Students in Each Competency Level (Grade 3)



Source: Authors' estimation using NSA 2011.

Note: Bands 1–5 correspond to: 5—equivalent to grade 5; 4—between grades 3 and 5; 3—equivalent to grade 3; 2—below grade 2; and 1—significantly below grade 3.

II.8. **The overall level of the quality of learning needs to improve substantially to be internationally competitive.** A comparison of test items used in NSA and the ones used in the Progress in International Reading Literacy Study (PIRLS) shows that NSA test items are relatively easier. PIRLS, an internationally accepted reading assessment test for students in grade 4, has reading passages of up to 800 words, whereas the 2011 NSA Bangla test uses a shorter number of words. PIRLS questions require pupils to read much longer and more complex text passages and apply more developed reading skills, such as: locating information provided in a text; making inferences; and interpreting, integrating, and evaluating (ACER 2012a). Such skills were not tested in the NSA 2011, which required recalling textbook content, identifying correct spelling and punctuation, writing several sentences; locating explicitly stated information, and making simple inferences from very short text. In sum, this implies that NSA 2011 tests for a lower level of standards compared to the PIRLS.

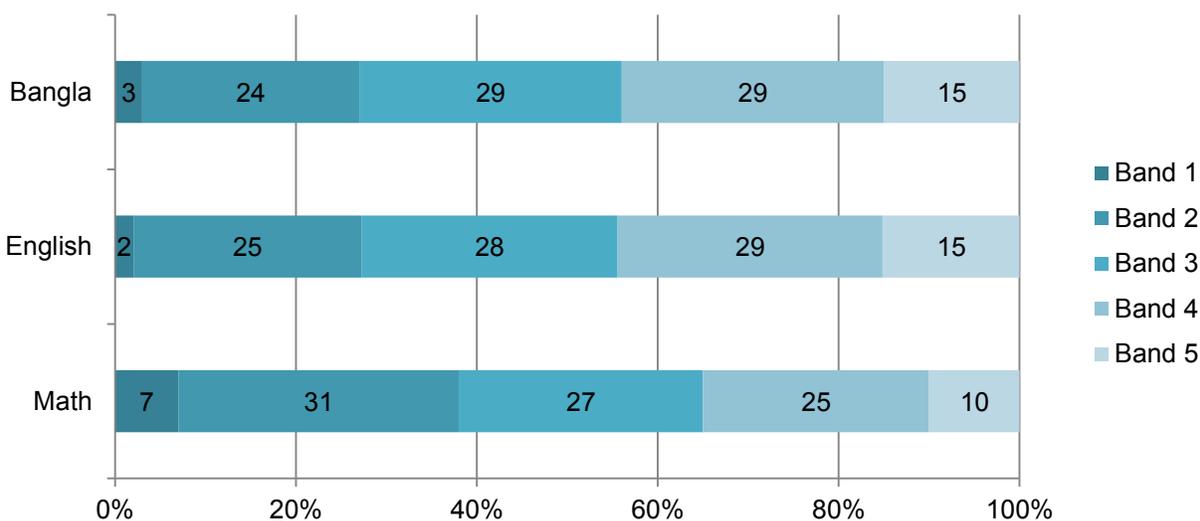
2.1.2 Overall learning outcomes in secondary education

II.9. **Weak performers drop out before reaching grade 9, and only a limited number of students remain competent in their relevant grade.** The 2012 LASI²⁰ revealed that the proportion of grade 9 students who have

²⁰ The 2012 LASI drew a representative sample of SEQAEP institutions from 303 schools (228 general education schools and 75 madrasahs) covering 7 divisions, 28 districts, and 29 upazilas of Bangladesh in 2012. Approximately 8,278 grade 9 students were tested in July 2012 to assess if they mastered grade 8-level competencies. Because this assessment covers only the SEQAEP upazilas, it is not nationally representative. However, because this is the only information available for assessing the competency of secondary students at present in Bangladesh, this analysis uses the results to infer the national-level competency achievement.

mastered grade 8-level competencies in Bangla, English, and Mathematics are respectively 44, 44, and 35 percent (see figure 4).²¹ Although the proportion of students mastering relevant competencies look larger than grade 5 (compared to 25 percent in Bangla and 33 percent in Mathematics), this can be partly attributed to poorly performing students dropping out before reaching grade 9. Figure 5 demonstrates a progression of students from grades 5–10 by their levels of competencies achieved at grade 5. Nationally, 2.2 million students were enrolled in grade 5 in 2010. If only 33 percent of students have acquired grade 5 Mathematics competencies, the estimated number of competent students is 710,000. The number of students achieving grade 8 Mathematics competency in grade 9 is estimated around 440,000 (that is, 35 percent of 1.3 million students enrolled in grade 9), which is a reduction by 38 percent. Those who had less than grade 3-level competencies, estimated around 750,000 students, have all dropped out by grade 8.

Figure II. 4: Proportion of Students in Each Competency Level (Grade 9)



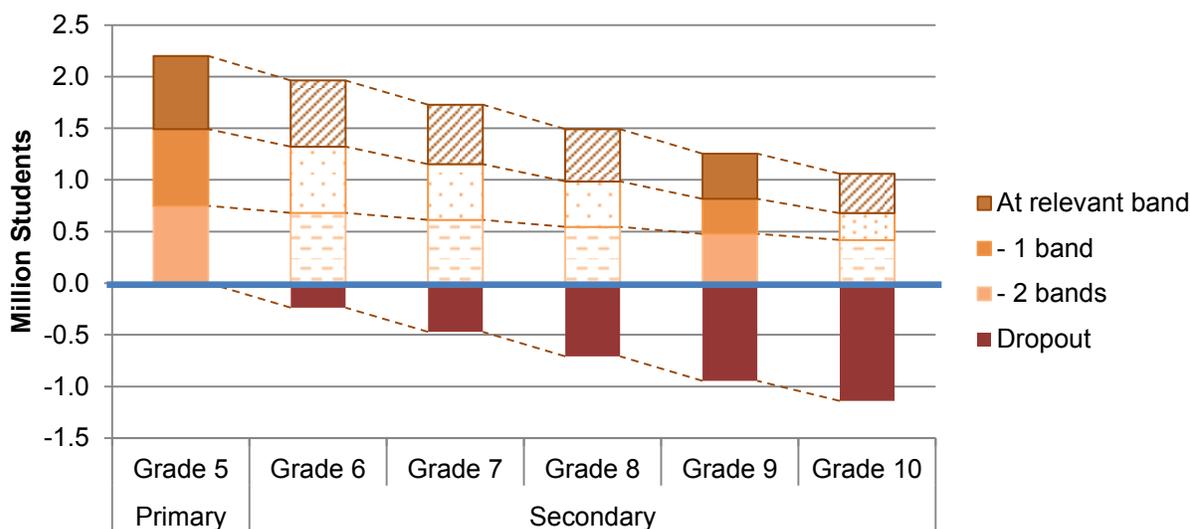
Source: Authors' estimation using Learning Assessment in SEQAEP Institutions (LASI) 2012.

Note: Band 4 is equivalent to the grade 8-level competency.

assuming that the national average competency is similar to that of SEQAEP schools. SEQAEP started in 2008 and covered 121 out of about 500 upazilas in Bangladesh. The Bangla, Mathematics, and English tests, which assess the curriculum of grade 8, were administered to 8,278 Grade 9 students in July 2012.

²¹ Five bands are created for LASI, and Band 4 is assigned for the grade 8-level competency. These five bands are not comparable with the bands for primary NSA.

Figure II. 5: Estimated Number of Students, by Levels of Competencies (Grades 5–10)



Source: Authors' simulation using NSA 2011 and LASI 2012.

Note: Number of students in grades 6–8 and grade 10 who acquire relevant competencies are estimated by using data for grades 5 and 9 students. Groups of –1 or –2 bands behind indicate students of a certain grade who are performing below that grade's relevant competency level.

2.1.3 Relevance of learning in TVET and higher education

II.10. TVET and higher education are growing. After completing their secondary education, only a small percentage of graduates gain entry into post-secondary institutions. Currently, the realm of technical and vocational education and training (TVET) is not large in Bangladesh, but it is burgeoning. In 2010, there are 2,848 institutions, 2,597 of which are private (BANBEIS). About 507,000 students are enrolled in TVET institutions, of which 22.9 percent are female (BANBEIS). Likewise, higher education has grown substantially over the last decade. Close to 80 percent (1.9 million students) of the tertiary students in Bangladesh study in 1,490 private and public colleges that are affiliated with the resource-challenged National University (NU) (World Bank 2013b). The remaining 20 percent of students study in highly competitive public (31) and private (51) universities that bear prestige and status, and are backed by adequate financial resources. Despite the rapid growth in higher education, participation in the higher education sector currently stands at approximately 4.7 percent of the population over the age of 18 having ever accessed tertiary studies. With the growth in demand, an approximate 1.7 percent increase within the last 10 years has been observed, and gross enrollment rates between 2005 and 2010 have increased by approximately 3 percent, to a total of about 8 percent in 2010. Each year, there are approximately 240,000 graduates of colleges and universities, and future projections indicate substantial sustained growth in the sector (World Bank 2013b).

II.11. Information to assess the quality and relevance of TVET and tertiary education is very limited. Results of tracer studies are generally used to assess the quality and relevance of the skill development activities at TVET institutions. However, regular tracer studies are not consistently conducted in Bangladesh. One tracer study conducted for 2,303 TVET graduates found that the employment rate after graduation from all levels of TVET institutions is as low as 8.5 percent—partly because some of the graduates are continuing education—but still about half of the graduates were unemployed (World Bank 2007). It is also challenging to base an assessment on the quality of the input required to produce TVET graduates, such as the quality of the teaching force, number of vacancies, and quality of examinations and learning materials, because no systematic assessment studies have been undertaken to assess whether these factors are contributing to the preparation and development of skilled human resources for the labor market.

II.12. From limited information, it appears that the TVET and higher education system in Bangladesh are not equipped to respond to changes in the labor market's demands.

Leading industries for which TVET is intended to serve are not involved in curricula development or accreditation procedures, and they do not consult with the highly centralized Bangladesh Technical Education Board (BTEB) on courses and skills that new graduates should possess to be successful in finding relevant employment (Mohiuzzaman 2013, World Bank 2010). After being educated in an institution that is essentially disconnected with both the informal and formal labor market, it is not unusual for prospective employees to be searching for employment for up to two years (World Bank 2010). The link, therefore, between what students learn in the classroom and what is current industry practice is quite weak. The absence of regular tracer studies and the lack of information on labor demand and employer input have compounded the quality challenges within Bangladesh's TVET sector. Students completing TVET programs with this mismatch of skills graduate with credentials that have low social and economic value (World Bank 2010). The curriculum of NU-affiliated colleges is centrally developed, monitored, and evaluated by the National University's Center for Curriculum Development and Evaluation (CCDE). Administrative and management challenges at the CCDE have inhibited stakeholder participation in any curricula revision. Therefore, the gap between labor market requirements and content taught in colleges is very wide (World Bank 2013b).

After being educated in a TVET institution that is essentially disconnected with both the informal and formal labor market, it is not unusual for prospective employees to be searching for employment for up to two years.

The link, therefore, between what students learn in the classroom and what is current industry practice is quite weak.

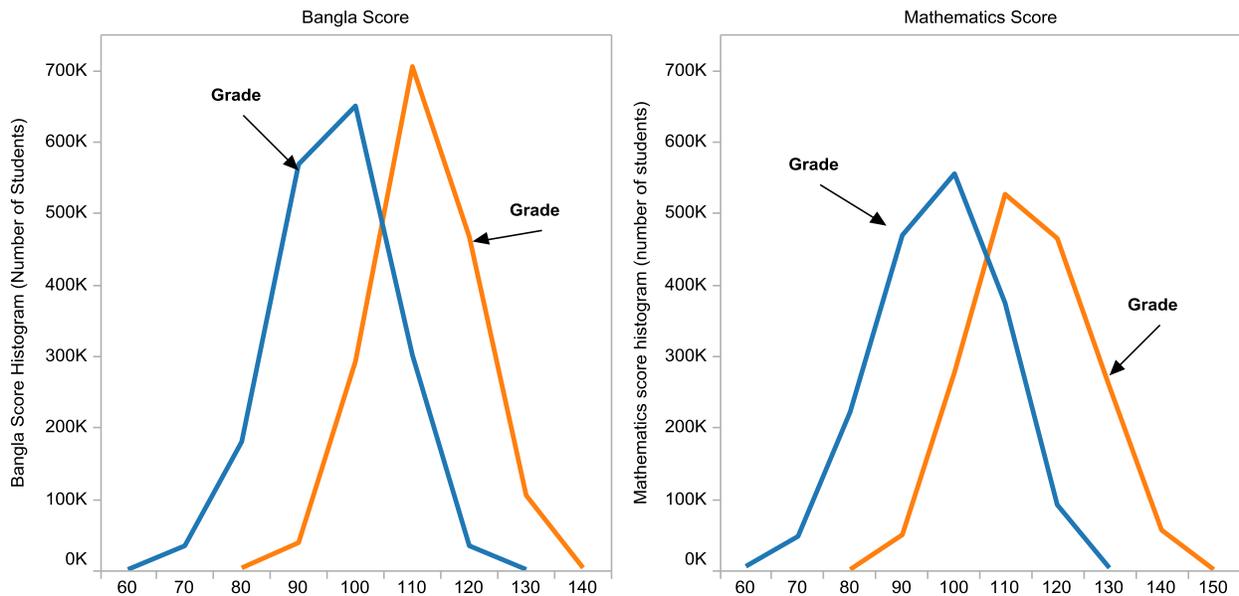
2.2 Equity in Learning

II.13. Although Bangladesh aims to achieve equity in learning, the NSA 2011 points to the presence of significant performance inequalities among various groups. These groups are evident by geographical locations, school characteristics, and individual and household characteristics, and these inequalities pose important policy concerns.

2.2.1 Equity in learning in primary and secondary education

II.14. Learning inequality is significant—about 20 percent of the best performers in grade 3 perform better than the bottom 20 percent of grade 5 students in Bangla, and the bottom 30 percent of grade 5 students in Mathematics. This is concerning, given that the grade 5 students have two additional years of education. Figure 6 shows that in both Bangla and Mathematics, there are many grade 5 students who have scored below the top performers of grade 3.

Figure II. 6: Comparison of the Distribution of Performance between Grade 3 and 5 Students (Bangla and Math)

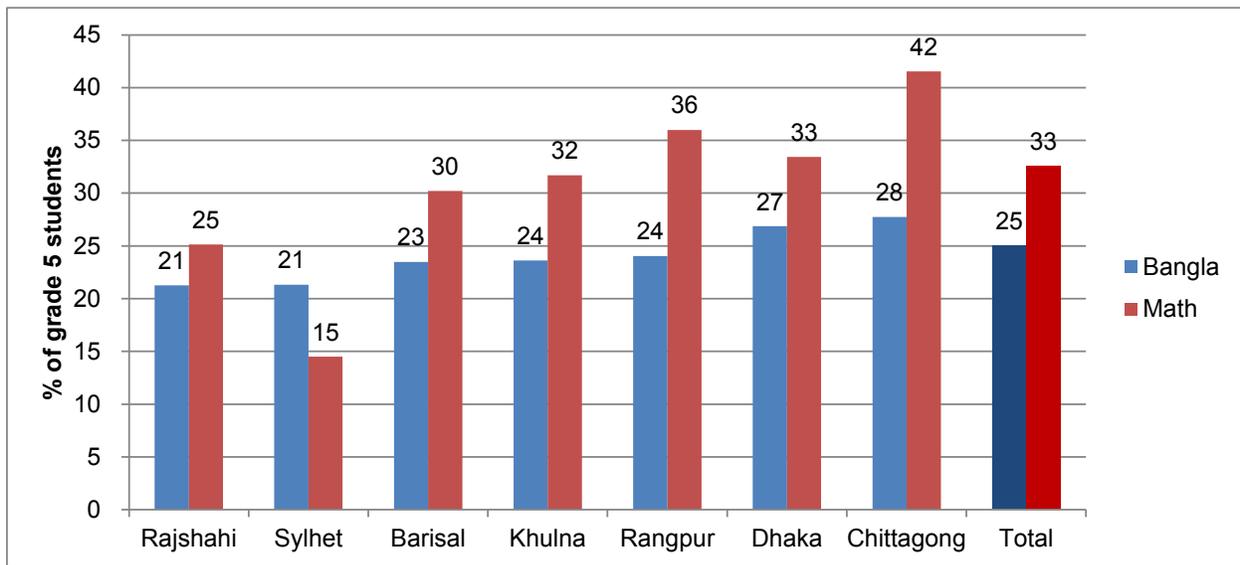


Source: Authors’ analysis using NSA 2011.

II.15. **Regional differences exist in students’ learning outcomes in Bangladesh.** While the national average competency in Bangla among grade 5 students is 25 percent, it ranges from 21 to 28 percent, depending on the division. The Dhaka and Chittagong divisions are performing better than the national average, but performance in Rajshahi and Sylhet is lagging significantly behind the national average. Figure 7 reflects a similar pattern for Mathematics, although the performance inequality is much wider than that of Bangla, ranging from 15 percent in Sylhet to 42 percent in Chittagong, against the national average of 33 percent. Although the percentage of students achieving grade 5 competencies is larger in Mathematics than in Bangla in most divisions, the Sylhet division exhibits a lower proportion of students achieving grade 5 competencies in Mathematics (15 percent) than in Bangla (21 percent). Regional differences, as well as an overall low performance of students from the Sylhet division, are also observed in grade 8.²²

²² LASI samples represent SEQAEP institutions that are based in rural areas only. As a result of taking only rural samples, Dhaka and Chittagong—which have higher urban populations and appear to have a relatively high performance in the primary NSA—perform relatively lower in the LASI.

Figure II. 7: Percentage of Grade 5 Students Achieving Grade 5-Level Competencies



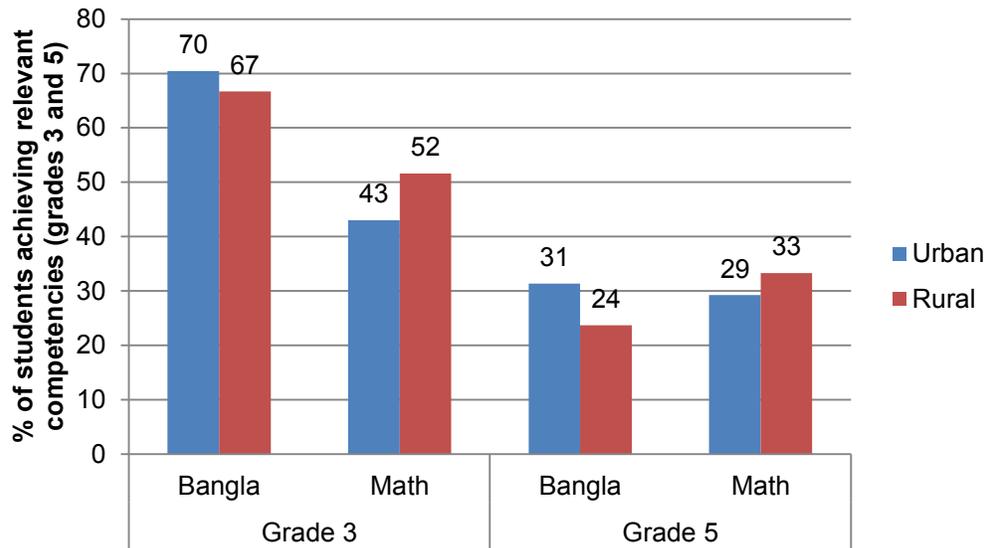
Source: Authors' analysis using NSA 2011.

II.16. Urban students perform better in Bangla, while rural students perform better in Mathematics.

Contrary to international experience, where urban students usually perform better than rural students because they have access to better education facilities and teachers, NSA 2011 found that urban students do well in Bangla, while rural students are better in Mathematics in both grades 3 and 5 (figure 8). The difference between urban and rural students in Mathematics is statistically significant in all cases. These findings are generally consistent with the findings of NSA 2008.²³ In 2008, urban students outperformed rural students in Bangla in both grades 3 and 5, but there was no statistically significant difference in performance in Mathematics (ADSL 2009). An Urban Slum Study conducted by the World Bank in 2012 on the situation of education in urban slums shows that children who live in urban slums have much less access to education and much lower educational attainment than children in the non-slum neighborhoods. The finding of better performance in Bangla and low performance in Mathematics by urban students demands further study.

²³ Although the NSA 2008 is not for comparison across different years and for grades 3 and 5, the average score difference between urban and rural areas is relevant.

Figure II. 8: Percentage of Urban and Rural Grade 3 and 5 Students Achieving Respective Competencies



Source: Authors' analysis using NSA 2011.

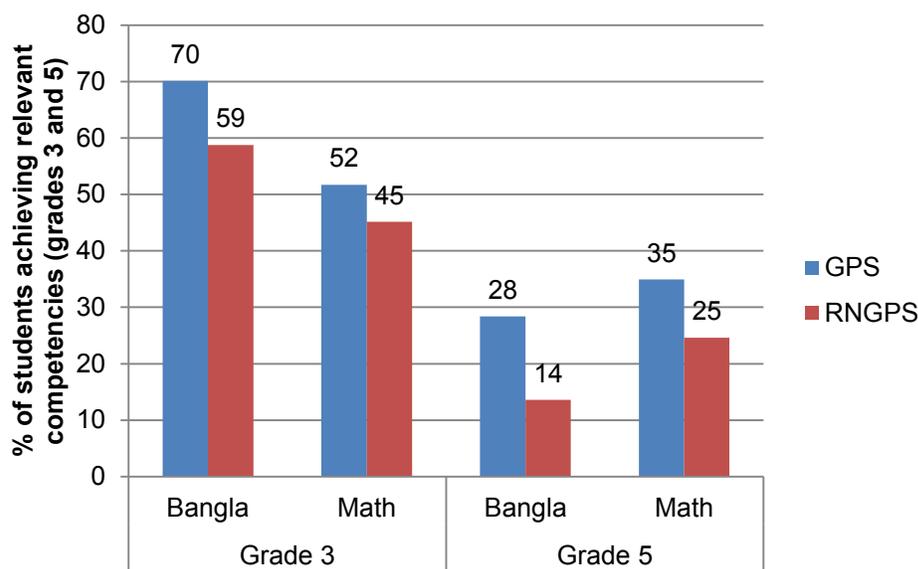
Note: Differences in average scores are statistically significant at 1 percent in both subjects in both grades.

II.17. **Students in GPSs perform better than students in RNGPSs in grades 3 and 5.** Figure 9 indicates that the performance difference that appears in grade 3 becomes more severe by the end of the primary education cycle. While only 84 percent of the grade 3 students in RNGPSs perform in Bangla at levels similar to those in GPSs,²⁴ this ratio is only 50 percent²⁵ for grade 5. These differences are particularly stark in the Barisal and Sylhet divisions.

²⁴ $59/70 = 0.84$

²⁵ $14/28 = 0.50$

Figure II. 9: Percentage of Grade 3 and 5 Students Achieving Respective Competencies (by School Type)



Source: Authors' analysis using NSA 2011.

Note: Differences in average score are statistically significant at 1 percent in both subjects in both grades. GPS = government primary schools; RNGPS = registered non-government primary schools.

II.18. Analysis for this Policy Note finds that students from the government secondary schools and private schools which do not receive subventions from the government tend to perform better than those from the vast majority of the non-government schools getting subventions.²⁶ There are 317 government secondary schools, as opposed to 18,753 non-government secondary schools in the country. The government secondary schools comprise less than 2 percent of total secondary schools in the country. Non-government schools that receive subventions from the government are referred to as *MPO-recipient schools*.²⁷ Better performance of government secondary school students could well be a result of better resources, stringent teacher recruitment policies, and higher remuneration packages in the sample of schools surveyed. Although the communities that the MPO schools and the non-MPO schools serve are similar in the sample, the performance of students between these two school types is different. The fact that MPO schools, constituting some 98 percent of secondary schools in Bangladesh, perform well below the expected level is alarming and worrisome. These schools

The fact that MPO schools, constituting some 98 percent of secondary schools in Bangladesh, perform well below the expected level is alarming and worrisome.

These schools are expected to meet certain quality standards to be eligible for MPO. Once MPO is received, it does not remain a strong impetus for the schools to perform.

²⁶ Based on the SEQAEP impact evaluation baseline survey in 2008.

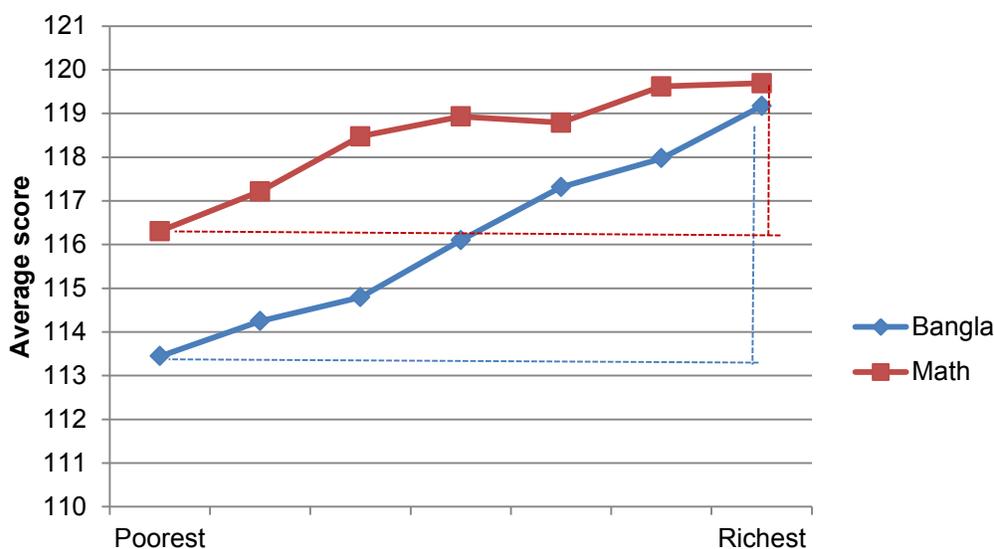
²⁷ Monthly Pay Order (MPO) is a salary support provided to teachers of recognized non-government schools. Provision of subvention in the form of MPO began in 1981, first as 50 percent of the basic salaries of the government secondary school teachers. After successive increases, it is now at the level of 100 percent of the basic salaries of the government secondary school teachers. There is a set of criteria in terms of school facilities, management, number of students, and performance based on which a school is recognized for MPO. However, these criteria have never been strictly followed in the past. In some areas, it is difficult to meet all the criteria. For example, in the remote and disadvantaged areas, the criterion on the number of students is difficult to meet. However, in most other areas political considerations and skewed evaluation processes dictate the recognition of schools for subvention. The schools receiving MPO are expected to perform at a certain level in terms of terminal examination results. However, this performance criterion has been difficult to enforce for various reasons. Some non-government schools, particularly in the big cities, do not seek subvention from the government, because they have adequate resources on their own.

are expected to meet certain quality standards to be eligible for MPO. However, once MPO is received, as evident from the study, it does not remain a strong impetus for the schools to perform. It further emphasizes the need to align performance with public subsidy.

II.19. Students from poor households perform generally lower than students from wealthy households. Figure 10 shows large differences in average scores in learning achievement between relatively wealthy children and their poorer counterparts.²⁸ The correlation with poverty seems stronger for Bangla than for Mathematics. Based on statistical analysis,²⁹ it is estimated that the children from poor families are at least three-quarters of a school year behind their richer counterparts in Bangla, and half a school year in Mathematics. However, by grade 8, the performance inequality between the poor and the non-poor is less pronounced, since most of the non-performing poor students would likely have dropped out before attending secondary school. An increase in dropouts of students from poorer families by grade 8 narrows the rich-poor gap in performance among the survivors.

Children from poor families are at least three-quarters of a school year behind their richer counterparts in Bangla, and half a school year in Mathematics.

Figure II. 10: Average Score by Different Wealth Groups (Grade 5)



Source: Authors' estimation using NSA 2011.

Note: Wealth groups are established by using six proxy variables, which include possession of a separate room for study, safe water, sanitary latrine, electricity, TV, and a pucca-type household. Each variable is weighted equally and the household will score a point if it has one and 0 if it does not have one.

²⁸ Household wealth is estimated by calculating an asset index, which is constructed from variables such as having a separate room for study, safe water, sanitary latrine, electricity, TV, and pucca-type household. The asset index—which ranges from 0 to 6—is created by having each of these possessions. A household is labeled rich if it scores 6 and poor if the score is 0.

²⁹ The difference in the means between two groups (the richest and the poorest) is as large as 0.66 and 0.41 of standard deviations in Bangla and Mathematics in grade 5 (that is, the effect size). The effect sizes are compared against grade 3 and 5 students, which are 1.85 and 1.61 for Bangla and Mathematics. The effect size of 0.66 for Bangla is about 36 percent of the difference between grade 3 and 5 students ($0.66/1.85=0.36$); 36 percent of a 2-year gap (Grade 5 less Grade 3 = 2 years) is approximately 9 months.

The scores presented in this figure are scale scores to enable comparison between grades and over time. Average scores for grade 5 students are 116.2 (with a standard deviation of 8.7) in Bangla and 118.6 (standard deviation of 11.1) in Mathematics.

II.20. The only gender gap in performance evident in primary and secondary education is in Mathematics, where boys outperform girls, and the gap increases by each grade level. Internationally, reading skills are usually higher among girls than among boys,³⁰ but there are no statistical differences in the performance of Bangladeshi boys and girls for grades 3, 5, and 8. In Mathematics, however, boys' performance is higher than girls' in all grades. This is similar to findings in other countries.³¹ Although the performance gap is insubstantial at the primary level, the gap becomes substantial by grade 8. This finding is generally consistent with other student assessments in primary and secondary education (CAMPE 2008, 2009). CAMPE (2009) explained that social attitudes and practices as well as learning opportunities at school are responsible for this gender gap. The girls are expected to do more household work than boys, and less encouraged to study at home.

2.2.2 Equity in learning in TVET and higher education

II.21. There are a number of equity concerns in the current TVET provision models in Bangladesh. Individuals from low economic backgrounds are inhibited from considering TVET, since for many, the opportunity cost associated with a one- or two-year educational program is high and unaffordable (Mohiuzzaman 2013). In a recent study, youths who were more economically advantaged were shown to be twice as likely to participate in formal TVET programs, and those living in urban areas are more likely to consider TVET (as opposed to apprenticeship programs, which are more preferred by rural students), since they are geographically closer to training centers and schools (CAMPE 2013). The Ministry of Women and Children Affairs offers female participants who are primary school graduates (who have completed grade 5) opportunities for training, while other TVET providers offer very limited opportunities for anyone who has less than a grade 8 standing. The minimum requirement of grade 8 for entry into these programs also excludes the participation of the majority of the male youth population (Mohiuzzaman 2013). Female students comprise 24 percent of the enrollment, and they tend to focus on low-paying occupations, further exacerbating inequities.

Students from low economic backgrounds are inhibited from considering TVET, since for many, the opportunity cost associated with a one- or two-year educational program is high and unaffordable.

Youths who are more economically advantaged are twice as likely to participate in TVET programs.

II.22. Higher education is out of reach for most students interested in attending either because of increasing costs or geographic location. Most public universities (with lower tuition and better academic reputations) are in metropolitan areas, but admission is very competitive, and these institutions generally cater to academically competitive students from economically privileged backgrounds. Since the growth in the supply of higher education has been seen mainly in private institutions, the prohibitive costs in the form of high tuition fees render any such opportunities out of reach for the lower-income population (World Bank 2013b). Thus, the gap between supply and demand of higher education in Bangladesh has reinforced inequities faced by traditionally marginalized groups, particularly the poor rural population and girls. In colleges, the enrollment of girls is reported at 43 percent out of a total 1.9 million students. Further, most seats (60 percent) in university education are located in urban or semi-urban areas, while the majority of people (65 percent) who live in Bangladesh live in rural regions.

³⁰ Forty countries (out of 45) show this pattern in the PIRLS 2011 for grade 4. Five countries show no statistically significant gender difference (Mullis et al. 2012a).

³¹ Twenty countries (out of 50) show this pattern in the Trends in International Mathematics and Science Study (TIMSS) for grade 4 Mathematics. Twenty-six countries show no statistically significant gender differences, and four countries show higher girls' performance (Mullis et al. 2012b).

The high dropout rate after high school, particularly by girls and the lower-income population in these regions, is attributable to this factor.

II.23. Linked to the inequities in educational access, the placements or subjects critical to the labor market need and for general economic development aren't being offered or are very limited in tertiary institutions. For example, only 20 percent of higher-education students graduate from science or engineering programs. This number plummets to 9 percent in private universities that generally are unwilling and unable to bear the cost of expensive science and engineering programs compared to teaching programs in the humanities. Further, in many rural colleges, science programs are virtually nonexistent. The supply-and-demand gap is likely to widen in coming years, as projections indicate a 40 percent increase in demand by the year 2020, and up to 65 percent by 2030.

3. Determinants of Learning

II.24. International evidence indicates that a variety of factors influence the acquisition of skills and student performance. These factors include resources, family backgrounds, socioeconomic conditions, learning input, and conditions at schools—including the quality of the learning environment, teaching force, teaching and learning materials, as well as time allocated for learning at school and home. Using regression analysis, a study of five East Asian countries (Hong Kong SAR China, Japan, Singapore, South Korea, and Thailand) indicated that class size seems to be positively associated with student performance in all countries. Also, institutional characteristics such as school autonomy in salary matters was a clear factor in Japan and Singapore, whereas family background was a significant factor in determining how well students performed in Korea (Gundlach and Ludger, 2004).

3.1 Contribution of School-Related Factors to Learning Inequalities

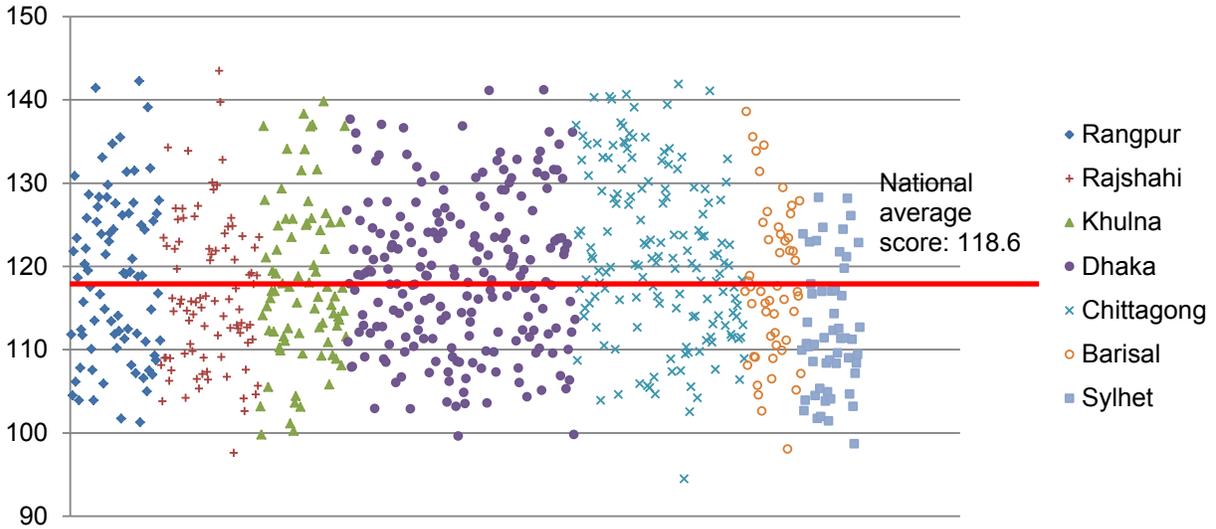
II.25. **The most important determinant of learning in Bangladesh is the school/institution that one attends.** Family characteristics also play a role, but much less so than school-level characteristics. Learning assessment results obtained from NSA 2011 and LASI 2012 have shown that larger performance disparities exist among schools rather than among students within a school.³² Figure 11 displays the average grade 5 Mathematics score by schools. As is visually evident, in every division, there are schools which have an average score around 100 and schools which have an average score around 140. The difference between the best-performing schools and worst-performing schools within a division is as large as 40 points, which is substantial. This finding is corroborated by a regression analysis conducted of student performance in the grade 5 NSA Mathematics test for this study (annex 1). The analysis found that school-related factors account for 73 percent of the differences in students' performance, while only 27 percent of the differences in performance can be attributed to student-related factors. The same pattern is found in all subjects at grades 3, 5, and 8.

Larger performance disparities exist among schools rather than among students within a school. Family characteristics also play a role, but much less so than school-level characteristics.

School-related factors account for 73 percent of the differences in students' performance.

³² An important policy question is where the academic performance gap exists. To answer this question, a multilevel linear regression analysis was conducted to decompose contributions of two factors to the variation in the total score: (i) school/teacher-level factors and (ii) student/household-level factors. Saying that there are good, poor, and between-student variations within a school means that there are large differences in performance of students within the same school.

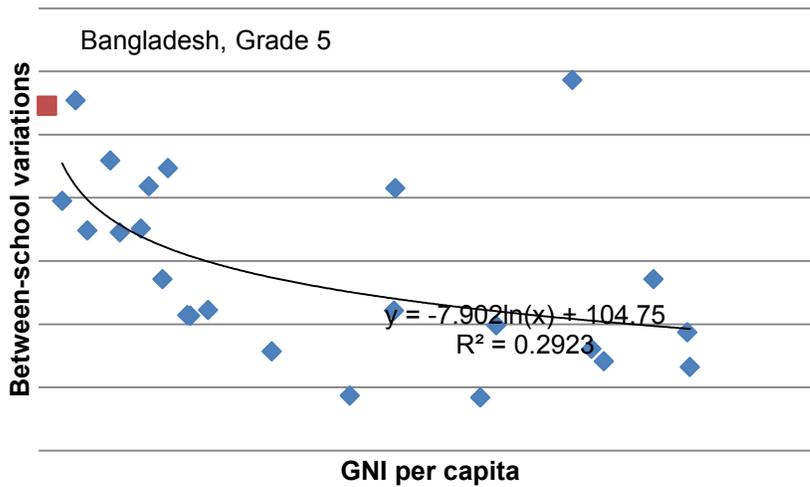
Figure II. 11: Distribution of School Average Test Scores (Grade 5 Math)



Source: Author's analysis using NSA 2011.

II.26. **Bangladesh has a large variance in performance between schools at its present stage of economic development.** Figure 12 shows the current level of variance for grade 5-level reading comprehension; as countries develop economically, between-school variance in performance tends to diminish.

Figure II. 12: Relationship of GNI Per Capita and Between-School Variations for Reading Comprehension



Source: Progress in International Reading Literacy study (PIRLS) 2000, cited by World Bank 2004.
 Note: GNI = Gross National Income.

II.27. **An important message from this analysis is that quality issues in Bangladesh’s education system are largely attributable to factors that are well within the purview of public policy reform.** Analysis of student performance in grade 5 Bangla indicates that only 6.5 percent³³ of the 55 percent of variance between schools’ scores can be explained by the community’s average poverty level. This implies that even though demand-side constraints of the communities are more or less the same, a wide variance in performance exists among schools. The next section teases out the relationship between supply-side factors and student performance.

3.1.1 School characteristics

II.28. **The education system in Bangladesh is characterized by one of the world’s largest teaching forces.** There are almost 30 million students in the education system. Consequently, the teaching force’s size, at 857,000, is quite large (table 2). In terms of the financial contribution, teacher salaries comprise the biggest element of public finance for education.

Table II. 2: Overview of Teacher Statistics in the Education System in Bangladesh

Type of school	Number of schools	Number of teachers	Number of students	Student–teacher ratio	Average number of teachers per school
Primary	78,685	395,281	16,957,894	42.9	5
Secondary	19,070	223,555	7,510,218	33.6	12
Colleges	3,475	95,620	2,915,851	30.5	28
Madrasah	9,330	107,177	2,197,877	20.5	11
University	82	12,585	439,406	34.9	153
TVET	2,981	22,919	506,556	22.1	8

Source: BANBEIS.

Note: TVET = Technical and Vocational Education and Training.

3.1.2 Teacher Characteristics

II.29. **Several international studies have confirmed that an effective teacher is the single most important school-related factor responsible for better learning** (Schacter and Thum 2004; Glewwe and Kremer 2006; Hanushek and Rivkin 2006, 2010). From a review of international impact evaluation studies in developing countries, Glewwe and Kremer (2006) find that the programs that address the problem of weak teaching are empirically proven to be the most effective programs for raising student learning. Teacher issues are also important, because they constitute the largest single budgetary element in schools in Bangladesh. More than 90 percent of the education revenue budget was spent on educational personnel salaries in 2010,³⁴ so improving the teachers’ performance is linked directly to improving the efficiency of public resource usage. This section reviews the teacher management and development policies in Bangladesh, as well as their links to successful student learning.

II.30. **Teaching quality is a complex concept, and traditional teaching characteristics may not always represent teaching quality.** Evidence from international literature indicates that there is substantial variation in teaching quality, and characteristics often used to determine entry into the profession—such as experience and educational qualifications—appear to explain little of the variation in teacher quality (Hanushek and Rivkin 2010). Schacter and Thum (2004), for example, claim that teachers differ in their teaching practices by behaviors, teaching models, teaching strategies, and standards in the following areas: teacher content knowledge, lesson objectives, presentation, lesson structure and pacing, activities, feedback, questions, thinking, grouping students, motivating students, classroom environments, and knowledge of students. Although these elements are difficult to observe, they

³³ In grade 3, 4.4 percent and 1.6 percent of between-school variations for Bangla and Mathematics are explained by a community’s average wealth level. In grade 5, they are respectively 6.5 percent and 1.5 percent of between-school variations.

³⁴ Authors’ calculation using Ministry of Finance (2011).

are precisely the factors that define the quality of teaching and transform qualifications and training into high-quality teaching.

II.31. Consistent with international evidence, correlations between student learning outcomes and traditional characteristics of assessing teacher quality—including teacher qualifications and general training—appear to be weak at the primary and secondary levels in Bangladesh. An analysis of NSA 2011 found that observable credentials of teachers, including formal educational certificates and exposure to general training, are not correlated with high performance among grades 3 and 5 students (see table 3 and annex 1 for the regression model). This could be a result of the quality of education and training that these teachers received. The students of teachers who possess only an SSC underperform. However, there appear to be no consistent differences in student performance among teachers with qualifications beyond an HSC (table 4). This finding indicates that the current minimum qualification for female teachers, which is the SSC, should be upgraded to an HSC, which is optimum for primary school teaching. With regard to teacher training, the results are mixed depending on the type of training. Positive correlation is found only in subject training, whereas no statistically significant impacts are observed for Certificate-in-Education (C-in-Ed) training. This could partially be a result of the training quality. The government of Bangladesh has already developed a pilot Diploma-in-Education program to replace the C-in-Ed. The 18-month diploma program is expected to deliver substantially higher-quality training (in accordance with international standards) to primary school teachers, using child-centered teaching and learning methods.

Table II. 3: Factors Correlated with Students’ Learning (by Grade and Subject)

	Grade 3		Grade 5	
	Bangla	Math	Bangla	Math
School-related factors				
Divisions	+	+	+	+
Rural	+	+	-	+
GPS	+	+	+	+
PECE pass rate	+	+	+	+
Class size	-	-	+	
Primary Education Stipend Program (PESP) school	-	-	-	-
Teacher-related factors				
Teacher experience		-		
Subject training	+	+	+	+
Teacher qualification: HSC	+			
Teacher qualification: Bachelor	+	-	+	-
Teacher qualification: Master+	+			
Use teaching and learning materials (TLMs)	+	-		+
Student and household factors				
Age			-	
Female		-		
Repetition	-		-	
Father's education	+	+		
Mother's education	+	+	+	+
Books at home	+	+	+	+
Wealth index		+	+	
Number of days absent	-	-	-	-

Source: Authors’ analysis using NSA 2011. See annex 1 for the detailed results.

Note: Only statistically significant results are presented. “+” indicates positive correlation; “-” indicates negative correlation. The full regression model is provided in annex 1.

Table II. 4: Teachers’ Qualification Levels and Students’ Average Scores

Teachers’ qualification	Grade 3				Grade 5			
	Average score		% achieving grade 3 competencies		Average score		% achieving grade 5 competencies	
	Bangla	Math	Bangla	Math	Bangla	Math	Bangla	Math
SSC	98.6	100.1	61.4	48.7	114.2	118.7	16.6	32.4
HSC	100.6	100.6	69.1	49.4	115.8	117.2	22.6	26.8
Bachelors	100.9	101.5	70.0	52.6	117.4	118.5	30.1	31.8
Masters	100.7	101.8	67.3	52.2	116.9	120.2	27.0	40.4
Total	100.3	101.0	67.4	50.9	116.3	118.7	25.2	32.9

Source: Authors’ analysis using NSA 2011.

II.32. **There appears to be little correlation between years of teaching experience and student learning outcomes except that, beyond 20 years, experience appears to be negatively correlated with student performance.** A regression analysis based on NSA 2011 indicates that teachers with more than 20 years of experience are negatively correlated with student performance in grade 3 Mathematics (table 5). Thus, it appears that more than 20 years of teaching experience generally is associated with lower student outcomes. The majority of primary school teachers with more than 20 years of experience are in their 40s and 50s, with many more years to contribute to educational development; this is a resource that Bangladesh needs to effectively utilize. It is likely that motivation, incentives, and the quality of training they receive are deterring factors that must be addressed urgently.

Table II. 5: Teachers’ Years of Experience and Students’ Average Scores

Teachers’ years of experience	Grade 3				Grade 5			
	Average score		% achieving grade 3 competencies		Average score		% achieving grade 5 competencies	
	Bangla	Math	Bangla	Math	Bangla	Math	Bangla	Math
0–4 years	100.1	101.4	66.8	52.7	116.5	118.5	27.0	30.7
5–9 years	100.9	101.9	68.7	54.0	116.6	118.4	25.2	34.1
10–19 years	101.9	102.3	73.6	54.1	117.0	119.3	27.5	35.8
20 years+	99.2	99.4	63.6	45.8	115.7	118.3	23.0	30.3
Total	100.3	101.0	67.4	50.9	116.3	118.7	25.2	32.9

Source: Authors’ estimation using NSA 2011.

II.33. **Limited empirical evidence in Bangladesh indicates that there are some characteristics and styles of teaching that produce better learning outcomes, although these are not commonly used.** Teaching practices vary from teacher to teacher, depending on their characteristics and behaviors, teaching models, strategies, and standards. Teaching practices are also affected by the school environment and external factors. Therefore, although there is no single solution for what constitutes “the best” teaching, it is helpful to analyze which elements are less effective, and promote elements that appear to positively impact student learning.

3.1.3 Pedagogical beliefs and approach

II.34. **Teaching methods and beliefs impact students’ learning.** An analysis of the SEQAEP impact evaluation baseline survey in 2008 shows that teaching students in small groups has a positive impact on both grades 6 and 8—and the impact is relatively large—although this method is relatively less frequent (table 6). Only 27 percent of grade 6 teachers and 28 percent of grade 8 teachers use this teaching method.³⁵ On the other hand, teaching the whole class together, using daily problems and question-and-answer communications, had a mixed impact, which

³⁵ Many teachers instruct classes for both grades (6 and 8), so their teaching methods are similar.

could be a result of the varied quality of interactions. In Mathematics, teachers who believe in solving problems individually instead of memorizing formulas, and who use this as a regular teaching practice, are generally able to generate higher performance among their students (table 7). While some level of memorization is essential, particularly in the lower grades, this is not associated with higher levels of performance at the higher grades.

Table II. 6: Teaching Methodologies and Their Impact on Student Learning

Teaching methodology	Grade 6		Grade 8	
	% of teachers using the methodology/ approach often	Impact on learning	% of teachers using the methodology/ approach often	Impact on learning
Use of daily problem (oral, written, or worksheet)	56.3	+	56.2	
Teach the whole class together	60.1	-	60.8	+
Teach the students in small groups	27.2	++	28.4	+
Teach every student separately	15.1		16.2	+
Teaching by the technique of questioning and taking answers	69.3		70.3	+
Include teaching (if possible) using conditions/situations of daily life	42.6		43.0	-
Training in primary skills in Mathematics	24.8		24.1	
Explaining mathematical processes	41.2		41.4	+
Use local available materials	33.4	-	37.0	

Source: Author's calculation using Round-1 (2008) Secondary Education Quality and Access Enhancement Project (SEQAEP) impact evaluation survey.

Note: The size of impact and direction is signified by the following signs: ++ for more than +0.2 standard deviation; + for between 0 and +0.2; - for between 0 and -0.2 standard deviation; and -- for larger than -0.2 standard deviation.

Table II. 7: Teachers’ Belief in the Methodologies and Their Impact on Student Learning

Approach	Grade 6		Grade 8	
	% of teachers believing in importance	Impact on learning	% of teachers believing in importance	Impact on learning
Do work in pairs or groups to solve the math problems	77.9	-	75.4	
Work alone for solving questions	25.9	+	24.9	+
Make project or poster to show in the classroom	53.6	+	52.2	
Use of practical instruments (scale, calculator)	73.6	+	72.2	
Giving homework	72.5		73.5	
Read and explain graphs from magazines and newspapers	24.5		23.0	
Learn tables and formulas by repeating	56.6	-	62.4	--
Examination, puzzle test, and so on	58.2	-	61.1	-

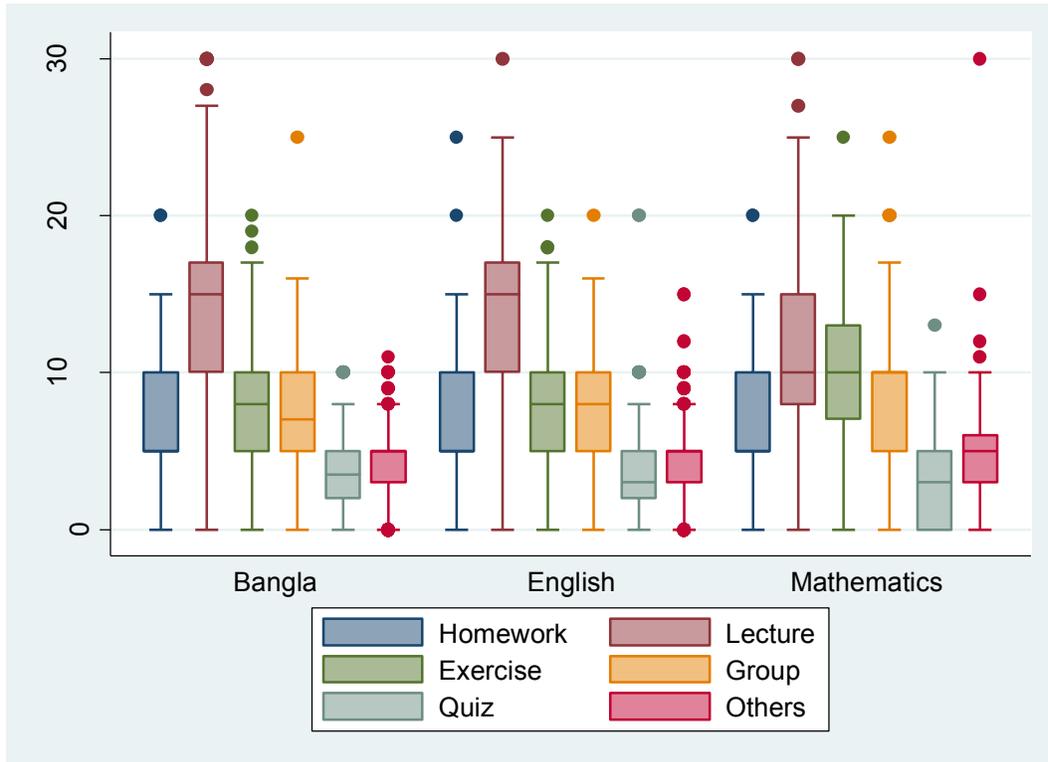
Source: Author’s calculation using Round-1 (2008) SEQAEP impact evaluation survey.

Note: The size of impact and direction is signified by the following signs: ++ for more than +0.2 standard deviation; + for between 0 and +0.2; - for between 0 and -0.2 standard deviation; and -- for larger than -0.2 standard deviation.

II.35. **Existing studies uniformly indicate that the most common teaching style in Bangladesh is lecturing and reading textbooks.** As figure 13 shows, teachers tend to spend most of their classroom time lecturing or reading textbooks in secondary schools. This pattern is consistent with the findings in primary schools (EIA 2009). When there is interaction, it is commonly in the form of teachers asking closed questions³⁶ to check whether students have memorized the textbook’s information (Baba 2008). This teaching practice goes hand in hand with current examination systems, which test memory recall from the textbooks. Because teachers fear that using other approaches may result in poor performance on examinations, they are uncomfortable trying out innovative pedagogical practices (Baba 2008). Also, some teachers may rely too heavily on the textbooks because of limited subject knowledge (Baba 2008).

³⁶ For example, “Yes or No?” questions and “A or B?” questions.

Figure II. 13: Teachers' Time Allocation across Different Activities in Grade 9 (by Subject)



Source: Authors' calculation using LASI 2012.

Note: Boxes represent the 75th and 25th percentile, and the line in the middle shows the median.

II.36. **Teachers do not always practice student-centered teaching.** The right pacing of lessons is important for students to understand and make use of it. Mohsin and Baba (2007) reported in their study of math teaching practices in primary schools in Bangladesh that the pacing is often inadequate for students. They claim that teachers do not grasp the pupil's level of understanding mathematical concepts, and that they need to link teaching activities to those levels.

3.1.4 Teachers' subject knowledge

II.37. Available evidence points to the fact that weaknesses in teachers' subject knowledge negatively affects student learning.

Although evidence is limited, a few studies have uniformly discovered weaknesses in teachers' subject knowledge, both in primary and secondary education. The primary education social sector performance survey in 2004–2005 raised a concern about teachers' literacy, numeracy, and nonverbal reasoning skills (FMRP 2006).³⁷ In secondary education, the SEQAEP impact evaluation baseline study of 2008 collected test scores on students and teachers using common test items. Although the teachers' performance is generally higher than students on the commonly tested questions, some teachers performed lower than students. Out of 16 mathematical test items that are common for grade 8 students and their teachers, teachers' average score is 66.8 percent, while students' average score is 33.4 percent. While 15 percent of the students score more than 50 percent, 21 percent of teachers score less than 50 percent on exactly the same test items (figure 14). When the average students' performance by class is plotted against teachers' performance, the results show that students who are learning from teachers with less subject knowledge perform lower (figure 15).³⁸ There is an upward trend of students' performance against teachers' knowledge.³⁹ The problem of teachers' low subject knowledge is often sensed by students. One study shows that students think roughly 30 percent of their teachers are not knowledgeable, because they cannot give specific examples to explain the topic or answer students' questions (CAMPE 2008).

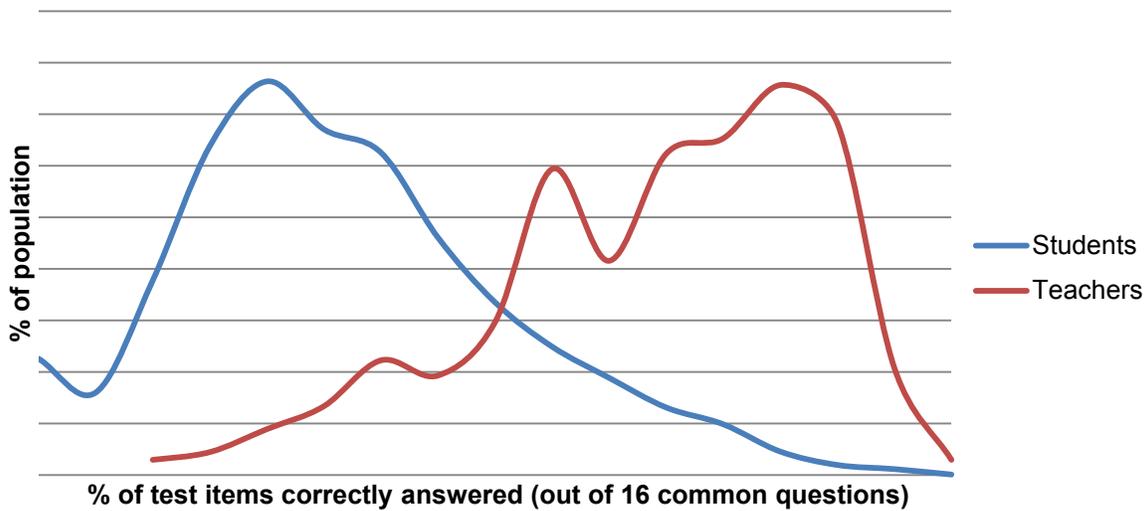
Students need to feel confident in their teachers. One study shows that students think roughly 30 percent of their teachers are not knowledgeable, because they cannot give specific examples to explain the topic or answer students' questions.

³⁷ The survey showed that sampled teachers were able to answer only 53 percent of test items that are relatively simple. The test includes 7 questions on Mathematics and 7 questions on reading and nonverbal reasoning. The Mathematics test consists of multiple-choice questions written in Bangla, such as: (i) A class plans to paint a quarter of a wall that measures 3 meters by 24 meters. How many square meters will they paint? (ii) A student writes 6 tests, each worth 20 marks. Her scores were 10, 12, 15, 7, 6, and 4. What is her average score?

³⁸ A statistically significant correlation is also observed in a regression model after controlling for schools, teachers, students, and household characteristics.

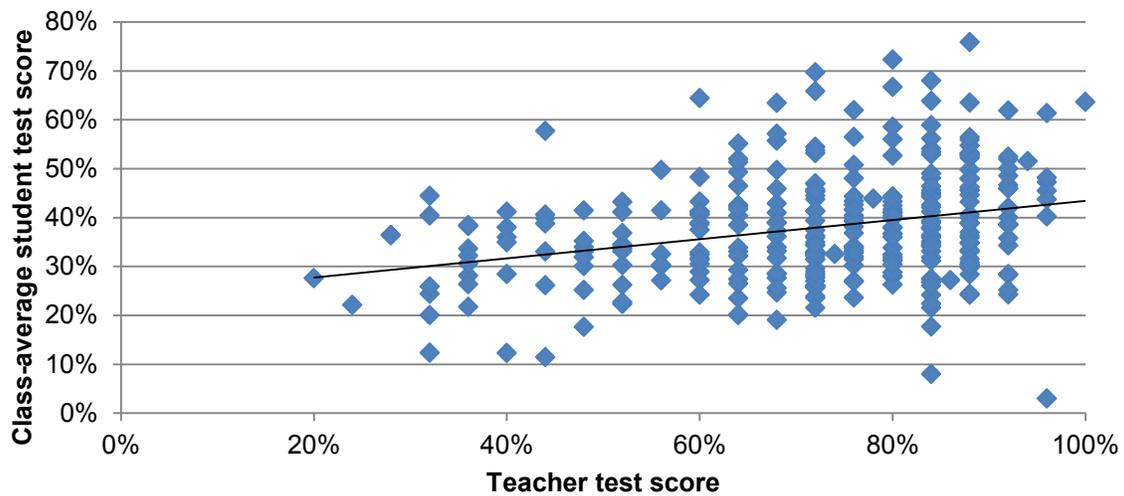
³⁹ There are similar findings internationally. In Peru, a 1-standard deviation increase in teachers' achievement increases student achievement by 10 percent of the standard deviation (Metzler and Woessmann 2012). Worries about teachers' subject knowledge are also reported for India and Pakistan, where teachers do not have sufficient curriculum knowledge, the ability to spot mistakes that children commonly make, or proficiency in explaining mathematical and language concepts (World Bank 2013a).

Figure II. 14: Distribution of Scores on a Common Test by Teachers and Students



Source: Author’s calculation using Round-1 (2008) SEQAEP impact evaluation survey.

Figure II. 15: Relationship between Teachers’ Subject Knowledge (Measured by Test Scores) and Students’ Learning



Source: Author’s calculation using SEQAEP impact evaluation survey (2008).

3.1.5 Time on task

II.38. Time on task in Bangladesh is constrained overall by limited contact hours during the academic year. In Bangladesh, contact hours in primary school are already much lower than international norms (900–1,000 hours per year) as a result of many holidays, double-shifting, and teachers’ other time-consuming responsibilities. According to official directives regarding school hours, the annual total contact hours in grade 1 is 861 in a single-shift school and 595 hours in a double-shift school, resulting in 30 percent fewer schooling hours for children in double-shift schools, which make up about 90 percent of primary schools (CAMPE 2005). This limited number of

official contact hours is further reduced by 19–55 percent (45–130 days out of 238 official days) because of official school days for various reasons (Rahman et al. 2004).⁴⁰

II.39. Teacher absence and tardiness contribute to relatively low time on tasks and low student performance. The time on tasks for students is further aggravated by absent teachers. Various studies have reported that about 13–17 percent of teachers are absent (due to authorized or unauthorized reasons), and some 30 percent of teachers are late coming to school (Rahman et al. 2004, FMRP 2006, Chaudhury et al. 2007).⁴¹ A study of secondary school students shows that only 82 percent of teachers come to class on time (CAMPE 2008). A significant amount of absence is related to teacher training. FMRP (2006) reported the tardiness of teachers as a serious concern. Some 32 percent of GPS and 29 percent of RNGPS teachers are late to school by more than 15 minutes and close to 50 percent of teachers are not in school at the beginning of a school day. A study on time-on-task in India (discussed in more detail later, in box 5) shows that better time management is essential for teachers and students in terms of accountability and being more efficient (World Bank 2009).

II.40. Student absence exacerbates the situation, negatively affecting learning outcomes. Although information on teacher absenteeism or tardiness was not collected through NSA or LASI, the importance of time on a task is indicated by the correlation between the number of days of student absence and their performance. In the month of November 2011, 8 percent of primary school students were absent from school for more than six days, and their performance was lower by a 0.1–0.2 standard deviation when compared to students who were not absent. While this does not prove causation, there is a correlation between a lower number of hours available for studying and students' lower performance. It is interesting to note that students who may have a lot of constraints to come to school on time are more likely to come on time with positive incentives such as stipends (box 1).

⁴⁰ Reasons for school closure include: school closures or time dedicated for administrative work at the year's beginning and end, training teachers, health campaigns, election, school contingency, strikes/shutdowns, and natural disasters (Rahman et al. 2004).

⁴¹ The primary education social sector performance survey in 2004–2005 found a 16 percent rate of absence among GPS teachers and 11 percent among RNGPS teachers (FMRP 2006). Choudhury et al. (2004) found that the teacher absence rate was about 15.3 percent in primary education and 17.6 percent in secondary education. Rahman et al. (2004) found that teacher absenteeism in primary schools was around 13 percent.

Box II. 1: Students' Absence and Stipends

Students' absence is high, especially when students are not supported by stipends. A study of the Primary Education Stipend Program (PESP) in 2010 found that the attendance rate of children on an observed day is 65 percent among boys and 69 percent among girls who do not receive any stipends (table 8). The attendance rates are particularly lower in the areas where the prevalence of poverty (according to HIES 2010) is high. In areas where the poverty rate is more than 60 percent, the attendance rate of non-stipend beneficiaries was only 61 percent among boys and 65 percent among girls. On the other hand, stipend recipients who are conditioned to be present at school for receiving the stipends recorded higher attendance rate at 89 percent among boys and 91 percent among girls.

Table II. 8: Attendance Rate on the Day of the Survey in October 2010 by Poverty Level of Upazilas

	Boys			Girls		
	All	Stipend	Non-stipend	All	Stipend	Non-stipend
Poorest (Pov > 60%)	80%	88%	61%	83%	89%	65%
Pov: 48–60%	80%	87%	63%	83%	89%	66%
Pov: 36–48%	78%	91%	67%	83%	93%	72%
Pov: < 36%	77%	89%	69%	81%	91%	73%
Total	79%	89%	65%	82%	91%	69%

Source: Authors' calculation based on the school survey module of the PESP survey.

3.1.6 Motivation and teacher incentives

II.41. **Teachers are generally satisfied with teaching, but not their salary.** The SEQAEP survey data show that teachers are generally satisfied with their profession, and those teachers who are satisfied with their profession and their salary tend to have students with higher learning outcomes in grade 8. On the other hand, teachers are generally not satisfied with the salary they receive, although the salary level is not necessarily low from an international perspective. An empirical analysis shows teachers in Bangladesh are paid about 23 percent higher salary than professionals with the same level of education and who are not working as teachers (2005). This difference is larger than the ones found in India and Nepal (which have gaps of about 14 and 11 percent, respectively), though smaller than Pakistan and Sri Lanka (28 and 54 percent, respectively) (World Bank 2013a). However, it is known from the salary scale that there is a considerable difference between the teacher salary of government and non-government schools as a result of different benefits, and such relative differences may contribute to dissatisfaction about salaries among secondary education teachers, most of whom work in the non-public sector, in the absence of large entitlements and benefits (see more discussion in Section 5.4.).

II.42. **Motivation plays a key role in translating teacher competencies to student performance.** A recent study finds that although teachers are generally satisfied with their teaching job, absence of continued professional development coupled with the lack of any positive or negative feedback or accountability seems to affect teacher morale (Sandhu and Rahman 2012). The study reported that despite teachers' desires to learn new and relevant technical skills and methodologies, there are no such opportunities for them. The lack of continuous professional development opportunities and regular feedback seem to hinder the engagement, enthusiasm, effectiveness, and retention of teachers.⁴² This finding, coupled with the finding that teachers with more than 20 years of experience are not necessarily improving the learning outcomes of students, indicates that motivation plays a key role in translating teacher competencies to student performance. This is consistent with international findings. One recent

⁴² Teachers' motivation factors are difficult to collect in learning assessment questionnaires. NSA and LASI attempted to collect information about teachers' satisfaction, but most teachers answered they are fully satisfied. It is likely that teachers automatically responded with "right" answers rather than actual answers.

study (Sestito 2013) from Italy shows that the share of teachers applying for a transfer to another school is negatively affecting students' achievement, because dissatisfied teachers who want to transfer to another school may be poor performers both because of general motivational factors and also because they are simply waiting to move on to a different location, thereby putting low effort into their current work duties and disregarding any longer-term plans for their students.

II.43. Too many vacancies and instances of low motivation among teachers inhibit TVET institutions and colleges. Vacancies in TVET institutions severely limit the capacity of the TVET system in Bangladesh. A recent study noted that according to the Directorate of Technical Education (DTE), the vacancy rate for teachers within the TVET system is approximately 50 percent (Mohiuzzaman 2013). This high rate is partly attributed to a lengthy and bureaucratic recruitment system, which can take up to two years to fill a post. The study also revealed that of the current teachers, approximately 10 percent have not received any pedagogical training. Once recruited, teachers are not encouraged to upgrade their skills. Another recent study (Sandhu and Rahman 2012) noted that teachers' enrollment for a Diploma in Technical Education at the Technical Teachers Training College (TTC) was as low as 15 percent, with only 12 out of 80 seats being filled in 2012. In the bachelor's in Technical Education program at the same institution, only 8 teachers out of an intake capacity of 40 were enrolled. Low enrollment in these cases has been attributed to principals at polytechnic institutes, technical schools, and colleges not sending teachers to training on the grounds that it would be too disruptive to their classes already in progress. The inefficient process of recruiting teachers for government colleges has led to a shortage of college teachers, and the approximate two-year process has led to an extended period of vacancies and chronic teacher shortages. Although most (90 percent) of college teachers hold master's degrees, few have pedagogical training or any additional qualifications, such as research or practical experience. Once recruited, college teachers do not have opportunities for continued professional development. The 45-day refresher training provided through a lecture-style format by the NU focuses on subject matter and administration. However, no pedagogical techniques are reviewed, nor are critical thinking and student participation stressed. Unlike their university counterparts, who enjoy an elevated status and compensation, college teachers suffer from low motivation, leading to low performance due to their dissatisfaction with remuneration, working conditions, and career opportunities. Also, with the absence of a uniform salary scale governing colleges, remuneration packages can vary grossly between the institutions (World Bank 2013b). For example, a non-government college that does not receive salary subventions under the MPO system may pay teachers very low salaries with limited benefits on an irregular pay schedule. Government college teachers, on the other hand, receive regular payment at a higher salary level with allowances for rent or medical expenses.

3.1.7 Curriculum, Textbooks, and Other Educational Material

II.44. **Teachers are implementing the Mathematics and Science curricula as it is designed, but the curricula focuses on memorizing rather than conceptual understanding or applying knowledge, thus moving in the opposite direction of international norms—that is, the acquisition of mathematical and scientific literacy.** A study of the National Academy for Primary Education (NAPE) and the Japan International Cooperation Agency (JICA) points out that learning Mathematics in Bangladesh is equated to knowing mathematical terms and procedures. Similarly, learning science means accumulating as many pieces of scientific knowledge as possible. As a result, students can answer the same or very similar questions given in the textbooks without questioning why it happens. This problem has led to a philosophical gap between Bangladesh and educationally developed countries (NAPE et al. 2009).

II.45. **Textbooks reflect the curricula objectives without adequate regard for students' development stages and learning process.** NAPE et al. (2009) reported after a page-by-page close scrutiny of grade 1–5 Mathematics textbooks that the textbooks are lacking a few important properties, including: (i) consideration about students' development stage and learning process, (ii) consideration about the relationship with students' daily lives, (iii) inclusion of content that is neither described in the curriculum nor helpful to students, and (iv) errors and mistakes in the textbook—including insufficient, misleading, or inappropriate expressions and instructions (NAPE et al. 2009).

II.46. **Poor teacher inputs are coupled with ineffective pedagogy and a weak infrastructure at TVETs and higher-education institutions.** Poorly maintained buildings, classrooms, workshops, and laboratories have contributed to low staff morale and a lackluster learning environment for students (Sandhu and Rahman 2012). TVET instructors and teachers are often ill-equipped with effective pedagogical skills and lack the basic knowledge of trade skills specific to current industry demand (Mohiuzzaman 2013). Additionally, teaching and learning materials and curricula are often outdated, leading students to learn obsolete technologies and irrelevant information for today's demands (Mohiuzzaman 2013). Teachers, particularly in rural areas, may lack technical support even when they are provided with resources such as information and communication technology (ICT) facilities. In one such case in a private MPO rural college offering bachelor's and vocational programs, computer facilities had been used only a handful of times over several years (World Bank 2013b). The lack of teacher training, as well as an unwillingness to adapt to change, were reported as the reasons for the lack of equipment use. In other cases, learning resources (such as books in a college library) were irrelevant to the programs of study offered in those institutions. Further, the lack of incentives and infrastructure—such as an unreliable Internet connection and no access to peer-reviewed journals—has made it difficult for teachers to further their development, even if they so desired. This situation is reflected in the low percentage (4 percent) of teachers who have had their work published in a journal (World Bank 2013b).

3.2 Household-Related Factors

II.47. **Poverty is correlated with low student performance.** As previously mentioned, students from poor households perform about three-fourths of a year behind their wealthier counterparts in Bangla and half a school year behind in Mathematics. Other studies on student performance also support this finding. The Education Watch study for primary and secondary students also reported a lower performance of students from relatively poor households (CAMPE 2008, 2009).

II.48. **Mothers' education has a positive correlation with students' performance.** Regression analysis of student performance from NSA 2011 (table 3 and annex 1) indicates that parental education (especially the mother's) is one of the most important household characteristics impacting student learning.⁴³ Households with more educated parents are more likely to have books at home. One way that parental education affects student

⁴³ The importance of parental education on students' learning achievement is also found in other countries in South Asia (for example, the Student Learning Study 2010 conducted in grades 4, 6, and 8 in India; the Bhutan Learning Quality Survey in 2007; and the National Education Assessment System in Pakistan. In Nepal and Sri Lanka, ethnicity plays a role in different student achievement, especially in language-related aspects (World Bank 2013a).

learning is a habit of reading at home. Thirty-six percent of grade 3 and 41 percent of grade 5 student households reported that they had books at home. The NSA results show that test scores are generally higher for children who have books at home. This implies that reading at home makes a difference in student performance.

II.49. Most households pay for tutoring to enhance students' learning in Bangladesh—yet, its benefit is uncertain. To achieve good marks in examinations, one of the common strategies that households adopt in Bangladesh is private tuition, such as private tutoring or coaching classes. The prevalence of private tutoring increases by grade, from 34 percent in grade 1 to 55 percent in grade 5 (CAMPE 2005), and it goes up to 86 percent in grade 10 (CAMPE 2008).⁴⁴ Education Watch finds a positive correlation between tutoring and performance in the test administered by CAMPE (CAMPE 2008, 2009), perhaps resulting partly from increased time on tasks. However, the NSA 2011 and SEQAEP impact evaluation survey 2008 find no evidence of improvement in learning competencies as a result of tutoring.

Parental education (especially the mother's) is one of the most important household characteristics impacting student learning. Households with more educated parents are more likely to have books at home.

Test scores are generally higher for children who have books at home—reading at home makes a difference in student performance.

⁴⁴ Evidence suggests that private tutoring is often provided by the student's school teacher, and private tuition becomes a source of additional income for teachers (Nath 2006). A study shows that about 40 percent of teachers engage in private tutoring (CAMPE 2008). The average amount a household spends on tutoring a secondary student is Tk. 4,700 in government schools, Tk. 2,200 in MPO schools, and Tk. 1,200 in madrasahs (CAMPE 2007).

4. Systemic Constraints

II.50. There are several systemic constraints that impede the education system—for example, the way that knowledge is measured, the frequency of examinations, and the method of grading examinations all play a part in demotivating teachers and students. Each constraint is interrelated with the others, and sends broader signals throughout the system.

4.1 Examination Systems and a Lack of Incentives for Teaching and Learning

II.51. **As noted earlier, Bangladesh has a well-established system of examinations at all levels of the system.** In-school and end-of-year exams (table 9) at the school/institution level and national standardized examinations at the end of a cycle are used to determine the extent to which curricula competencies have been acquired by students, enabling the transition to a higher level of education or a degree/certificate that enables graduates to be eligible for a job.

Table II. 9: Public Examinations in Bangladesh

School	Grade	Examination	Responsibility	Remarks
Primary	5	Primary Education Terminal Examination ⁴⁵	Directorate of Primary Education (DPE)	Started in 2009 by replacing the former Scholarship Examination. Six subjects (Bangla, Mathematics, English, Social Science, General Science, and Religious Studies)
	5	Ibtedaayee Terminal Examination	DPE, Bangladesh Madrasah Education Board (BMEB)—cost is covered by BMEB	Students of all madrasahs using BMEB curriculum are eligible to participate.
Junior secondary	8	JSC Examination	Board of Intermediate and Secondary Education (BISEs)	The JSC Examination started in 2010. There are eight BISEs, located in Barishal, Chittagong, Comilla, Dhaka, Dinajpur, Jessore, Rajshahi, and Sylhet.
	8	JDC Examination	BMEB	
Secondary	10	SSC Examination	BISEs	The eight BISEs that conduct JSC examinations are responsible for SSC/HSC.
	10	Secondary School Certificate–Vocational (SSCvoc) Examination	Bangladesh Technical Education Board (BTEB)	
	10	Dakhil Certificate Examination	BMEB	
Higher secondary	12	HSC Examination	BISEs	The eight BISEs that conduct JSC examinations are responsible for SSC/HSC.
	12	Diploma in Business Studies (DIBS)	BISEs	
	12	Alim Certificate Examination	BMEB	

⁴⁵ Previously this was a scholarship exam that the top 20 percent of grade 5 students were given opportunities to participate in.

II.52. Given how pervasive exams are in Bangladesh, it is no surprise that the examination system—what is tested, how it is tested, how it is graded, and how the result is used across the system—sends strong signals about its centrality in the entire education system and what matters most in terms of student learning. These messages provide incentives, both positive and negative, affecting how the country defines a high-quality education system and how different elements of such a system are prioritized. For example, when the exam expects a student to recall a paragraph from the textbook, then the best use of teaching time for a teacher and learning time for a student is to memorize the text in the textbook. If applying the theory is not tested, then classroom teaching and learning practices may not focus on applying the theory, and underprivileged schools may not invest in libraries and laboratories, or these facilities may be underutilized. In addition, repetition of identical (or very similar) questions from year to year further limits the validity⁴⁶ of examinations (Hossain 2009). A sample study of grade 4 year-end Mathematics exams reports that 69 percent of the test items are exactly the same as items in textbooks; 20 percent are similar, and only 11 percent of items are not from the textbook. There are no test items that test inferences or analysis (Baba 2008).⁴⁷ This finding is just as relevant at the lower as at the higher levels of education in Bangladesh. At the primary level, the NSA 2011 has confirmed that students at lower grades pick up competencies in a highly varied manner (which is the norm for most countries), requiring a student-centered pedagogical style, rather than one that is tailored to match an examination system. Yet the grade 5 examination is also overwhelmingly based on memory recall of textbook content. In a pilot testing the integration of competency-based test items in the grade 5 exam, students were penalized if they used their own language to answer questions instead of the language in the textbook (Jones 2011).

II.53. Notwithstanding the commendable achievement of the first national administration of the PECE in 2009, it is generally recognized that the exam has low reliability, the test items measure rote learning rather than the actual competencies, and exam results are not fed back to teachers and teachers' trainers to improve teaching.

For instance, over the last few years the proportion of students passing the grade 5 exam and the SSC exam is increasing—the SSC pass rate increased from 36 percent in 2003 to 86 percent in 2012, and the HSC pass rate increased from 39 percent in 2003 to 75 percent in 2011 (figure 16). Yet the assessments of learning competencies have consistently indicated, at both the primary and the secondary level, that the vast majority of students are still not mastering the competencies expected of them in the curriculum (NSA 2011 and LASI 2012). One of the factors for the discrepancy is that the SSC exam does not yet test the entire curriculum and only assesses skills in a limited manner (Hossain 2009). The curriculum is further restricted by teachers in the classroom picking topics within subjects that they think are likely to appear in the examinations. Teachers tend to focus on cognitive skills and neglect practical ones, since practical skills tend to be less emphasized in examinations. It is no surprise, therefore, that when the 2012 pilot learning assessment was designed for grade 8, based entirely on the textbook and on the competencies expected of the students in grade 8 students, most students could not answer the questions. To contend with such issues, under the Third Primary Education Development Program (PEDP 3), the Ministry of Primary and Mass Education (MoPME) aims to support, based on an action plan, improvements in the completion exam, so that it focuses on progressively moving away from rote recall questions to competencies with more application and problem solving for real-life situations. Analyses of successive completion examination results and content will be used to inform and guide changes in further test-item design, curriculum development, and teacher training, sharpening the focus of the curriculum/competencies and changing the way teachers teach. Skill development for improving the exam, including training markers and test-item developers, is equally important.

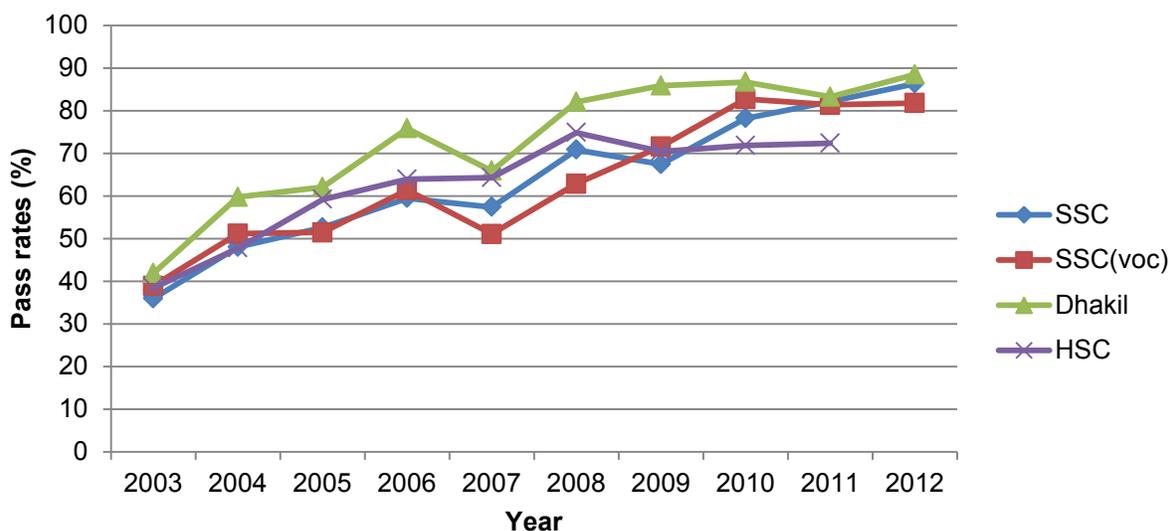
The grade 5 examination is overwhelmingly based on memory recall of textbook content.

In a pilot testing the integration of competency-based test items in the grade 5 exam, students were penalized if they used their own language to answer questions instead of the language in the textbook.

⁴⁶ Validity means that it measures what it claims to measure. For example, valid SSC examinations should measure the competency of students that are expected to be achieved by the curriculum of up to grade 10.

⁴⁷ In the science test, 74 percent of the exam was exactly the same, 7 percent was similar, and 19 percent was not from the textbook (Baba 2008).

Figure II. 16: Trends of Key Examination Pass Rates (2003–2012)



Source: BANBEIS.

II.54. **Marker and Administrator unreliability also raises a concern about the credibility of public examinations.** Marker unreliability can take many forms, including the differences between scores by the same scorers on two occasions and differences in scores for the scripts marked by different scorers. The management of test administration—marking, scoring, and monitoring the PECE—are conducted at the upazila level, opening the door for variance in the quality of marking from upazila to upazila in the absence of unified training and quality control. Because markers and test administrators tend to be from the same upazila, there is a tendency to inflate marking to show better results for the upazila. Test administration must be conducted in a standardized manner to enable fair assessment for all students. However, the training of test administrators to ensure that they all follow the same test administration protocols is lacking. Moreover, the training for quality and consistent marking and scoring of the examinations has not been institutionalized yet. As the PECE reform has started to gradually introduce competency-based test items where often there is more than one suitable answer, the management of test administration, marking, and scoring must be improved substantially.

a concern about the credibility of public

Test administration must be conducted in a standardized manner to enable fair assessment for all students.

However, test administrators lack training to ensure that they follow the same test administration protocols.

II.55. **The inconsistency in grading becomes more challenging in the case of secondary, vocational, and university education, where many standards are employed in assessing student competencies.** This is distinct in the case of the National University and its many affiliated colleges, where a single exam is instituted for all students. However, it is difficult to expect that all secondary education completers in Bangladesh would have, at minimum, the same basic set of competencies upon graduation. Perhaps one of the most important reasons for this phenomenon is the lack of a common set of standards that have been established for all secondary school completers. At present, there are 10 examination boards for secondary education.⁴⁸ Each board is free to test its

⁴⁸ There are eight Boards of Intermediate and Secondary Education. In addition to these eight Boards, the Bangladesh Madrasah Education Board and Bangladesh Technical Education Board are responsible for secondary level examinations.

students as it determines, and they might use different teaching and learning materials and methodologies, emphasizing one aspect of the curricula over another. Although a joint board of the eight BISEs has been established, attempts to compare and equate the standards of examination papers across subjects and across examination boards are still limited. The only check on the standard of the questions is conducted by a group of moderators, who read through the papers and make comments, usually on matters of content (Hossain 2009). There is a high level of variance observed between the criteria used for awarding degrees at different universities. This is particularly an issue for students attending the weaker institutions. The absence of an accreditation agency not only limits the system's ability to identify good and weak performers, but also constrains the ability to set standards for performance to encourage good performance across all higher education institutions in the country.

4.2 Competencies and a Lack of Awareness about Standards for Service Delivery

II.56. **Data analysis shows that choosing the right school is the most important decision that a family could make for the future of its children—but going forward, it shouldn't be.** This idea of “choosing the right school” implies that going to a good school more or less guarantees a reasonably good learning outcome, which is expected to be a good starting point for the rest of the student's life—whether academic, professional, or social. This information, coupled with the findings about significant inequalities in learning, indicates that one extremely important step towards improving the quality of overall education in Bangladesh will be to elevate the quality of all its institutions to an acceptable level.

II.57. **However, Bangladesh's education system is large and complex, in terms of the number and types of providers as well as the number of regulators.** Enrollments at all levels of education are nearing 30 million. In 2013, there are 13 types of recognized schools offering primary education in the country. Secondary education is overwhelmingly privately provided (98 percent) with significant subsidization from the government (93 percent of non-government schools). There are 10 boards of examination governing what constitutes a secondary graduate's appropriate standard of achievement. Ninety percent of the secondary vocational education providers are private, even though all SSC vocational exams are held under one board. In tertiary education, all colleges follow the curriculum prepared by the National University, whereas public and private universities are free to develop their own curricula and testing methods.

II.58. **Given the sheer size and complexity of Bangladesh's education system, it is difficult to expect a minimum standard of performance at all educational and skill-building institutions without a set of robust standards for student competency and service delivery.** Articulating transparent standards and implementing and measuring these consistently can provide a strong incentive to the system and motivate people to do a good job. Most primary schools teachers are not aware of key terminal competencies that students should have by the end of primary school. Only 4 percent of Bangla teachers in GPSs were able to correctly list all curriculum objectives and 27 percent were unable to list any competencies at all. Among Mathematics teachers, only 1 percent of GPS teachers were able to list all competencies, and 32 percent were unable to mention a single key terminal competency (FMRP 2006). This does not mean that teachers are not teaching what they are supposed to teach, but it does indicate that the curriculum is not well implemented at the classroom level. Teachers are not fully aware of the gap between curriculum objectives and student performance.

4.3 Weak Incentives for Performance

II.59. **The real benefit of good standards translates into a positive impact only when buttressed with good incentives for alignment with those standards and disincentives against non-compliance.** Incentives, as well as disincentives for performance, are expressed in many forms. In many cases, they result from the unofficial practices within a system that may or may not render the regulations in place effective. There is a wealth of literature and evaluation studies indicating that incentives aligned with good performance play an important role in motivating professionals to perform well and excel.

II.60. The evidence on the interface between policy and practice and the incentives for high performance in Bangladesh is weak. In many instances, the regulatory regime is reasonably strong, facilitating transparency, accountability, and good-quality performance. However, implementation may not be consistent with the policy. And, additional elements—official or unofficial—sometimes erode the incentives within a good policy. For example, Bangladesh’s government has a high-quality, merit-based policy for the recruitment of primary teachers. The merit-based criteria are clear: 85 percent marks for an examination and 15 percent marks based on viva voce. The examination is scored by a third party and results are not disclosed, to ensure transparency. Although there is very little scope for manipulating results, nepotism and favoritism are reported to influence the results of oral tests (Sandhu and Rahman 2012). Moreover, the pass mark for the written examination is variable, based on the number of applicants and the number of vacancies, and has been as low as 30 percent in the recent past, limiting a perfectly good system’s ability to provide high-quality teachers to the education system. Further, it is the interplay of merit-based recruitment criteria with annually determined quotas (gender, family history, disability status, and so on) that ultimately determines who is appointed to the job. In the worst case scenario, this may imply that a weaker candidate is offered a job because he or she is more qualified on the basis of quotas determined for the year. A teacher’s posting from a government education institution to a more favorable location also depends heavily on the teacher’s political connections (Sandhu and Rahman 2012).⁴⁹

II.61. Policies for continuing subvention to non-government secondary schools have not really provided proper incentive for performance. In non-government secondary schools, which constitute 98 percent of the total secondary education system, teachers survive on subventions from the government in the form of MPOs. First instituted as 50 percent of the basic salary of government school teachers in 1980, MPOs have gone up to 100 percent of the basic salary of government school teachers since 2006. Provision of support to non-government schools has incentivized remarkable expansion of secondary education over the past decades, and encouraged school communities to take charge of secondary education provision. However, administering subvention in connection with school performance is weak. The 29 types of paper that a school submits to get MPOs make the process cumbersome, and these still do not ensure MPOs—sometimes because of fund constraints and sometimes because such decisions are not taken purely on the basis of the applications’ criteria and merits. Also, the policies regarding subvention provisions have clear criteria linking subvention to school performance. For example, in the urban areas, a secondary school must have at least 50 students, and half of them must pass the terminal public examination.⁵⁰ Still, once a school has been recognized for subvention, the government has hardly been able to enforce this criterion, mainly for political reasons. Using subvention as a tool to improve the quality of education and to hold the schools accountable for performance has largely failed. While this result could be caused by a variety of factors, it does merit additional review into the effectiveness (or lack thereof) of the MPO system in incentivizing schools to do better and the accountability for results that are a necessary precondition of the MPO system.

Using subvention as a tool to improve the quality of education and to hold the schools accountable for performance has largely failed.

II.62. Policy and practices in the examination system also provide mixed incentives. Despite the problem in the accountability system, schools still have a strong incentive to show good results either for subsidies from the government, as in the case of RNgPSs, or for the reputation of the school in its locality, which also ties back to the reputation of political constituencies. The system of marking and scoring the PECE at the upazila level, although well intentioned, provides a loophole for this incentive to be at work. The risk of this policy loophole cannot be mitigated under the current context, because a nationwide standard of scoring and training of markers and a system

⁴⁹ In South Asian countries, politicization of teachers could negatively affect teacher morale, as average-motivated teachers find it difficult to progress through a system where merit gets little reward in reality. In India, a survey reported that 12 to 25 percent of teachers in Rajasthan, Madhya Pradesh, and Karnataka reported being frequently harassed by politicians for reasons unrelated to teaching—such as threat of transfer to a remote area (World Bank 2013a).

⁵⁰ Government of the People’s Republic of Bangladesh. Ministry of Education. Memo no. sha:13/mpo-12/2009/75. Dated 4 February 2010.

of cross-checking does not exist as yet. As the examination system moves towards being competency-based, with markers having discretion over grading exam papers, this problem is likely to continue.

II.63. Although teachers are one of the principal resources available to the education system, it appears that this resource is not being utilized in the most effective manner. In 2010, 94 percent of the public expenditure on education for secondary education was spent on educational personnel salaries, and for primary education in 2011, 90 percent was spent on teacher salaries.⁵¹ However, the current system does not attract, constitute, and retain the best professionals, and once recruited, it provides little incentive to keep them motivated (Sandhu and Rahman 2012). NSA 2011 and LASI 2012 also indicate that additional years of experience are not correlated with higher student learning, mostly due to low motivation levels. Factors contributing to motivation levels include professional recognition of the teaching cadre; sound practices in recruitment, promotion, and deployment; pay scales; and performance recognition. These will be explored in the next few paragraphs.

II.64. The teaching profession at the lower education levels is considered to be low profile, and the lack of a career ladder causes dissatisfaction among teachers at the primary and secondary levels, whereas the scenario is quite different in higher education. Many teachers decide to become teachers as a last resort, because they have been unsuccessful in entering another profession and the entry requirements are relatively lower for the teaching profession (Sandhu and Rahman 2012). This is especially the case for male teachers, although women are more likely to join the teaching profession with greater satisfaction because of better working conditions (FREPD 2007). Once in the profession, there is a limited scope for moving up the career ladder. A primary teacher could either serve as an assistant teacher or a head teacher, but most spend their career as an assistant teacher, because the number of posts for head teachers is limited. Likewise, a secondary school teacher could work as an assistant teacher, assistant head teacher, or head teacher, but promotion into the higher levels is rare. Although creating a job hierarchy in the teaching force may not be what the system needs, career options that can keep teachers motivated for performing in the classroom and for constantly upgrading their skills are needed. MoPME, in recognition of this constraint, has attempted to create a cadre for primary school teachers, but without much success. In non-government secondary institutions, there is hardly any opportunity for promotion or transfer. In TVET, instructors may get promoted to the level of head of institutions at best. In contrast, teaching in higher-education institutions, particularly at public universities, is a high-profile profession marked with instant recognition of academic excellence.

The education system does not attract, constitute, and retain the best professionals, and once recruited, it provides little incentive to keep them motivated.

II.65. Performance incentives, including recognition, promotion, and pay—which are effective in raising teacher motivation in other parts of the world—have not been effectively enforced in Bangladesh. Among 36 Programme for International Student Assessment (PISA)-participating countries, performance pays are introduced in the forms of base salary (7 countries), annual increment (11 countries) and supplementary pay (14 countries) (OECD 2012). In the case of the Organisation for Economic Co-operation and Development (OECD) countries, student performance tends to be better when performance-based pay systems are in place in countries with comparatively low teacher salaries (less than 15 percent above GDP per capita). The opposite is true in countries where teachers are relatively well-paid (more than 15 percent above GDP per capita) (OECD 2012). As mentioned earlier, MPOs in secondary education have certain performance criteria linked to institutional performance, as reflected in the terminal exams. This, however, relates only to continuation of subvention, as opposed to obtaining higher subventions. Enforcement of this criterion has been an issue that takes away the incentive to do better. While cancelling subvention, despite poor performance, has been politically challenging, there is no staggered system of subvention—such as better subvention for better performance—to sustain an effective link between subvention and performance.

II.66. Teachers have limited incentives for innovating teaching methods and practices. As reported earlier, primary and secondary teachers rely heavily on the textbook for classroom instruction, and they aren't familiar with the competencies that must be gained by the students. This implies that a teacher's accountability rests on delivering

⁵¹ This is the percentage of the non-development budget allocated for teacher salaries.

textbook content geared toward doing well in the final examination. The principal on-the-job training opportunities for primary teachers, provided by Assistant Upazila Education Officers (AUEOs) during their supervision visits, and Upazila Resource Center (URC) instructors, also do not encourage innovation in teaching methods or to learn from peers through any learning networks (Baba 2008). In secondary education, such support is limited and ad hoc, coming mostly from donor-funded projects.

II.67. The role of the School Management Committee (SMC) in holding teachers and the school system accountable is rather weak, and Head Teachers (HTs) are, in many cases, classroom teachers, rather than leaders who are tasked to manage school performance. Because the education system in Bangladesh is highly centralized, very limited authority is delegated to the upazila and school levels, both in decision making and in financial matters. However, having such a centralized approach, with standardized, one-size-fits-all intervention may not always work on the ground in reducing disparities. Conversely, it is ineffective to delegate too much responsibility to HTs, because they usually have too many time and capacity constraints to provide regular monitoring and mentoring for teachers, and to provide on-site support and ensure accountability. In looking at ways to balance decision-making powers within the education system and empower individual schools, MoPME initiated SMC reforms and revised the SMC guidelines in 2012. The SMC, comprising 12 members—including community leaders, teachers, and parents/guardians—has a vast range of mandates to improve school performance. The revised guidelines aim to give SMC a more active role in school management; support school block grant operation to implement the School-Level Improvement Plan (SLIP); monitor regular teaching-learning activities at school; appoint teaching assistants or aides in case of an acute shortage of teachers in the school; and take actions on children’s enrollment and dropout issues. At the secondary level, having an approved SMC/governing body is also one of the conditions to be eligible for MPO. Evidence has shown that having a more-empowered entity at the local level that offers capacity building and transparency can greatly increase a school’s effectiveness, as long as the SMC is run by parents and the community (rather than political leaders and the elite). To improve the function of SMCs, the government has conducted several studies under the Secondary Education Sector Improvement Project (SESIP, a project co-financed by the Asian Development Bank and the government of Bangladesh), the Second Female Secondary School Assistance Project (FSSAP II), and SEQAEP, based upon which SMC members have been provided with extensive training over the past eight years.

4.4 Insufficient Coordination on Reforms

II.68. Because of the system’s large size and complexity, reforms in the last few years have been introduced without much coordination within various subsectors. There are many actors and implementers within each subsector of education, necessitating a great deal of collaboration across all these agencies to affect the quality of education service delivery. The government has taken a number of very positive reform initiatives at different levels. For example, at the primary education level, MoPME has introduced a national learning assessment and an 18-month Diploma course that meets international standards for teachers; and MoPME has moved toward competency-based examinations. Although not all of these initiatives are fully implemented, they have been relatively easier to design and plan in a phased and coordinated manner as elements of the subsector-wide reform program—the PEDP 3. The program approach implemented in primary education over the past 11 years attained considerable maturity to make judgments regarding how different reforms inform and support each other.

II.69. In secondary education, however, many reforms are being implemented under various projects without much interaction among the projects. For example, the following are all geared toward improving secondary education without much coordination: the secondary learning assessment; introducing school-based assessment; creative questions in SSC exams; school performance-based management systems (SPBMS); introducing the Non-Government Teachers’ Registration and Certification Authority (NTRCA); motivational incentives for higher-performing institutions, teachers, and students; and targeted intervention to assist poorly performing schools. In general, higher education is moving toward an accreditation system just for private universities, even though public universities are equally in need of such a system.

II.70. There is limited interface between the subsectors, which are administered by two different ministries, despite the fact that one builds upon the success of the other and provision at one level has considerable implications for other levels. For example, the move in primary education toward a competency-based examination

system would have much to inform the examination reforms at the secondary level, and vice versa. The lessons from NTRCA should inform the centralized teacher recruitment system in primary education. The national student assessment at grades 3 and 5 should be linked to the secondary assessment and provide a wealth of information about the entire education system's health. As changes in examination systems in primary and secondary education become more established and demand a different skill mix from teachers, higher-education institutions would need to factor these demands in as core competencies for their graduates. The TVET system has worked out a detailed qualifications framework and expects it to be implemented through all the skill-building activities provided in the country. However, links with the general secondary education system and with higher education are yet to be fully explored. Such links could support the development of a robust lifelong learning and skill-development environment in the country.

5. Policy Directions

Based on analysis and findings from the earlier sections, this section presents seven areas as policy directions: (i) change what is “valued” throughout the system; (ii) set national learning goals and monitor them; (iii) articulate and consistently measure standards, including improvement incentives; (iv) enhance policy measures to address teacher performance and motivate; (v) target interventions and engage stakeholders; (vi) coordinate reforms, exploring all synergies and consequences; and (vii) develop key national institutions.

5.1 Change What Is “Valued” Throughout the System

II.71. **There are a number of very good initiatives being undertaken to improve the primary and secondary exams in Bangladesh.** However, earlier sections of this PN have indicated that the messages that examinations are currently sending to students, teachers, and policymakers are that the system values memorizing facts and passive recognition or repetition of single, correct answers—and that a single, high-stakes test can determine what students know, can do, and are likely to be capable of in the future. The best way to improve evaluation is to change the message it sends into the classroom. Good testing should send a message that reflects what a system truly *values* in learning—skills such as critical thinking, clear communication, and problem solving. Then, evaluation becomes a positive force. To help the system shift its focus throughout the education process, this Policy Note recommends that Bangladesh: (i) ration the number of examinations; (ii) continue with improvements in the technical and managerial aspects of examination reform; and (iii) enhance acceptance for reforms and use of the examination results to improve teaching and learning.

When a country decides to change what it values in learning, it has a domino effect for the entire education process.

The key to success is creating a strong awareness, motivating and mobilizing resources, and reinforcing those values at every stage.

5.1.1 Ration the number of examinations

II.72. **Bangladesh has a number of high-stakes examinations—four to be exact (at grades 5, 8, 10, and 12)—before a student completes secondary education.** In addition, students face monthly exams in almost every class (administered by the teacher). In highly competitive schools, students are bound to sit for entrance exams also, as early as kindergarten. This raises three serious concerns: equity, the strength of the examination in determining what the system values, and coordination. Such frequent exams in Bangladesh reinforce the message, at every educational level, about the importance of recalling facts and knowledge versus testing competencies, which limits the scope for improvements in teaching and learning at any single stage of the cycle. And, in a system where coordination is limited (see also policy direction 6), this provides a complex situation for the teacher—for example, if the JSC, SSC, or HSC exams do not reform in the same manner as the PECE, then there is barely any incentive for primary school teachers to innovate and change classroom behaviors. This is not to say that Bangladesh should fully eliminate exams—India has seen a reduction in student learning outcomes in recent years (see box 2), and many believe this is a result of eliminating standardized exams. However, it is important for Bangladesh to consider rationing the number of exams.

Box II. 2: Number of Public Examinations in South Asian Countries

In general, assessment systems in countries in South Asia are stronger in the area of examinations and weaker in classroom and large-scale assessments. This is not surprising, because most of those countries have a long legacy of using examinations for making high-stakes decisions about who gains access to scarce opportunities at the next educational level.

Over the past decade, other South Asian countries (besides Bangladesh) have reduced the number of examinations (see table 10). Bhutan, for example, has reduced the number of examinations by delegating responsibility for primary and lower-secondary examinations to schools. In India, many states previously conducted annual (board) examinations at the end of primary (grade 5) and upper primary (grade 8) to determine who would be promoted. Based on the National Curriculum Framework of 2005 that highlighted concerns about the negative influence of testing and examinations throughout the school years, the Right to Education Act advocated continuous and comprehensive evaluations of a child's overall knowledge and development and prohibited board examinations until the child completed his or her elementary education. All Indian states have since banned board examinations until grade 10. At present, more than 40 school boards in the country conduct secondary school examinations at the end of grades 10 and 12.

Table II. 10: Number of Public Examinations in South Asian Countries

Country	Grade	Examination Name
Bhutan	10	Bhutan Certificate of Secondary Education (BCSE)
	12	Bhutan Higher Secondary Certificate
India	10	Secondary School Leaving Certificate
	12	Higher Secondary Certificate
Maldives	10	General Certificate of Education, Ordinary Level (GCE O/L)
	12	General Certificate of Education, Advanced Level (GCE A/L)
Nepal	8	Basic Level Terminal
	10	Secondary Level Certificate (SLC)
	12	Higher Secondary Level Certification (HSLC)
Pakistan	10	Secondary School Certificate
	12	Higher Secondary School Certificate
Sri Lanka	11	General Certificate of Education, Ordinary Level (GCE O/L)
	13	General Certificate of Education, Advanced Level (GCE A/L)

Note: In India and Pakistan, some states have examinations at grades 5 and 8. The list includes only the major public examinations, and the names of the examinations vary by certifying boards or state/province within the country.

Source: World Bank 2013a.

5.1.2 Continue improving the technical and managerial aspects of examination reform

II.73. **Reliable and valid examination development is a long-term process and requires a great deal of technical skill and time for development.** It is essential that the examinations conducted in Bangladesh: produce scores that are both reliable and valid; are deemed fair and achieve a high level of public acceptance, ensuring that no particular candidate or group of candidates has an unfair advantage over another; are delivered making the best possible use of physical, financial, and human resources; are administered according to the agreed schedules and protocols, and with results issued on time; and are open to public scrutiny.

II.74. For the reforms to achieve the aforementioned five criteria, it is essential to build requisite capacity for testing, item development, administration, and management, along with robust quality assurance. To deliver the required services in the most efficient way, the assessment authority should be efficiently staffed (while there appears to be sufficient personnel in NAPE available to develop the new PECE, many of the personnel are involved in other activities such as Diploma in Education training and National Assessments, limiting concentrated capacity development and the timely development of examinations). Test items must be piloted with a diverse student group, pilot results must be rigorously analyzed, and the analysis results should be available for scrutiny. Teachers, parents, and guardians should be made aware that exams are based on curricula and syllabi—for example, the PECE is based on the competencies found in the curriculum, and as such, the examination items will not necessarily be in the same format as those found in the textbooks. There is a need to also set in place adequate quality control measures to greatly reduce the errors and variations in assessing students' work. At present, the PECE is sent to the printer in handwritten form for security reasons. This, however, prevents the inclusion of diagrams in the examination—a requirement for testing student skills in their ability to apply their knowledge and understand specific concepts. A procedure should be developed to ensure the paper's security and to enable the inclusion of diagrams. This might also decrease the number of print-related errors.

II.75. Each upazila is responsible for managing tests' administration, marking and scoring, and monitoring the PECE exam. This may be due in some part to the lack of space available in test centers. Test administration should be conducted in a more standardized manner, to enable all students to be fairly assessed. Going forward, the process for selecting test administrators in Bangladesh should be reconsidered. Although the present methodology is more cost effective, using teachers from the local area could result in a lack of standardization for testing protocols (see box 3 for country cases on elements of examination reform). It is important to train test administrators to ensure that they follow the same test administration protocols. This should occur on an annual basis. First, master trainers should be trained, who can then train the test administrators prior to the actual examination. This training should be interactive, where test administrators act out potential test scenarios. Precise information should be given to the test administrators regarding what they can or cannot say to examinees, and what they should do if they are unclear on how to deal with a specific issue that was not covered during training.

II.76. Similarly, the marking and scoring of the examinations requires training. This is especially true with competency-based questions, where often there is more than one suitable answer. Limitations to data reliability can also be questioned—for example, data entry and cleaning. The data are entered in the upazilas using the government's software, and sent to the Monitoring and Evaluation division of the Directorate of Primary Education (DPE) Department. Currently, there has not been enough focus on checking the accuracy of the marks, scores, and data entry, and a robust process for data cleaning (identifying inaccuracies in the data) is missing. This aspect should be improved, as should the process of managing examination papers after they have been marked and scored, with the data entered, so that the papers are available for further analysis and research purposes.

5.1.3 Enhance acceptance for reforms and use examination results to improve teaching and learning

II.77. To promote good teaching and learning practices, examinations should not be shrouded in mystery; create transparency by providing information on students' achievements and issuing summary reports. The institutionalization of examinations is not enough. There is a need for devising procedures to communicate findings to stakeholders—curriculum developers, textbook writers, examination bodies, teachers' educators, and teachers in the schools (box 3). This may require training each stakeholder, to ensure that he or she understands the results and knows how to use the results to improve quality. Currently, the PECE provides information on students' achievements in very limited curriculum areas—the results are merely a “snapshot” of what students should know, understand, and be able to apply. This is fallout from the examination's focus, limiting the area of curriculum content to what was in textbook content. Thus, the achievements of all students, especially the lower- and higher-performing students, might not be adequately represented. Because every year the examination is different, and no piloting has been conducted on the majority of the test items used, there is no way of knowing whether the difficulty level of the examination is the same over time. This makes it difficult to monitor whether pupil achievement is improving, decreasing, or remaining the same. Ideally, some of the “new” test items used could be included in the next examination as anchor items, which would provide some indication of any changes in achievement.

Box II. 3: Elements of Examination Reform

The Importance of Good Examination Administration

How an exam is administered can affect student performance as much as how the exam was written. Test administrators should be selected carefully. Practice varies. For example, some countries have used graduate students; in Zambia, school inspectors and Ministry officials are used; in the Maldives, the test administrator must be from another island. Although using teachers whose students are participating in the examination may be more cost effective and convenient, it is rarely done: some might follow the normal practice of helping students; some might make copies of the tests or test items, making them unusable in future tests; it might also diminish public perception of the trustworthiness of the results.

Source: Adapted from *Assessing National Achievement Levels of Student Education*, World Bank 2008.

Using Examination Results through Coordination of Key Stakeholders—Uruguay

In Uruguay in 2005, the test results were mainly used by teachers, head teachers, and school inspectors. Forty days after testing and before the end of the school year, the schools received a confidential report with aggregate school results presented item by item. The reports did not include individual student results or results disaggregated by classroom. The Unit for Assessment of Educational Outcomes (UMRE; or in Spanish, Unidad de Medición de Resultados Educativos) produced teaching guides to help address perceived weaknesses, and organized in-service teacher training programs for schools in disadvantaged areas; they also prepared reports for supervisory personnel and held workshops for inspectors that drew on the test results.

Source: Adapted from *Assessing National Achievement Levels of Student Education*, World Bank 2008.

Building Consensus on the Purpose of the Assessment—Hungary

Hungary learned that communication and wide publicity of student assessment at the early stages of preparation as well as publication of results are essential for public acceptance and for gaining momentum on the findings from an assessment. Hungary conducted student assessment in 2002. Because the time for the development and implementation of the assessment was limited, adequate communication regarding how the assessments were to be used with education professionals and the wider public was neglected. This caused unexpected tension and misunderstanding among the public regarding the assessment.

Source: Case Study for Hungary, OSI Assessment Resource.

Disseminating Examination Results—Pakistan

In Sindh Province, Pakistan, besides a technical report and a summary report, teachers also receive additional information through a feedback report since 2007. This identifies the strengths and weaknesses in student achievement on individual test items and provides some solutions for teachers to overcome these difficulties. Similarly, for the general public a leaflet is produced, showing the general achievements and detailing areas for improvement.

Source: Lucy Jones, Quality Education Consultant, Sindh, 2007–2011.

II.78. **Examinations should provide systematic feedback of information to teachers, with information they can easily access regarding students' progress and achievement, as well as providing a sense of what students have or have not understood.** By their very nature, the examination results should be able to identify the strengths and weaknesses in teaching and learning (box 3). This leads to two requirements. First, results must be issued in time and in an appropriate form for decision making (such as selection for the next highest level of education). Presently, the results are issued on the specific date indicated by the government, and the examination results consist of the students' final scores. Aiming for a more detailed analysis of the results will result in better feedback to students, teachers, and policy makers, so that students and teachers can more readily identify their strengths and weaknesses. Second, feedback on assessment performance should be given to schools in time for it to influence instruction for the following school year. This feedback should be in the form of easily accessible information; it should identify reasonable targets for teachers in all areas, from disadvantaged or rural areas to more privileged areas. This should be built on in each successive year of testing.

II.79. **Communication and public awareness campaigns are crucial to build support and momentum for implementing changes—especially where it involves high-stakes examinations.** The key audiences for “awareness-raising” campaigns are teachers, students, parents/guardians, and the media. Strategies include the distribution of general information material (including via the website), distribution of special information for teachers, seminars, workshops, and meetings for teachers, face-to-face meetings with key stakeholders, open public meetings, press releases, newspaper articles, and radio and TV broadcasts (box 3). NAPE developed a framework, which has been approved by the MoPME, that identifies all the necessary reforms. This framework provides complete information regarding the PECE reforms. Also, NAPE has produced a series of documents entitled *Grade 5 Completion Examination at a Glance*. These should be distributed and form the basis of workshops and seminars.

5.2 Set National Learning Goals and Monitor Them

II.80. **Having put in place a credible assessment of learning through the sample-based NSA in primary education and the Learning Assessment in SEQAEP Institutions (LASI), Bangladesh is already off to a good start.** This Policy Note recommends that Bangladesh: (i) set national targets for achievement—backed by the highest level of political support—and monitor progress through continued administration of high-quality sample-based learning assessments in primary and secondary education; (ii) disseminate the results of the assessments widely to enhance accountability within the system and for informing policies; and (iii) consider benchmarking through international assessments.

5.2.1 Set national targets for achievement, backed by political support, and monitor progress through continued administration of high-quality assessments in primary and secondary education

II.81. **If done well, and of high quality, learning assessments can be extremely powerful instruments for communicating about an education system’s health.** Baseline information on what students learn, what factors affect their learning, and what policies could support higher learning is already available through the results and analysis of NSA 2011 and LASI 2012. For the emerging initiatives to be effective in transforming the quality of education, it is important that the learning assessments are institutionalized in the governments’ routine activities and clear learning outcome targets are set. Although sometimes public examinations are used to monitor students’ progress, public examinations are not usually designed for comparative analysis over time. System-level assessments, on the other hand, can track the progress of students’ learning over time. Setting clear targets, such as “x percent of students will master the grade y competency by 2020” can shift the direction of education policies towards outcomes. Strong and continuous political support is crucial to establish such a mechanism and use such a system for policy setting.

5.2.2 Widely disseminate assessment results to enhance accountability and inform policies

II.82. **Setting national targets and monitoring those targets can benefit tremendously from actively disseminating the results as well as the data analysis generated from learning assessments.** Although political backlash is common in many countries when results are not very positive, on the international level, making the results fully accountable to the public and making a political commitment to improve the quality of learning has proven quite powerful.⁵² There are a few important steps for using findings of the national learning assessment, including: (i) describing the state of educational quality and student achievement; (ii) communicating findings; (iii) formulating policies and programs of interventions; (iv) implementing policy and programs or interventions; and (v) monitoring effects. While test implementers often feel a sense of completeness after the exams and assessments are

⁵² For example, Mexico exhibited the fastest improvement among all participating countries in Mathematics in PISA, from 385 in 2003 to 419 in 2009 as a result of strong political commitment made by President Calderón, who led setting PISA performance targets in the national strategy and top-prioritizing learning outcomes (OECD 2011a).

finished, translating the assessment findings into policies and actions is important. Following analysis of the assessment results, there are five general areas of information usage to address deficiencies identified in the assessment: (i) formulating general policy and assisting in decision making in conjunction with other information; (ii) setting standards; (iii) providing additional resources to schools (system-wide or targeted); (iv) supporting curriculum revision, including textbooks; and (v) informing teacher development and teaching-learning practices in classrooms. Examples of using national assessment results in countries in other regions are presented in box 4.

Box II. 4: International Experiences with Using National Learning Assessment Results

Chile

Chile's Sistema de Medicion de la Calidad de la Educacion (SIMCE) is annually implemented on a census basis (to all students in the country) in grades 4 and 8. All schools receive a ranking in comparison with other schools in the same socioeconomic category, as well as a national ranking. SIMCE identifies 900 schools that score in the lowest 10 percent in the Mathematics and Language tests within their provincial regions for which special resources are provided. It is rather unique, as it uses an intensive public relations campaign that includes brochures for parents and schools, posters for schools, videos for workshops, TV programs, and press releases. Parents receive an individualized report for their schools so that they know which schools perform well in their neighborhood.

Uruguay

Uruguay implements national assessments at grade 6 in Mathematics and Reading Comprehension on a sample basis. Results are used mainly by teachers, principals, and school inspectors. The government uses the results to identify schools needing special support and for large-scale, in-service teacher training programs. Participating schools receive a confidential report with aggregate school results presented item by item. The unit responsible for the assessments produces: (i) teaching guides to help address perceived weaknesses and organize in-service training programs for disadvantaged schools; (ii) reports for supervisory personnel; and (iii) help workshops for inspectors that draw on the test results.

Uganda

Uganda implements a sample-based assessment in grades 3 and 6 in English literacy and numeracy. The National Examination Board, an implementing agency of the assessment, prints a poster for each grade 3 and 6 classroom, listing curriculum areas where national-level student performance is considered adequate (for example, "We can count numbers") and less than adequate (for example, "Help us to carry out dividing numbers correctly"). The results and implications of results are shared with teachers, head teachers, supervisors/inspectors, teacher educators, and policy makers.

Source: Greany and Kellaghan 2008.

5.2.3 Consider benchmarking through international assessments

II.83. Lack of participation in international assessments limits the opportunities to understand objectively what Bangladeshi students have learned and can perform at the international standard. Despite a growing interest in national assessments, Bangladesh has not participated in an international assessment. There are advantages and disadvantages of participating in international assessments. Advantages include not only the internationally comparable data, but also the opportunities for improving each participating country's education system. An international assessment provides data from numerous countries, thereby allowing each country to compare the results of its students with the results achieved by students in other countries. Although the results are compared across all participating countries, and countries may end up being located at the low end of the country order, international assessments provide objective and fresh insights to the participating countries' national curriculum and education systems. Several countries—including Mexico, Brazil, Poland, and Turkey—have

significantly benefited from international assessments to accelerate their education quality improvement, and presently there are many assessments being undertaken (table 11). International assessments can foster strong political support for reforming education systems. The capacity building of national staff is also a positive result of participating in international assessments. International assessments require all participating countries to meet high-quality standards for the national results to be officially acknowledged. This provides an external pressure to improve the national technical team's quality standard.

Table II. 11: International Assessments

Name	Target grade/age	Frequency	Subjects	Participating countries	Characteristics
Trends in International Math and Science Study (TIMSS)	Grades 4 and 8	Every 4 years since 1995	Mathematics, Science	63 countries and 14 subnational territories (2011)	Assesses students' Mathematics and science competencies based on formal curriculum contents (for example, Algebra and Geometry in Mathematics, and Biology and Chemistry in Science) and cognitive domains
TIMSS Advanced	Grade 12 (or last grade of secondary education)	1995, 2008, 2015	Mathematics, Physics	10 countries (2008)	Assesses students in their last year of secondary school who have studied advanced Mathematics or Physics to prepare them for further study of Mathematics and Science at the tertiary level
Progress in International Reading Literacy study (PIRLS)	Grade 4 (or 5 or 6)	Every 5 years since 2001	Reading	55 countries (2011)	Assesses reading comprehension of students, examines national policies and practices related to literacy, and assesses behaviors and attitudes toward reading
Pre-PIRLS	Grade 4 (or 5 or 6, depending on the country's educational development)	Every 5 years since 2011	Reading	3 countries (2011)	Tests basic reading skills that are prerequisite for success on PIRLS (shorter stories, easier vocabulary, simpler grammar, and syntax)
Programme for International Student Assessment (PISA)	Age 15	Every 3 years since 2000	Reading, Mathematics, Science	76 countries and economies (2009, some in 2010)	Assesses knowledge acquired both within school and out of school, and determines whether students can apply their skills and competencies in real-world situations

Source: International Association for the Evaluation of Educational Achievement (IEA) and Organisation for Economic Co-operation and Development (OECD) websites.

5.3 Articulate and Consistently Measure Standards, and Provide Incentives for Improvement

II.84. **As noted in the last policy direction, the articulation of an overarching learning goal for each level of education is a fundamental building block for improving the quality of education.** It also enables the identification of competencies and standards required to achieve the goal. In this context, this Policy Note proposes that going forward, Bangladesh consider: (i) developing standards of performance for service delivery for institutions and teachers; (ii) measuring compliance with these standards consistently, and (iii) incentivizing compliance with these standards, allowing flexibility where required so as to create an inclusive system.

5.3.1 Develop standards of performance for service delivery for institutions and teachers

II.85. **Drawing up standards of performance in great detail may not be necessary for every aspect of the curriculum and educational provision.** These standards could include, as a priority: (i) the competencies that students acquire in different subject areas for specific educational levels, with higher-level competencies building on the foundations provided during junior years of education; (ii) the competencies expected, as opposed to the academic qualifications of staff—for example, teachers, head teachers, and technicians, and (iii) the accreditation standards, which would enable quality assurance of various programs offered by different providers.

II.86. **Much work has occurred in primary education to date in setting competencies for students, including halving the number of competencies required from over 50; yet, there are still too many competencies—which are neither well-articulated nor consistently defined—across all subjects in primary education (Kraft et al. 2009).** Moreover, there is weak sequencing in students’ competencies between primary and secondary education that does not take into account a child’s developmental stages. Bangladesh has made substantial progress in developing national qualification frameworks for different levels of technical education and vocational training. What remains to be seen is how these will be implemented across various training providers, and how they build on competencies expected in the academic secondary and primary education levels. In terms of teacher competencies, the NSA 2011 clearly points to teachers’ competency and subject knowledge as an important factor contributing to students’ performance. However, there is limited scope for encouraging this at Primary Teacher Training Institutes (PTIs), where most trainers of teachers are not subject specialists, and therefore are limited in their ability to provide pedagogical guidance to new teachers. A teacher qualification standard for PTI recruitment, as informed by the NSA 2011, would be to bring in subject specialists (rather than generalists) as subject teachers at PTIs. Likewise, given that many trainers at vocational training institutes do not have any industry experience, they lack sufficient market knowledge, which is cited as something that is keenly lacking from graduates of secondary-level vocational institutes (Hossain 2012). Articulating a teacher recruitment standard to encourage recruiting trainers who have experience in the labor market prior to joining the teaching profession could help TVET instructors cater the curriculum towards the needs that many employers seek from TVET graduates.

5.3.2 Measure compliance with standards consistently

II.87. **Measuring compliance with standards becomes absolutely critical, to ensure accountability from institutions and professionals in implementing the standards.** Although countless experiences from around the world exist in measuring compliance with standards at schools, measuring and monitoring teacher competencies and performance standards in the types of activities that actually raise student learning (for example, coming to class on time, keeping students engaged, increasing efforts in grading homework and preparing lessons, and gauging how much their students learn) is a relatively new area for many countries. Getting real data on the teachers’ performance is not only critical to address issues around education quality, but also more accessible and cost efficient, given technological advances. Some recent approaches to acquire real data include using video cameras to observe classroom practices and using online homework to monitor students’ day-to-day progress (World Bank 2012; see box 5).

Box II. 5: Time-on-Task Study in India

A 2009 study in India observed classroom practices of 920 teachers in 360 schools in three Indian states—Andhra Pradesh (AP), Madhya Pradesh (MP), and Uttar Pradesh (UP)—to explore the association between quality of instructional time and learning outcomes. The study was replicated in six more states and provided invaluable feedback to enhance the country’s quality agenda. A unique tool was developed for observing classroom activities, to enable “quantifying” qualitative details of observations in the classrooms. Three primary grades in each school—grades 1, 2, and 4—were observed for Language and Math classes (for grades 1 and 2) and also Environmental Science classes (for grade 4); each class was observed twice during the study.

The major tools for this study included: (a) the school schedule, capturing information related to school characteristics and timing; (b) the teacher schedule, collecting information on teacher’s characteristics, perceptions, and practices; (c) a classroom logbook that recorded the classrooms’ physical structures, availability of materials, and classroom organization of teacher activities and students; (d) a classroom activity observation tool (an adaptation of the Stallings Observation Schedule) that records teacher and student tasks in classroom periods at regular intervals; (e) student schedules that collected individual and household information from children in grade 4 who were tested for their math and language skills; (f) language and math tests, with questions from both the national tests developed by National Council for Education Research and Training (NCERT) and Trends in International Math and Science Study (TIMSS); and (g) focus group discussions (FGD) with the community, parents, and students.

Three dimensions of teachers’ time were taken into account for this study: (i) the school calendar or the number of actual teaching days, as opposed to those planned for teaching by the school; (ii) the teacher’s physical presence time and the distribution of time across various functions within the school; and (iii) the teacher’s actual time in a class (45 minutes), along with the distribution of time across various activities of learning and “off task” (moments where the teacher and students do not engage in any activities that facilitate learning tasks). The rest of the activities were all broadly defined as time on task in a classroom situation. The time “on task” was further divided into: (a) time on learning tasks and (b) time on organizing tasks. Time on learning tasks were of three types: (i) time on learning activities that were “student centric” (Category 1); (ii) time on learning activities that followed traditional teacher-centric, “chalk and talk” methods (Category 2); and (iii) time in which the tasks were mainly “rote learning” (Category 3).

Overall, the study brought forth some key lessons. First, better time management is essential for teachers and students in terms of accountability and being more efficient. Second, academic reforms must be instilled to help teachers utilize class time effectively. Finally, the analysis highlights that children’s learning levels are better in classes where teachers choose more student-centric tasks.

Source: World Bank 2009.

5.3.3 Incentivize compliance with standards, allowing flexibility where required to create an inclusive system

II.88. **It is advisable to set standards with the objectives of improving the quality of education, rather than policing it.** Countries have experimented with different methods of incentivizing schools and teachers to comply with standards, including the use of performance pay (see box 6). It is important to note, though, that monitoring systems must be robust and reliable in their ability to measure compliance. Moreover, in the context of Bangladesh, where there is so much diversity in the types of providers, it is important to apply flexibility and contextually specific criteria in measuring performance against agreed standards. For example, it might not be necessary to articulate the number of hours that students have to participate in classes in order to master a competency in a

particular subject. If schools in urban slums catering to poor students could, through multi-grade teaching, prepare students to sit for the PETE over a two-year period (as opposed to the five years it would take at a regular, formal school), service standards for primary education provision should not inhibit such modes of delivery (by, for example, enforcing a restrictive teacher qualification criteria or time-on-task routine). Lack of flexibility in applying standards is a constraint in college education at present. Since the National University sets the curriculum centrally for colleges under its mandate and there is limited flexibility in attaining the curriculum objectives, colleges are constrained in innovating and improving the quality of instruction independently, primarily because they do not have the ability to use their funds as required. Therefore, it is important to allow flexibility in applying well-documented standards.

Box II. 6: International Examples of Incentive Schemes to Encourage Compliance with Performance Standards

In Brazil, four states and the municipality of Rio de Janeiro have successfully introduced teacher incentive programs. The incentives are group-based and are awarded in the form of a salary bonus, consisting of approximately one to two months of salary. Schools managed by the state-set specific targets to improve test scores and pass rates at the primary and secondary levels. As the programs are implemented system wide, the evaluations use regression discontinuity designs to compare results for similar schools that face stronger or weaker performance incentives as a result of the rules for setting individual schools' performance targets. Targets are for value-added student learning improvements in Mathematics, Language, and student grade progression. Schools that do not meet at least 50 percent of targets do not receive the bonus. Where bonuses are available statewide, it seems that when the targets are more ambitious, student learning remarkably increases. This is the case in the northeastern state of Pernambuco, which had high targets and performed considerably better than similar-performing comparison schools (a 0.31 standard deviation higher in language and a 0.15 standard deviation higher in math). The successful schools also demonstrate a more intensive use of learning materials and students seem to be more engaged.

In the second year, results demonstrated that when controlling for school characteristics, schools that had just missed achieving the minimum requirements for the bonus showed more improvement than schools that had just met the threshold for the bonus. Therefore, higher targets and barely missing the bonus created incentives, leading to positive effects on schools' motivation and performance.

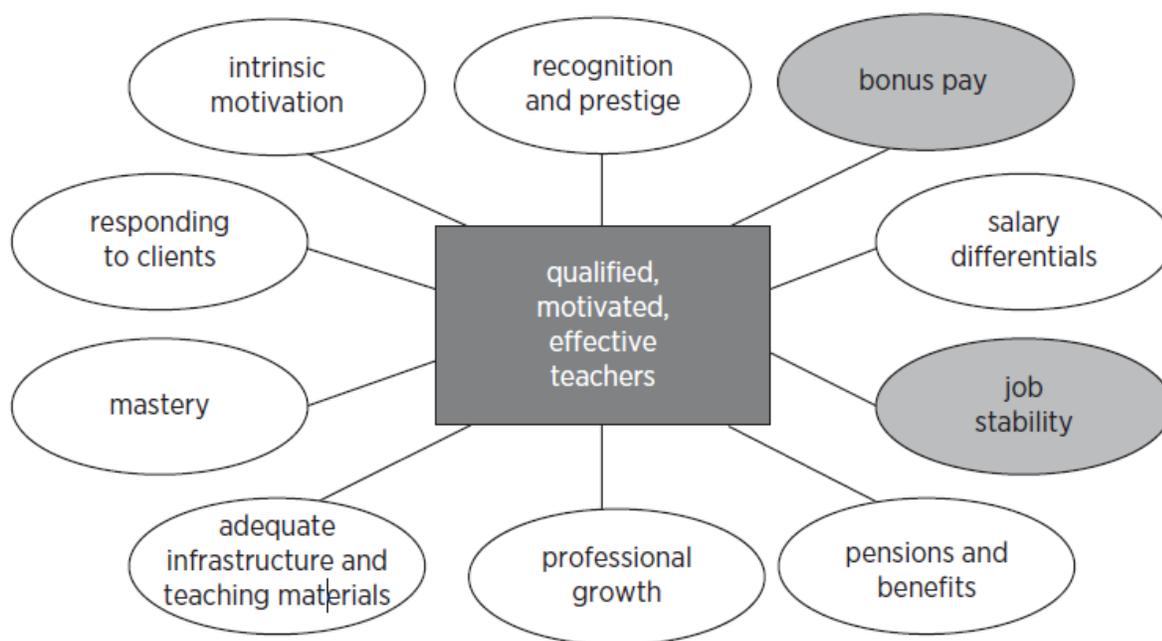
The increasing popularity for pay-for-performance programs in Brazil is rooted in the perceived legitimacy of the measures used to determine performance. Two combined measures—learning outcomes and grade progression (including repetition and graduation rates)—are used to mitigate negative factors such as teacher behavior in boosting scores. This innovative tool, called the Index of Basic Education Development (IBED), has become a rich data source for long-term tracking at both state and municipal levels and prevents data manipulation, especially when used in conjunction with other performance measures such as the national Prova Brasil test, which assesses math and science.

Source: Bruns et al. 2011.

5.4 Enhance Policy Measures to Address Teachers' Performance and Motivate Them

II.89. **The framework for enhancing teacher performance is already well developed.** The framework includes many features, such as motivation, bonus pay, mastery of subject matter, job stability, opportunities for professional growth, recognition, and prestige (see figure 17).

Figure II. 17: Teacher Performance Incentives



Source: From Bruns et al. 2011, adapted from Vegas 2005.

II.90. **Evidence in this Policy Note has confirmed that teacher performance, subject knowledge, and motivation are critical for student learning in Bangladesh, as in most countries around the world.** Yet, there are a number of factors limiting the development of an effective teaching force in the country. These include the lack of prestige associated with the profession—particularly at the primary and secondary level—and limited opportunities for career development, progression, and enhancement, which discourages entry (and retention) of the top graduates of the country’s education system into the profession. Several factors demotivate teachers, including the disparities in salary structures (between MPO versus non-MPO schools, vocational versus academic secondary teachers, and so on); lack of recognition for good performance; perceptions of unfairness in the recruitment, deployment, and promotion processes; and disincentives for innovating teaching and learning practices demotivate teachers. Perhaps no other fact epitomizes the issue more than the finding that teachers with more than 20 years of experience in teaching are associated with lower levels of student learning. What is more alarming is that these teachers, many of whom will remain in the system for the next two to three decades, are financed through the public budget, many through the MPO system that is supposed to be conditioned upon performance. Therefore, any advancement in the teaching and learning process—and the effectiveness of public finance in delivering high-quality skill development in the country—necessitates that Bangladesh address the issue of teacher motivation and performance as a priority.

II.91. **Research on top-performing education systems has identified four ways in which they achieve excellence in teaching: professional autonomy, shared responsibility, career development, and performance management (Vegas et al. 2012; World Bank 2012a).** These four elements can be used as alternative policy options or in combination to achieve the optimum results. This Policy Note proposes that Bangladesh: (i) continue its efforts at enhancing teacher development, already introduced through the Diploma in Education program; (ii) introduce the concept of shared responsibility for performance and link it with the MPO system, and (iii) institute a system of performance management for teachers. Professional autonomy, which enables teachers, once they have entered into the system, discretion to decide how best to achieve the highest performance from students, may work

well in advanced systems where performance standards are well established and curricula content and teacher professional development are well integrated into the teaching profession.

5.4.1 Continue efforts at enhancing teacher development already introduced through the Diploma in Education program

II.92. **The Diploma in Education Program, which is currently being piloted, is considered to be of reasonably good standard.** It is limited to the in-service professional development of primary school teachers, and is offered as a pilot only in seven PTIs. It is important to further develop this Diploma program into a pre-service training program, making it mandatory for all teachers who are currently teaching or aiming to apply for a job in primary schools (public or private) in an effort to universalize higher-quality teaching across the system. If the Diploma is awarded by a nationally recognized agency, such as the National University, the Diploma could form the first step in a series of professional development opportunities for teachers—a much-needed intervention to raise the quality of teaching and learning in the country. Likewise, the current in-service training for secondary school teachers must be enhanced. The capacity to provide high-quality subject-based training for secondary teachers of TTCs is limited. Strengthening and formalizing partnership with universities to provide the standardized subject-based degree and TTCs to provide a one-year course focusing on pedagogy would improve the quality of secondary teachers and institutions. Unlike primary education, a number of organizations (both public and private) are involved in teacher training in secondary education. Articulating the roles and responsibilities of various stakeholders (such as National Teacher Education Council [NTEC], NTRCA, and TTCs/universities) could support the development of a well-trained teacher force for secondary education in Bangladesh. Another possible type of Continuous Professional Development (CPD) program could be continuing mentoring and on-site support for teachers, as practiced in Punjab, Pakistan. On-site advisory support to teachers would work via a network of field-based District Teacher Educators (DTEs) and Teacher Educators (TEs) located in high schools and teacher education colleges (World Bank 2013a).

5.4.2 Introduce the concept of shared responsibility and perhaps link it with MPO

II.93. **One manner in which excellence in teacher performance can be achieved is through the practice of shared responsibility, whereby teachers share a collective vision about their roles and responsibilities (Vegas et al. 2012).** In this model, collaboration between teachers and support for weaker teachers by their more experienced and stronger colleagues is seen as a fundamental input to enhancing teacher and student performance (see box 7). The education system's quality, therefore, depends on each and every teacher within that system. The current issues for the education system in Bangladesh—remote locations of several schools, overpopulated classrooms, and the teachers' limited capacities—may be tackled through such a model. It would be important for Bangladesh to study the models of shared responsibility around the world to determine how best to make it work for the country and its teachers. Linking with the MPO system may be worthwhile and effective to consider.

Box II. 7: Examples of Group-Based Performance-Enhancement Measures

Chile: SNED

The Sistema Nacional de Evaluación del Desempeño de los Establecimientos Educativos (National System of School Performance Evaluation, or SNED) in Chile is a group-based financial incentive program that rewards the highest-performing schools that serve 25 percent of primary and secondary enrollment in each region. Every two years, participating schools are chosen in a regional “tournament.” Successful schools receive a bonus, of which 90 percent of the total amount is allocated for teachers. Each teacher’s bonus consists of between 5 percent and 7 percent of his or her annual salary.

Shanghai, China: Shared Accountability

In Shanghai, China, the practice of *shared responsibility*, in which teachers share a collective vision about their roles and responsibilities, has led to excellence in teacher performance (Vegas et al. 2012). The concept is promoted through the implementation of several mechanisms intended to foster collaboration, continuous teacher development, and accountability. For example, teachers are expected to join “teaching study groups” in which teachers of the same subject meet regularly to discuss and develop detailed lesson plans, which in turn can be considered a record for the teachers’ performance (OECD 2011). Further, opportunities to observe other teachers (for example, in the event of a curriculum change, for mentoring, or monitoring by the principal) and demonstration classes taught for the purpose of peer feedback, facilitate ongoing dialogue on pedagogical techniques and subject knowledge (OECD 2011). The shared responsibility concept has also been reflected in strategies to intervene in “weak” or lower-performing schools through the practice of “pairing off” urban and rural districts, where administrators share knowledge and facilitate an exchange program for teachers (OECD 2011). Another successful strategy has been the transfer of teachers and principals from urban areas to the high-turnover rural areas for a period of time, while their rural colleagues join schools for the same duration in urban areas (OECD 2011).

5.4.3 Institute a system of performance management for teachers

II.94. **Finally, introducing effective performance management could be explored further in Bangladesh.** School systems use monetary and nonmonetary incentives in attracting and rewarding effective teachers. These rewards promote excellence, and show that not only are teachers qualified and highly trained, they are competent, effective, and efficient. Since successful teacher performance is highly predictive of successful student academic performance, particular performance incentives may be considered. In the development context, evidence shows that teacher bonus pay can be successful when countries share the following characteristics: weak systems for performance monitoring and accountability; relatively weak teacher professionalism; a relatively large bonus size; focused performance metrics; and “fair” performance metrics, with rewards clearly linked to prior period results (Bruns et al. 2011). There is also evidence that performance-related pay for teachers works better in raising student achievement levels in countries where the base teacher salary is low (Bruns et al. 2011). There are many models of how countries have instituted teacher performance pay incentives to support higher levels of performance (box 8), and these different models must bear great consideration and study before designing and determining Bangladesh’s specific scheme.

Box II. 8: Models of Performance Pay Systems

Many countries have attempted to improve teacher performance and motivation through performance pay increases. The following examples list some of the relevant cases for Bangladesh.

India

In Andhra Pradesh, India, a large-scale study involving 300 schools provided financial rewards to teachers as motivation. Financial incentives were given in one case to individual teachers and in another case to groups of teachers within designated schools who were successful in raising the average class test scores by 5 percent or more. The financial reward represented, on average, 35 percent of a teacher's monthly salary. In both cases (the individual teacher and group awards), it was found that financial awards were successful in raising student performance. However, after the second year, schools where individual teachers got awards outperformed the schools where group awards were offered.

Singapore

As a crucial element of the "Education Service Professional Development and Career Plan" introduced by the Government of Singapore, teachers can choose three career tracks, each linked with its own performance: (i) a Teaching Track, where they can advance to be Principal Master Teachers; (ii) a Specialist Track in which they can advance to become Chief Specialists; or (iii) the Leadership Track, which trains them to take on leadership positions in schools and in the Ministry of Education's headquarters, and where they can advance to become the Director-General of Education. Each teacher's performance is monitored through an Enhanced Performance Management System, involving planning (for teaching goals, innovations instruction, school improvements, and personal and professional development), regular support and coaching to the teacher, and an intensive performance evaluation. The evaluation results in a performance grade, which is linked directly to the annual performance bonus of the teacher as well as promotion decisions.

Sources: Muralidharan and Sundararaman 2009 for India and the Singapore Ministry of Education website.

5.5 Target Interventions and Engage Stakeholders

II.95. **This Policy Note reports some alarming facts about the determinants of learning in Bangladesh.** Based on international experience in tackling these issues, this Policy Notes recommends that Bangladesh: (i) devolve centralized authority and instead promote school-based management (SBM) to bring all schools—particularly the weakest-performing ones—to acceptable quality standards; (ii) use information actively to enhance accountability, and (iii) introduce targeted interventions to address the learning needs of weak students.

5.5.1 Devolve centralized authority and instead promote SBM to bring all schools—particularly the weakest-performing ones—to acceptable quality standards

II.96. **Education service provisions are among the most complex services to deliver, requiring immense managerial, technical, and financial expertise.** Therefore, many suggest that education is too complex to be efficiently produced and distributed in a centralized fashion (King and Cordeiro-Guerra 2005). This is highly relevant for Bangladesh, which has one of the largest student populations in the world, and one of the most centralized systems for service delivery.

II.97. **Most countries whose students are among the highest performers in international assessments of learning achievement have provided a high degree of autonomy to their local authorities and schools, especially their teachers and parents, particularly in deciding what courses to teach and how to use funds at the school.** This form of SBM has not only been helpful in enabling schools to provide for students' diverse needs, but also to minimize disparities in provision across all schools in a country. If governments provide a framework and requisite financing to let poorer-performing schools receive the help they need to improve, SBM can minimize the performance differences between schools. For example, Finland and Sweden are two top-performing countries in

PISA (and provide among the highest degree of autonomy in the world), and they record the smallest differences in schools' performances on learning assessments (Bruns et al. 2011). Numerous other examples exist that speak highly of the results of SBM reforms around the world (see box 9).

II.98. In primary education, SLIP funds under PEDP 3 should be expanded nationwide as a tool to promote devolution and to ensure teachers' accountability on school management and student learning with necessary trainings to SMC (for example, on needs assessment, planning, and account keeping). A rigorous monitoring mechanism with strong policy support and capacity building needs to be established to strengthen SBM and to encourage peer learning at their locality and nationwide. MoPME should accelerate introducing the Upazila Primary Education Plan (UPEP) initiative with block grant allocation that will help address issues of poorer-performing schools to receive specific interventions, intensive supervision, and/or additional funds for inclusive education. Concerns have been raised about implementing SBM at the secondary level under the SESIP, allegedly without much discussion with stakeholders. While global experience with SBM is positive, such practices need to be contextualized—taking into account the constraints and governance issues in secondary education, so that the incentives are not distorted and outcomes do not give a false impression of quality improvement.

Box II. 9: Impact of SBM on Student Achievement and Teacher Performance

Kenya: Extra Teacher Program

Following the introduction of free primary schooling in Kenya, an intervention introducing contract teachers in targeted schools was implemented as a response to increases in student enrollment and the pupil-teacher ratio. The Extra Teacher Program (ETP) led to the recruitment of a contract teacher for first-grade classes for each of the 140 randomly selected schools out of a pool of 210 schools. Of the participating schools with contract teachers, 70 were randomly selected to participate in a school-based management (SBM) intervention, which asked for the school committees to monitor the contract teacher's performance and decide whether to renew a teacher's contract or to replace him or her. School committees were given special training regarding how to monitor the teacher's performance and attendance and how to effectively engage parents. An impact evaluation of the ETP indicated that after 18 months of intervention, the effects of empowering school committees by reinforcing the important role of parental participation is noteworthy, with many positive benefits. Students of contract teachers performed better than students of civil service teachers. These effects were even larger when the school committee was given training on dealing with contract teachers. Students in civil service teachers' classrooms in ETP schools did better in Mathematics compared to students in the ETP schools not participating in the SBM program. Further, positive effects were seen on the test scores of civil service teachers' students, and on teacher absence rates in ETP schools participating in the SBM intervention.

Mexico: Programa Escuelas de Calidad

The Programa Escuelas de Calidad (Quality Schools Program, or PEC) in Mexico is an example of an SBM initiative aimed to increase school autonomy and education quality, particularly in disadvantaged urban schools. Participation in the program is voluntary, and selected schools receive grants of up to \$15,000 in exchange for the preparation, including input from parents, of a five-year educational improvement plan. Approximately 80 percent of the grant is allocated toward school materials and facilities, and must be spent within the first four years. The remaining funds are spent in the fifth year, and a significant amount is designated for teacher training and development. A notable aspect of this program is that it integrates both vertical accountability (as the school committee is accountable to central education authorities), as well as horizontal accountability (as the school committee is responsible to donors and the school community). Analyses of PEC's results revealed that participation in the program led to lower dropout rates by 0.24 points, lower failure rates by 0.24 points, and lower repetition rates by 0.31 points. Further investigation showed an increase in parental engagement at the school and at home, through supervising students' homework. In the state of Colima, where PEC grants have been assigned since 2006, teachers in participating schools report a significant increase in time spent per week on supporting students who are falling behind and meeting with parents. According to reports by parents, teachers in the PEC schools have lower levels of absenteeism compared to teachers in schools not participating in the program. Student performance increased in schools that participated in the PEC for a longer duration.

Source: Bruns et al. 2011.

5.5.2 Use report cards and other information resources to enhance accountability

II.99. Enhancing accountability in an education system rests on the transparency and availability of information, to enable voice and participation of stakeholders in the decision-making process. Citizen report cards and school report cards have enabled improvements in management and service delivery around the world.

This Policy Note recommends that Bangladesh institute a system of regular reporting and dissemination of this information through school report cards. Although these report cards may be linked specifically to the standards mentioned in section 5.2, they should be simple and user friendly, so that they are easily understood by the community. Report cards work best when their information is used to reward good performers (through recognition in national ceremonies or financial incentives), identify poor performers (so that the government can play an active role in supporting poor performers who want to improve), and take punitive measures on those schools or school boards who are too complacent and not eager to be held accountable. Many developing countries are successfully employing these instruments to raise the standard of performance of all their schools (see box 10). In Bangladesh, MoPME has already established practices to give awards to best-performing teachers, HTs, teacher educators, and local education officers based on certain criteria every year. Accountability could be strengthened by systematically introducing school report cards, using them as a critical element of SMC dialogue with the school and upazila leadership, and for informing the development of SLIPs.

Box II. 10: Examples of Using Information for Accountability

Pakistan: School Report Cards Impact Performance, Behavior, Time Dedicated, and Fees

An information intervention was introduced in 112 randomly selected villages, involving 823 public and private schools and 9,900 students in three districts in the province of Punjab to determine the effects of providing information about school performance to parents, teachers, and school administrators. Because the intervention included every school within a village, the intention was for the whole educational sector in the village to be affected. Parents in treatment villages received two simple report cards: one showing their child's score for tests in English, Mathematics, and Urdu (the local language), including the student's ranking in comparison to classmates and relative to the school's performance. The second card showed the average scores for other schools in the village, their respective quintile rank, and the number of students tested. Teachers in the treatment villages received a third card, which showed scores disaggregated across subtopics, such as word recognition or sentence building.

Results of the intervention revealed that students' average test scores became higher in villages using report cards, and that these results were sustained two years after introducing report cards. Improvements were even more substantial in private schools that started off with lower scores in the initial period. Villages with school report cards were also more likely to have more textbooks, more teaching time (with a reduction in breaks from 23 to 14 minutes and higher time on tasks by teachers), and more time spent by students studying at home (which increased by an average of 37 minutes). As a result of the intervention, high-performing private schools adjusted and lowered their fees, although scores in these schools remained relatively the same. The simplicity in the report cards' design facilitated parental and community engagement, showed performance results in a clear manner, and fostered a positive sense of competition.

Source: Bruns et al. 2011; Andrabi, Das, and Khwaja 2009.

India: Three-State Village Information Campaign

An information-for-accountability intervention involving three Indian states—Uttar Pradesh, Madhya Pradesh, and Karnataka—introduced information dissemination tools to selected villages across 12 districts in the three states, over two rounds (2006 and 2009). The toolkit, disseminated over three community meetings in each round, consisted of a six-minute film shown on a mobile, a set of posters, a large wall painting, take-home calendars, and a learning assessment booklet. The intervention's objective was to systematically explain and offer information regarding school oversight committees' roles and responsibilities. Evaluation of the campaign was based on an earlier baseline survey, where selected students from grades 2 and 5 were tested. Results indicated positive measureable impacts on learning outcomes. In Uttar Pradesh, scores in mathematical addition tasks for grade 3 and 4 students increased by 5 percent, while reading scores were raised by 4 percent. Madhya Pradesh showed similar results, with grade 5 students raising their scores by 4 percent. In Karnataka, grade 4 and 5 students also showed a substantial increase in their Mathematics scores, with gains as high as 7 percent in division tasks. In addition to the positive impact on learning outcomes, the intervention also led to more awareness and participation among the selected communities regarding school matters in general, as well as an increase in teacher attendance. In both Uttar Pradesh and Madhya Pradesh, teacher attendance increased by 6–8 percent.

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Bangladesh: Community Score Cards

In Bangladesh, the Community Score Cards (CSC) tool has made quite an impact on the two projects supported by the Affiliated Network for Social Accountability–South Asian Region (ANSA-SAR) from 2010–2012. The Citizen Engagement for Quality Services project was implemented by the Private Rural Initiatives Program Trust (PRIP Trust), and the Social Safety Net and Quality Primary Education project was implemented by the Manusher Jonno Foundation (MJF). The key advantages of using CSC to measure performance in these projects include improved performance in the delivery of basic services in rural communities (especially in primary education, health, and social safety nets), community empowerment, and in building trust between the providers and users of these services.

In the Social Safety Net and Quality Primary Education Project (April 2010 to June 2012), implemented in 18 unions of five districts of the northern and southern parts of Bangladesh, the Community Monitoring Team has played a vital role regarding all activities of the CSC tool application. The following steps were followed to implement the CSC mechanism: (i) needs assessment (selecting locations); (ii) recruiting volunteers and orienting them; (iii) forming the monitoring teams; (iv) orienting service providers; (v) input tracking; (vi) Facilitator Group Development (FGD) for the community group and performance evaluation; (vii) FGD for the service provider and self-assessment; (viii) interface meeting; (ix) preparing a work plan; (x) organizing bimonthly meetings with the community monitoring team; (xi) displaying the approved work plan; and (xii) following up by implementing the work.

Although both projects applied the CSC tool for social accountability, there are a number of differences in their approaches. First, while PRIP Trust was piloting the tool in individual communities in three different sectors (education, health, and agriculture), MJF focused on creating a more critical mass of experiences in two main sectors (health and social safety), thus producing more credible evidence of success and better leverage. Second, while PRIP Trust worked through its project implementation structure in the field, MJF deployed the resources of their grass roots partner organizations. However, both projects greatly depended on community volunteers. Third, MJF managed to establish better rapport with the local government structures and to engage them with the project, owing to its geographic coverage and critical mass of experiences at the local level. Finally, in the case of MJF, the CSC was not a standalone project, but rather part of a wider social accountability program implemented with partner grass roots organizations.

CSC is a powerful tool for raising awareness among citizens of their rights to access basic services. Capacity building on both the supply and demand side is of key importance to the success of CSC initiatives. Additionally, proper induction, training, and guidance provided to the community monitoring teams/volunteers are the preconditions for their effective engagement in CSC. Moreover, there needs to be an adequate focus on advocacy work in such interventions. Prior community experience of social mobilization and interfacing with local authorities is also an important facilitating factor for introducing social accountability tools like CSC. Finally, CSC is an effective mechanism for resolving local-level irregularities in service provision and establishing a constructive interface between service users and service providers.

Source: Krylova 2012.

5.5.3 Introduce targeted interventions to address weak students' learning needs

II.100. **As exhibited in the examples in boxes 7–10, many of the concerns related to students' poor performance can be addressed through enhanced SBM, using information for promoting accountability at the school level and motivating teachers to perform their teaching task with their best abilities.** In some cases, students may need extra support, both in terms of monetary support (to defray the opportunity cost of coming to school) as well as extra hours to undertake remedial education. Although evidence from randomized control trial-impact evaluation studies may not be available yet, some conditional cash transfer (CCT) programs have attempted to introduce a *conditionality*—that is, a positive incentive—to encourage students to perform well in school. For

example, students may be able to get higher proportions of the CCT if they pass the end-of-year exam and/or a bonus after passing the end-of-level exam. Sometimes disincentives may also work. For example, students may be barred from receiving CCTs if they repeat an academic year more than once within a particular academic cycle.

II.101. **Bangladesh has a large number of stipend programs, catering to all levels of the education system.** It may consider extending the conditionality, to provide incentives for improved student performance (for example, a bonus grant for completing a cycle with no repetition and bonuses each year for passing exams). Disincentives could also be introduced, including the cancellation of CCTs in the case of over repetition or failure in examinations. However, it is possible that the disincentives eliminate exactly those students that the CCT was aiming to bring into the education cycle. Therefore, disincentives should be used cautiously and complemented with strong programs to enable poor-performing students to raise their learning. Remedial classes, catering to weak students who need more time, particularly those who are not able to afford costly private tuition, are already being provided in select secondary schools in the country (see box 11).⁵³ Such tactics are worthwhile to consider as motivators to help underperforming students, since they could be without the means or time to dedicate to additional instruction. This would be necessary to ensure that no child's future is knowingly put at risk by the country's education system.

⁵³ The effectiveness of remedial classes has been rigorously evaluated in India through different studies in urban areas of Gujarat and Maharashtra, and rural settings in Uttar Pradesh, Uttarakhand, Bihar, and Andhra Pradesh. The studies consistently found that the remedial instruction improved the learning of students, especially among students with lower learning levels, and they are proven cost effective interventions for improving learning outcomes. However, scaling up such programs would require careful design with respect to application to students in the middle to upper levels of learning distributions (World Bank 2013a).

Box II. 11: Additional Classes in Remote Areas of Bangladesh

The quality of secondary education in Bangladesh is often undermined by weaknesses in teaching and learning two vital subjects: Mathematics and English, contributing to high student drop-out, especially just before the SSC examination. This is particularly severe in remote, disadvantaged areas, and especially so for the students who are unable to afford private tuition.

To improve students' Mathematics and English, the Additional Class (AC) subcomponent of the Secondary Education Quality and Access Enhancement Project (SEQAEP) was introduced in the poorest areas of the country in 2010, with a revised implementation modality from 2012. The key objectives are to improve the processes of teaching and learning in the classrooms in targeted project institutions, and assist weak students in improving their performance. The scheme targets the poorest schools with the weakest students, in underprivileged regions of the country, identified through poverty mapping. Priority is given to institutions located in remote areas that lack any other support. Institutions performing below the national average in the national SSC exam for three consecutive years are targeted for support, with the aim of reaching the weakest-performing schools, as opposed to those that may have a temporary loss in quality due to the absence of a teacher.

ACs are led by resource teachers (RTs), who are selected competitively from the market and comprise young graduates or recently retired teachers. Current teachers are allowed to apply for RT positions if they have the time and are able to teach. After undergoing six days of basic training conducted by renowned resource persons from different universities and training institutes, RTs are confirmed (upon passing the post-training test) and travel to their assigned locations. Meanwhile, the relevant School Management Committee (SMC) chairpersons, Union Secondary Education Officers (USEOs), and head teachers (HTs) are also oriented on their supervisory and monitoring roles in making the scheme a success. The monitoring system is multilayered, with HTs, SMCs, and USEOs playing their respective roles in the process.

The six-day training of RTs mainly relies on discussions, simulations, and role-playing exercises to acquaint RTs with tested teaching and learning techniques. RTs are provided specialized teaching and learning materials designed to make the classes easy, interesting, and attractive through effective content presentation, using diagrams, pictures, games, quizzes, and puzzles, and providing examples of developing interesting exercises for individual and group discussions. RTs are also trained to develop their own lesson plans and use existing textbooks effectively. Refresher trainings are also conducted for the RTs every three months, where they get an opportunity to further develop their skills, their professional network (through connecting with other RTs and learning from their experiences), and to get mentoring from resource persons.

SEQAEP ACs are considered to be highly beneficial and effective by the targeted institutions, communities, parents, and class teachers. In a country where it is difficult to find instructors who are skilled to teach English, the selection and deployment of RTs has opened up a new avenue for learning English, and is developing a core of skilled professionals in these subjects. Furthermore, the supplementary materials provided through the AC component help both teachers and students make the learning experience enjoyable and resourceful. Overall, the perception is that it has had a hugely positive effect on improving the quality of English and Mathematics instruction in underprivileged schools in remote communities of Bangladesh.

Source: Authors.

5.6 Coordinate Reforms, Exploring All Synergies and Consequences

II.102. **The large and complex education system in Bangladesh, despite having so many types of providers, financiers, and regulators is one of the most interconnected sectors in the country.** These interconnections mean that the performance of one agency makes a significant impact on the performance of another agency. For example, if more than two thirds of the children graduating from primary schools have not mastered the competencies that are expected of them at the grade 5 level, the secondary and vocation institutions are at a severe disadvantage in terms of ensuring their graduates' skill development.

II.103. **The current education system's management structure—with two distinct ministries, several boards, and semi-autonomous bodies (such as NAPE and the National Curriculum and Textbook Board, or NCTB)—makes it difficult to coordinate.** The fact that 24 agencies are involved in TVET also creates a highly challenging environment to coordinate. However, coordination is crucial. Perhaps one way to promote coordination is to establish inter-ministerial/interagency task forces, whereby each ministry/agency has a specific responsibility around key thematic areas (as opposed to members just participating in meetings for the sake of representation). The most pressing areas for collaboration include: (i) teacher development, where links should be established between the Diploma in Education and other Diploma programs in the country, so that it is recognized at the same level and granted by the same authority; (ii) training provided at TTCs for secondary teachers and the National Technical and Vocational Education Qualifications Framework; (iii) national assessments at the primary and secondary levels—which are currently implemented by two distinct agencies, under two separate ministries (coordinating objectives, methodologies, capacity building, and testing agencies for the two assessments); (iv) national examinations (coordinating across the primary and secondary levels, both academic and vocational, as well as across the various boards of examination, to have uniform skill assessments for secondary graduates); and (v) creating a curriculum framework for academic and vocational secondary education (to provide a basic set of secondary competencies in all secondary graduates, which is a growing area of interest among many countries around the world).

Establishing inter-ministerial or interagency task forces could help coordinate reforms across the education system. Each ministry or agency should have a specific responsibility around key thematic areas.

Key areas for collaboration include teacher development and training, national assessments and examinations, and the creation of a curriculum framework for secondary education.

II.104. **Two issues have recently arisen, which also require special attention: the merger of primary and secondary education, and the recent decision to nationalize all RNGPSs.** The merger of primary and secondary education appears to be implemented in a haphazard fashion, with limited coordination across the two ministries currently providing this level of education. The National Education Policy 2009 states that primary education in the country would consist of eight years of basic education (as opposed to five years, as it is now under MoPME's mandate), while secondary education would be from grades 9–12 (as opposed to the current provision of secondary from grades 6–10, which is under MoE's mandate). This change affects the current functions of, at a minimum, two ministries, 14 examination boards, 32 implementing agencies, and more than 20 types of providers. MoPME has recently introduced grade 6 in 492 government primary schools.

II.105. **Regarding the nationalization of all RNGPSs, although providing adequate levels of support to RNGPSs is critical to address the significant disparities found in these schools through NSA 2011, it is unclear whether this remains a political decision in an election year or whether this is truly going to translate into a quality upgrade for RNGPSs.** The current nationalization decision does not appear to be in sync with another initiative that MoPME and DPE are working hard towards—that is, recognition of a primary teacher cadre. The final proposal for establishing promotion and recruitment rules for primary and head teachers has been approved by the Ministry of Public Administration (MoPA), but how they will affect the RNGPS teachers is unclear. Likewise,

MoPME and DPE, who have worked so hard to maintain a transparent and fully merit-based teacher recruitment system, can no longer boast that every teacher is recruited through the application of these rules, as they nationalize all schools and convert the current stock of RNGPS teachers into government teachers on the public budget.

II.106. **In both cases, coordination is critical.** Coordinating must occur across all the agencies and ministries to make the transition fruitful, adequately financed, and—under the appropriate regulatory support system—a meaningful addition to the education of a generation of children undergoing this transition. If uncoordinated, it could create a great deal of chaos.

5.7 Develop Key National Institutions

II.107. **Developing a national capacity to assess and strengthen education quality is essential, particularly in the areas outlined in these Policy Notes.** The two key areas which could have the strongest impact on creating a culture and dialogue on education quality are also the two areas in which capacity appears to be most urgently required. These are in the professionalization of the teacher development process and in the area of conducting national assessments for learning.

5.7.1 *An institute for primary and secondary teacher development*

II.108. **Given the importance of good-quality education in the formative years of a child's life, and the significant role that good teaching practices play in student learning, it is imperative that Bangladesh address the lack of relevant teaching skills (teaching pedagogy and techniques, undertaking meaningful assessments, handling large classes, and preparing lesson plans) in the current and emerging teaching force.** There is currently no pre-service teacher training or degree-granting agency operating in Bangladesh. Creating a national institute for the development of primary and secondary education teachers, with high intake requirements, may go a long way in addressing the skill gap that is currently unmet by either higher education institutes in the country or through the various small-scale teacher training programs. In terms of modality, a high-quality institute could also provide quality control for regional/district teacher preparation institutes. Raising the bar on entrance requirements to the national institute, providing high tuition stipends, and recognizing good performance may be just what is required to raise the profile of the intake of professionals who are attracted to the teaching profession. In terms of content, the Diploma program, which is currently being piloted in 7 PTIs, provides a good basis to begin with, in terms of course offerings at a potential institute. The 18-month course aims to prepare primary school teachers for a student-centered style of teaching and learning. It is not yet recognized by a Diploma-awarding body, but could be expanded into a two- or four-year degree of international standards.

5.7.2 *An independent national assessment center for primary and secondary assessments*

II.109. **Undertaking a good assessment requires some level of independence from the mainstream provision of education services, with a capacity to undertake high-level technical work and coordinate across many stakeholders (including agencies and units that deal with curriculum, examinations, textbook development, and monitoring and evaluation).** The agency undertaking the assessment also needs to be high profile, so that it is able to influence educational policy making and planning as well as teacher training. Also, it is essential for one system of assessment to be applied consistently across primary and secondary education. At present, this is managed through external technical assistance (TA) to two distinct units in two different agencies—the Monitoring and Evaluation Department in the Directorate of Primary Education and the Monitoring and Evaluation Wing of the Directorate of Secondary and Higher Education. There is limited, although growing, coordination between the two entities. The education system needs a well-established and acknowledged institutional home that takes full responsibility, from designing the assessment framework to disseminating and post-assessing follow-up. This could enable establishing stable institutional arrangements for regularly implementing assessments through regular staffing and funding arrangements developing much-needed technical and analytical capacities, and instituting a system that uses results to feedback into education policy making.

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Annex II

Table AII-1: Results of Education Production Function Regressions, NSA 2011 (Grade 3 Bangla)

	Model 1	Model 2	Model 3	Model 4
School Factors				
Divisions (ref= Barisal)				
Chittagong	2.00 ***	1.37 ***	1.58 **	
Dhaka	2.53 ***	2.22 ***	2.55 ***	
Khulna	0.49	-0.18	0.35	
Rajshahi	0.31	-0.13	0.56	
Sylhet	-0.50	-1.23 ***	-0.86	
Rural	2.03 ***	1.65 ***	2.20 ***	
GPS	2.54 ***	1.90 ***	1.22 ***	
PSC pass rate	0.08 ***	0.07 ***	0.07 ***	
Class size	-0.01 ***	-0.01 ***	-0.01 *	
PESP school	-3.16 ***	-2.51 ***	-1.17 *	
Teacher Factors				
Female teacher		0.39 **	0.60	
Teacher experience (years)		-0.01	-0.01	
C-in-Ed		0.93 ***	0.27	
Subject Training		1.54 ***	1.88 ***	
Qualification (ref= SSC)				
HSC		2.01 ***	2.34 ***	
Bachelor		1.34 ***	0.94 *	
Master+		1.41 ***	1.53 **	
Opinion and practice				
Satisfied with teaching		0.43 ***	0.49	
No difficulty		-0.33 *	-0.61	
Support from colleagues		-0.14	-0.19	
Give homework		0.44 **	-0.07	
Check homework		0.31	0.62	
Use textbooks		0.40 *	0.57	
Use TLMs		1.65 ***	1.11 ***	
Review manuals		-0.44 **	-0.39	
Student and household factors				
Age			-0.53 **	-0.25
Female			0.39	0.39
Repetition			-1.03 **	-1.22 ***
Stipend			-0.69	-0.73 **
Indigenous			1.67	1.11
Tutor			-1.11 ***	0.47
Family support on study			-0.73 *	0.15
Domestic work			0.04	0.12
Father's education (ref= no education)				
PSC			1.20 **	0.39
JSC			1.19 *	0.00
SSC			0.74	0.96 *
HSC			2.73 **	2.38 ***
Bachelor +			2.61 **	1.69 *
Mother's education (ref= no education)				
PSC			1.40 **	0.24
JSC			1.76 **	1.18 **
SSC			2.44 ***	1.72 ***
HSC			1.99	2.68 **
Bachelor +			6.86 ***	5.61 ***
Books at home			1.67 ***	1.17 ***
Wealth index			0.49 ***	0.13
Number of days absent			-0.42 ***	-0.33 ***
Constant	91.30 ***	87.59 ***	89.60 ***	101.16 ***
N	17,517	16,121	3,089	3,291
Adjusted R-square	0.051	0.069	0.134	0.584

Note: Significance levels are indicated for 1% (***), 5% (**), and 10% (*), by using robust standard errors.

Table AII-2: Results of Education Production Function Regressions, NSA 2011 (Grade 3 Mathematics)

	Model 1	Model 2	Model 3	Model 4
School Factors				
Divisions (ref= Barisal)				
Chittagong	2.23 ***	1.79 ***	1.77 **	
Dhaka	1.89 ***	2.15 ***	2.70 ***	
Khulna	-0.22	-0.72 *	1.34	
Rajshahi	-0.60	-0.54	0.54	
Sylhet	-2.59 ***	-2.42 ***	-0.99	
Rural	3.71 ***	3.27 ***	3.00 ***	
GPS	1.88 ***	1.23 ***	1.08 *	
PSC pass rate	0.08 ***	0.10 ***	0.09 ***	
Class size	-0.02 ***	-0.01 **	0.00	
PESP school	-2.27 ***	-2.46 ***	-1.16	
Teacher Factors				
Female teacher		-0.21	-0.63	
Teacher experience (years)		-0.14 ***	-0.14 ***	
C-in-Ed		0.86 ***	1.02	
Subject Training		2.23 ***	1.98 ***	
Qualification (ref= SSC)				
HSC		-1.13 ***	-0.82	
Bachelor		-1.35 ***	-1.42 *	
Master+		-1.25 ***	-1.24	
Opinion and practice				
Satisfied with teaching		0.32	0.26	
No difficulty		0.75 ***	0.75	
Support from colleagues		0.49 **	0.59	
Give homework		-0.18	0.40	
Check homework		0.39 *	-0.32	
Use textbooks		-1.20 ***	-0.95	
Use TLMs		-0.44 **	-0.78 *	
Review manuals		1.57 ***	1.62 ***	
Student and household factors				
Age			-0.59 **	-0.27
Female			-1.00 **	-0.84 ***
Repetition			-0.50	-0.67
Stipend			0.82	-0.06
Indigenous			1.79 *	1.49
Tutor			-1.71 ***	-0.19
Family support on study			-1.31 ***	0.41
Domestic work			0.15	0.07
Father's education (ref= no education)				
PSC			1.93 ***	0.50
JSC			1.76 **	-0.25
SSC			1.96 **	1.22 *
HSC			5.10 ***	2.36 **
Bachelor +			3.84 ***	2.66 **
Mother's education (ref= no education)				
PSC			1.88 ***	-0.28
JSC			1.48 *	0.20
SSC			2.44 **	0.74
HSC			1.04	0.84
Bachelor +			5.42 ***	3.90 **
Books at home			1.78 ***	0.91 **
Wealth index			0.55 ***	0.28 **
Number of days absent			-0.38 ***	-0.36 ***
Constant	90.87 ***	90.66 ***	91.28 ***	102.19 ***
N	17,417	15,742	3,028	3,284
Adjusted R-square	0.041	0.053	0.107	0.615

Note: Significance levels are indicated for 1% (***), 5% (**), and 10% (*), by using robust standard errors.

Table AII-3: Results of Education Production Function Regressions, NSA 2011 (Grade 5 Bangla)

	Model 1	Model 2	Model 3	Model 4
School Factors				
Divisions (ref= Barisal)				
Chittagong	0.61 *	0.34	1.25 **	
Dhaka	0.56 *	0.60 *	1.32 **	
Khulna	0.69 **	0.28	1.69 **	
Rajshahi	0.95 ***	0.98 ***	1.66 ***	
Sylhet	-0.19	0.37	1.35 *	
Rural	-0.49 *	-1.24 ***	-0.42	
GPS	3.31 ***	2.73 ***	2.48 ***	
PSC pass rate	0.08 ***	0.08 ***	0.07 ***	
Class size	0.03 ***	0.03 ***	0.02 *	
PESP school	-1.19 ***	-0.88 ***	-0.81	
Teacher Factors				
Female teacher		0.37 **	0.52	
Teacher experience (years)		-0.01	-0.02	
C-in-Ed		-0.25	0.09	
Subject Training		1.39 ***	1.45 ***	
Qualification (ref= SSC)				
HSC		0.54 **	0.77	
Bachelor		1.66 ***	1.65 ***	
Master+		0.48	0.83	
Opinion and practice				
Satisfied with teaching		0.50 ***	0.73 **	
No difficulty		0.55 ***	0.52	
Support from colleagues		-1.21 ***	-1.11 ***	
Give homework		-0.97 ***	-1.20 ***	
Check homework		1.99 ***	1.47 ***	
Use textbooks		0.41 *	0.66	
Use TLMs		0.15	0.19	
Review manuals		1.04 ***	1.07 ***	
Student and household factors				
Age			-0.36 **	-0.65 ***
Female			0.10	0.02
Repetition			-2.09 ***	-1.37 ***
Stipend			0.39	0.23
Indigenous			-1.41 *	-1.41
Tutor			-1.21 ***	-0.18
Family support on study			-0.73 **	0.36
Domestic work			0.38	0.23
Father's education (ref= no education)				
PSC			-0.14	-0.08
JSC			-0.14	0.00
SSC			0.17	0.41
HSC			1.64 *	0.78
Bachelor +			0.57	0.85
Mother's education (ref= no education)				
PSC			0.60	0.01
JSC			0.87	0.11
SSC			2.04 ***	0.31
HSC			4.62 ***	2.39 **
Bachelor +			3.87 **	3.84 ***
Books at home			0.64 **	0.86 **
Wealth index			0.68 ***	0.26 ***
Number of days absent			-0.31 ***	-0.39 ***
Constant	106.29 ***	103.57 ***	105.02 ***	122.19 ***
N	13,785	12,837	3,164	3,327
Adjusted R-square	0.056	0.083	0.160	0.554

Note: Significance levels are indicated for 1% (***), 5% (**), and 10% (*), by using robust standard errors.

Table AII-4: Results of Education Production Function Regressions, NSA 2011 (Grade 5 Mathematics)

	Model 1	Model 2	Model 3	Model 4
School Factors				
Divisions (ref= Barisal)				
Chittagong	4.36 ***	3.39 ***	4.50 ***	
Dhaka	1.62 ***	1.45 ***	2.44 ***	
Khulna	1.04 **	1.00 **	2.73 ***	
Rajshahi	1.10 ***	1.25 ***	2.13 ***	
Sylhet	-3.56 ***	-3.97 ***	-3.01 ***	
Rural	2.55 ***	2.00 ***	2.35 ***	
GPS	2.24 ***	2.50 ***	2.31 ***	
PSC pass rate	0.10 ***	0.10 ***	0.08 ***	
Class size	0.01	0.02 **	0.02	
PESP school	-1.39 ***	-0.96 ***	-0.93	
Teacher Factors				
Female teacher		-0.68 ***	-0.73 *	
Teacher experience (years)		-0.02	-0.03	
C-in-Ed		1.32 ***	1.09 *	
Subject Training		2.15 ***	1.87 **	
Qualification (ref= SSC)				
HSC		-1.09 ***	-0.94	
Bachelor		-1.67 ***	-1.74 **	
Master+		-0.25	-0.04	
Opinion and practice				
Satisfied with teaching		0.64 ***	0.44	
No difficulty		1.32 ***	1.27 ***	
Support from colleagues		-0.56 **	-0.28	
Give homework		0.51 **	0.58	
Check homework		0.03	-0.16	
Use textbooks		0.63 **	0.49	
Use TLMs		1.63 ***	1.21 ***	
Review manuals		0.46 *	0.72	
Student and household factors				
Age			-0.30	-0.39 **
Female			-0.43	-0.67 ***
Repetition			-2.30 ***	-0.80 **
Stipend			0.92 **	-0.10
Indigenous			-0.08	-0.98
Tutor			-1.72 ***	0.19
Family support on study			-1.01 **	0.12
Domestic work			0.13	-0.54 *
Father's education (ref= no education)				
PSC			0.70	0.04
JSC			0.01	-0.25
SSC			0.62	0.04
HSC			2.89 ***	1.06
Bachelor +			1.40	-0.09
Mother's education (ref= no education)				
PSC			0.49	-0.16
JSC			0.51	0.03
SSC			1.45 *	0.59
HSC			3.82 ***	2.96 ***
Bachelor +			3.66 *	5.93 ***
Books at home			1.24 ***	0.59 *
Wealth index			0.40 ***	0.03
Number of days absent			-0.49 ***	-0.27 ***
Constant	104.88 ***	100.92 ***	104.73 ***	123.47 ***
N	13,728	12,659	3,124	3,324
Adjusted R-square	0.059	0.081	0.126	0.729

Note: Significance levels are indicated for 1% (***), 5% (**), and 10% (*), by using robust standard errors.

Table AII-5: SEQAEP Impact Evaluation Regression

Teacher Variables	Grade 6	Grade 8	Student Variables	Grade 6	Grade 8
Testscore_G6contents	0.101 ***	0.105 ***	Age	-0.058 ***	-0.054 ***
Testscore_G8contents	0.079 ***	0.090 ***	Female	-0.307 ***	-0.453 ***
Use of daily's problem (oral, written or worksheet)	0.071 ***	0.007	Height	0.003	-0.002
Teach the whole class together	-0.005	0.084 ***	Weight	0.002	0.003
Teach the students in small group	0.211 ***	0.113 ***	Goal_HSC	0.217 ***	0.143 *
Teach every student separately	0.071 *	0.063 *	Goal_Baabove	0.318 ***	0.157 ***
Teaching by the technique of questioning and taking an	0.022	0.191 ***	Math_Tutor	-0.044 *	-0.006
Include teaching as possible with the condition / situati	-0.012	-0.082 ***	Absence	-0.031 ***	-0.044 ***
Training in primary skill in mathematics	0.022	-0.058 *	Afraid of Math	-0.084 *	-0.093 *
Explaining mathematical process	-0.023	0.066 *	houhoseld head_agri_daylaborer	0.103 ***	0.003
Use local available materials	-0.133 ***	-0.045	houhoseld head_nonagri_daylaborer	0.084 ***	-0.017
Do work in pair or group based to solve the problem of	-0.068 *	0.028	houhoseld member_agri_daylaborer	-0.029	-0.059 *
Work alone for solving question?	0.137 ***	0.066 *	houhoseld member_nonagri_daylab	0.065 *	0.043
Make project or poster for showing in the class room	0.077 ***	-0.058 *	household size	0.000	-0.002
Use of practial instruments (scale, calculator)	0.049	0.034	Number of kids below age 14	-0.017	-0.044 ***
Giving Home work?	-0.051 *	-0.006	Single head	-0.141 ***	-0.015
Read and explain graph from magazine and news paper	-0.145 ***	0.036	Remittance	-0.051	-0.003
Learn table, formulas by repeating	-0.099 ***	-0.185 ***	TV	0.053 *	-0.016
Examination, Puzzle test etc	-0.136 ***	-0.061 *	Bicycle	0.000	0.023
FemaleT	0.235 ***	-0.022	Phone	-0.068 *	-0.020
Experience	-0.003 *	-0.004 *	Tube well	0.018	-0.002
Training_Education	-0.322 ***	-0.009	Cattle	0.007	0.055 *
Subject Training	-0.066 *	-0.189 ***	Light	0.010	-0.002
Training_Other	-0.119 *	-0.295 ***	Number of rooms	0.057 ***	0.043 ***
HSC	0.135 *	0.276 ***	wall_2	-0.020	-0.048
Bachelor	0.248 ***	0.089	wall_3	-0.003	0.034
BA_Honor	0.355 ***	0.070	wall_4	-0.053	-0.016
Master	0.192 *	0.290 ***	roof_2	-0.035	-0.080
Satisfied_Profession	-0.008	0.026 ***	roof_3	0.218 ***	-0.161 *
Satisfied_Salary	-0.019 ***	0.021 ***	toilet_2	-0.076 *	-0.040
Satisfied_Student	0.056 ***	0.061 ***	toilet_3	-0.080	0.056
Give homework	0.132 ***	0.103 ***	toilet_4	0.006	-0.136
Check homework	0.048	0.107 ***	land2	-0.543 ***	0.177
School Variables			land3	-0.819 ***	0.068
School-nongov_MPO	-1.205 ***	-0.806 ***	head_edulv2	0.041	0.037
School-nongov_nonMPO	-0.864 ***	-0.462 ***	head_edulv3	0.010	0.068
Madrasa-nongov_MPO	-1.105 ***	-1.532 ***	head_edulv4	0.167 ***	0.123 *
Madrasa-nongov_nonMPO	-0.994 ***	-0.642 ***	spouse_edulv2	0.090 ***	-0.022
coeducational	0.024	-0.039	spouse_edulv3	0.147 ***	-0.010
SMC	0.125 *	0.263 ***	spouse_edulv4	0.210 ***	0.169 ***
PTA	0.017	-0.069 *	cons	0.827 *	0.308
Electricity	0.121 ***	-0.061 *	Sample Size	5949	5719
Library	-0.015	0.090 ***	R-square	0.2161	0.1693

POLICY NOTE III: SKILLS DEVELOPMENT

Key Messages

Key Findings

- **A limited body of global knowledge sheds light on a better path for attaining skills development.** Many countries are struggling with setting effective skills-development systems in place. Although still in its infancy worldwide, there is an increased recognition and awareness that finding and following the right path—primarily by instilling a strong foundation of skills—can lead to robust skills development. There is greater clarity about what does not work (that is, only focusing on technical education and vocational training). And, there is a general consensus that skills development is not a one-time activity in an individual’s life—it is incremental, cumulative, and transformational.
- **Skills development is affected by demand and supply.** While a great deal of skills development is within the purview of the education sector (to supply skills) and those who are providing skills, the economy and nature of jobs provide equally strong messages and incentives (on the demand side) for skills-development opportunities in a country.
- **A comprehensive dialogue on skills development is at nascent stages in Bangladesh.** The dialogue on skills development is much less established in Bangladesh than the dialogue on educational access and quality. However, there is growing interest and a large number of important initiatives and activities, particularly with regard to vocational education and training.
- **This is an important time in the country’s history to engage in skills-development dialogues and initiatives.** Bangladesh has achieved positive economic growth, and looking ahead, a demographic transition continues to present growth opportunities by creating a demographic dividend. However, Bangladesh may not receive the full benefit of this demographic dividend if the current growth pattern continues. Taking advantage of its low-cost edge over competitors, Bangladesh has the potential to become the “next China” with its potential export growth of labor-intensive manufactured products. However, continuing the current economic growth path could lead the country into a “low-skill, low-productivity” trap, where workers’ skills are insufficient to spur innovation and the demand for skills is too low to encourage workers to acquire higher skills.
- **Bangladesh has a large, mostly informal, low-skilled labor force.** Despite increased educational access during the past decades, the labor force in Bangladesh today is characterized as large (56.7 million) and growing (by 1.3 million per year), 89 percent informal, and mostly with low education levels (64 percent have less than a primary education; 96 percent have less than a secondary education). Education and skills, both cognitive and non-cognitive, matter for success in both the formal and informal labor market. Yet, most graduates lack effective work skills due to the low quality of education and lack of quality standards. While employers in formal and informal sector employment prioritize the importance of non-cognitive skills, such skills are not consciously developed in education and training.
- **Inequitable skills-development opportunities persist.** Such inequities occur in formal education and increase in post-formal education. Although various opportunities besides formal education are available for developing skills, and some are designed for relatively low-educated workers, overall, post-formal education training opportunities are largely benefiting the more educated. Informal sector workers have particularly limited opportunities, because skills-building opportunities for their needs—such as entrepreneurship training—are limited.
- **Support for effective school-to-work transition is weak, even for formal sector employment.** Career-development services are lacking for vocational and higher education graduates, and relatively high youth unemployment is observed.

Policy Directions

- **Avoid the low-skill, low-productivity trap.** It is important for policy makers to consciously redirect the skills demand to higher skills, and build a strong foundation of skills among the populace.
- **Articulate a comprehensive vision for skills development, encompassing all levels of education, and articulating tradeoffs and policy priorities over the short and medium term.** A good skills-development policy needs to recognize that skills are not built at a certain time of an individual's life—skills development is an incremental and lifelong process, acquired through formal and non-formal education, from pre-primary through higher education, networks, jobs, and other means. And, it relies on aspects that are beyond the control of the education system alone, such as nutrition and job creation. Once viewed and articulated as such, the comprehensive skills-development policy of Bangladesh would need to—from a national perspective—openly discuss the tradeoffs between prioritizing one aspect of skill development over another, such as whether to place greater emphasis on nutrition and pre-primary or Technical and Vocational Education and Training (TVET).
- **Developing the skills of potential labor market entrants may be best addressed through a strong foundational education.** Improving the quality of education is vital for skills development, to deliver strong foundational and more market-relevant higher skills. The priority would be improving the quality of general education and promoting early childhood education. Quality assurance and accreditation is particularly important at the upper levels of education.
- **Reskilling the current labor force is crucial.** The skills-development policy should support continuous and targeted skills building for workers in formal and informal employment. Reskilling the current low-skilled workforce is important, because they will contribute to the economy and society for several decades to come.
- **Structural changes in the economy are necessary for effective skills development.** Beyond the educational system, improving the investment climate and jobs-creation potential is necessary for skills development. Jobs and skills are closely interrelated, and the direction of influence is mutual. Jobs that foster the acquisition of higher skills are needed in Bangladesh, to propel the economy towards higher productivity and provide incentive for acquiring higher skills.

1. Introduction

Education and skill development have played a crucial role in economic growth, poverty reduction, and social transformation in Bangladesh—particularly with the inclusion of women in the labor force in the last decade (World Bank 2012a). Bangladesh has greatly improved access to education, reaching the Millennium Development Goal (MDG) of gender parity at the primary and secondary levels. Increased access to secondary education among girls over the last 20 years appears to be a powerful agent of social mobility. It is likely that many young women who benefited from the female stipends in the early 1990s have now entered the labor market and may be enjoying higher earnings than their older female cohorts (Hong and Sarr 2012). The widespread entry of women into the labor market also has been a leading factor in the garment industry's rapid expansion. To continue this trend in upward mobility and economic expansion, it is important to analyze the skills currently available in Bangladesh, and determine what skills should be developed to meet future needs.

III.1. **International studies have shown that education is an important determinant in labor markets, with the less-educated overwhelmingly found in low-paying and less-secure jobs (World Bank 2011a).** Bangladesh is no exception. Education can improve workers' productivity and, in the long run, lessen vulnerability associated with informal employment arrangements, which are quite pervasive at present, even in the formal sectors of the Bangladesh economy.

III.2. Skills development is an incremental and lifelong process, acquired through formal and non-formal education (pre-primary through higher education), networks, jobs and other means. Weak and inequitable learning outcomes in earlier years of education provide a poor foundation for skill building later in life. Although Bangladesh has made tremendous gains in access to primary education over the last decade, more than two-thirds of the labor force has less than primary education, with limited acquisition of basic competencies in numeracy, literacy, and life skills. While pre-primary education acquisition is not yet prevalent, education (both general and TVET continues to be offered with mostly theoretical and outdated content. Students from poor and disadvantaged backgrounds not only perform worse than their peers, but are less likely to complete higher levels of education. This neither sets the stage for a skilled labor force that could propel the economy nor provides the foundation for a labor market which is competitive in the globalized economy that demands higher skills. For the country to have a more skilled work force, all stakeholders must therefore make concerted efforts to improve the quality of basic education—so that beyond this first step, children can acquire more specialized skills at a later stage.

III.3. Skill development is a fundamental element of enhanced productivity and economic growth, together with job creation. Skills are at the core of improving individuals' employment potentials and, together with jobs, contribute significantly to increasing countries' productivity and growth. Making the most effective use of workers—using all of them, and using them to their greatest productivity—is vital. And while insufficient demand for workers or limited job opportunities remains to be a problem in many parts of the developing world, high skill mismatches are often a function of prospective employees being inadequately equipped to handle employers' demands (World Bank 2010a).

III.4. Taking these issues into consideration, this Policy Note discusses skills and jobs in Bangladesh from the viewpoint of educational development. A number of studies already exist that discuss the Bangladeshi labor market and employment. While some areas of this Policy Note overlap with such literature, its focus is on the processes of skills development in Bangladesh and the role that education plays in these processes. The Policy Note reviews existing literature and benefits from a wealth of labor force and household surveys. In addition, the Policy Note takes advantage of a recently concluded Enterprise-based Skills Survey (ESS), conducted by the team authoring this note in the fall of 2012 (see box 1 and annex 1 for more details). The survey collected information related to the education-to-work transition and skills-development practices of employees in the 500 enterprises surveyed. Information on the status and issues related to skills development in the informal sector and agriculture is obtained from the Household Income and Expenditure Survey (HIES) and an employment module of the SEQAEP⁵⁴ Impact Evaluation survey and existing literature. Although information gaps remain, especially with regards to the skills demand and acquisition channels for workers in the informal sector, the Policy Note discusses many key issues regarding supply, demand, and development of skills in Bangladesh (see box 2).

⁵⁴ SEQAEP is the Secondary Education Quality and Access Enhancement Project, a project financed by the government of Bangladesh and the World Bank.

Box III. 1: Enterprise-Based Skills Survey, 2012

The Enterprise-based Skills Survey (ESS) was undertaken to provide input to the Policy Note on Skills Development. It collected information from a sample of 500 formal sector enterprises and 6,981 employees working in these enterprises. The survey consists of two subsets of surveys: (i) an employer survey and (ii) an employee survey. The employer survey module collected information on the skills profile of workers in the enterprise; recruitment processes; evaluating employees' skills; post-employment training opportunities; business characteristics; and profiles of top management. The employee survey module collected information on education; work and training experiences; household background; numeracy and literacy skills; and a personality assessment. The survey was conducted between November 2012 and January 2013.

The Business Registry of 2009, collected by the Bangladesh Bureau of Statistics (BBS), was used as the sampling frame. The Business Registry contains 100,194 enterprises that have more than 10 employees in Bangladesh. The five economic sectors selected for sampling were: commerce (wholesale/retail), education, finance, manufacturing, and public administration. These five sectors occupy 87 percent of formal sector enterprises and 91 percent of formal sector employment (see table A1-1). Enterprises were categorized in three sizes: 10–20 (small), 21–70 (medium), and 71 or more employees (large). The final sample size by firm size and economic sector is described in table A1-2. The number of surveyed employees by sector is shown in table A1-3. The survey does not include the informal labor market.

Box III. 2: Definitions of Skills Used in This Policy Note

This Policy Note uses the definition of *skills* identified by the World Bank’s Skills Toward Employment and Productivity (STEP) framework. There are three types of skills primarily discussed:

- *Cognitive skills* include the ability to understand complex ideas, adapt effectively to the environment, learn from experience, engage in various forms of reasoning, and overcome obstacles using thoughts (via literacy, numeracy, and other abilities) to solve abstract problems.
- *Non-cognitive skills* involve characteristics across multiple domains (including social, emotional, personality, behaviors, and attitudes) not included under cognitive skills—for example, work habits (effort, discipline, and determination), behavioral traits (self-confidence, sociability, and emotional stability), and physical characteristics (strength, dexterity, and endurance).
- *Technical skills* are a combination of cognitive and non-cognitive skills used to accomplish specific tasks (skills used at work and in daily life).

For operational definitions, the cognitive skills measured through the Enterprise-based Skills Survey (ESS) are literacy and numeracy. In this Policy Note, cognitive skills broadly refer to subject knowledge in literacy and numeracy—the bulk of which is acquired through formal education—and thinking skills. Problem-solving skills, which are sometimes considered cognitive skills, are treated here as non-cognitive skills, because problem solving is not only a cognitive exercise—it also requires various non-cognitive skills. In ESS, technical/vocational, job-specific, and IT skills are considered technical skills.

This Policy Note also refers to foundational (basic) skills and higher-order skills. Foundational skills overlap with the concept of cognitive and non-cognitive skills, which are acquired through daily life and primary (and some secondary) education (such as functional literacy and numeracy and non-cognitive skills). Foundational skills are required before attaining higher-order skills, and they are transferrable across different jobs. Conversely, higher-order skills are more specialized skills and are often less transferrable across different jobs.

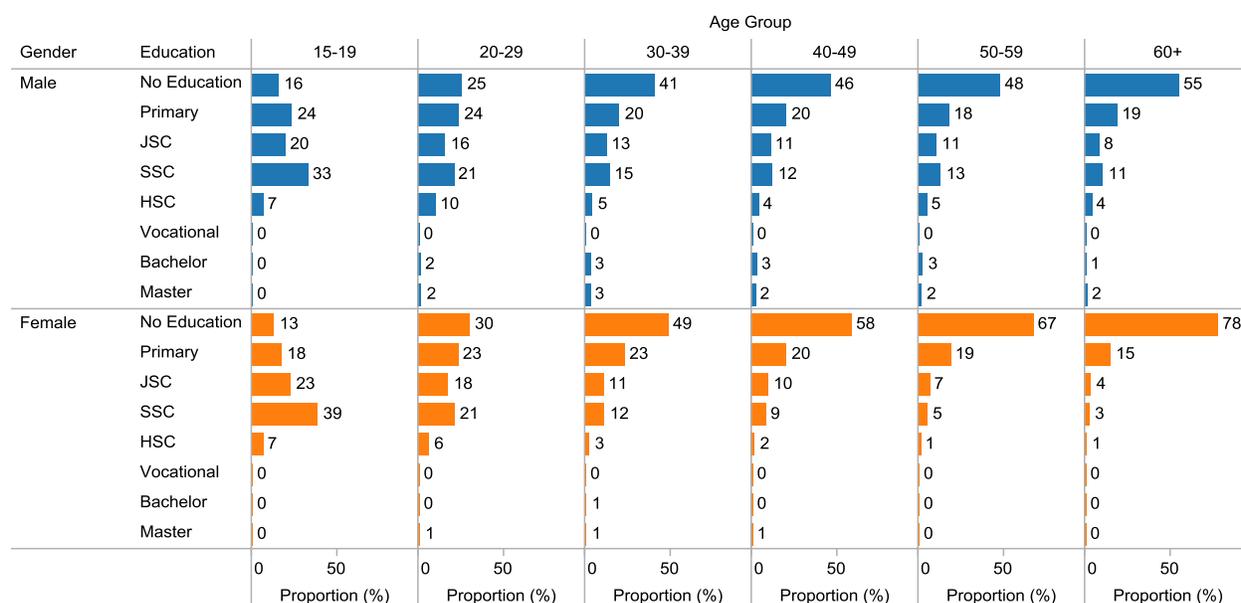
2. Macroeconomic Context

Bangladesh has achieved positive and accelerated growth for more than three decades—the per capita Gross National Income (GNI) grew by 4.9 percent per annum over three decades and accelerated to 5.8 percent per annum in the 2000s. Among the main drivers of economic growth, increased saving and investment rates and subsequent increases in labor productivity are derived primarily from a demographic transition. Bangladesh is currently in the third phase of demographic transition, with declining birth and death rates (World Bank 2012a).

III.5. **Bangladesh’s demographic transition continues to present growth opportunities and challenges.** The country is expected to benefit from a demographic dividend, with a higher share of working-age population and a declining dependency ratio, and per capita GNI growth is expected to accelerate. Annually, 2.1 million people will enter the prime working-age population over the next decade, which is 4.6 percent labor force growth per annum. This bodes well for Bangladesh, as this is above the 2.3 percent South Asian average, as well as the global average of 1.8 percent (World Bank 2012a). The era of demographic dividend brings an opportunity for promised economic growth. However, whether Bangladesh enjoys the demographic dividend’s full benefit or underutilizes the opportunity depends on the national policies of economic development and skills and educational development of the labor market entrants, as well as those who are already in the labor market, formal and informal.

III.6. As reflected in the Policy Note on Access and Equity in this series, Bangladesh experienced significant improvement in access to education, especially among women. As figure 1 shows, proportions of educational attainment differ considerably across age groups. Among the age group 50–59, 48 percent of men and 67 percent of women have no education. The proportion with no education declines with younger age groups, and shrinks to 16 and 13 percent for males and females aged 15–19. It is also noteworthy that an absence of education was higher among females in older generations, but the gender gap dwindles and even reverses for younger generations. Developing human capital, especially among women, impacted economic growth during the past decade.

Figure III. 1: Average Education Level Attained by Each Age Group



Source: Authors' analysis using the Labor Force Survey (LFS) 2010.

Note: The sum of all education levels for each age group by gender equals 100. HSC = Higher Secondary Certificate; JSC = Junior Secondary Certificate; and SSC = Secondary School Certificate.

III.7. However, the higher levels of education access have not yet fully translated into higher productivity of the Bangladeshi worker. The contribution of Total Factor Productivity (TFP) growth to economic growth—the efficiency with which capital and labor inputs are used in the production process—was marginal during the last decade (World Bank 2012a). One of the possible explanations for low TFP growth is the high prevalence of underemployment (20.3 percent in 2010), which could have caused a technical problem in calculations, where labor growth is overvalued due to overestimating the number of workers in the labor market (World Bank 2012a). It also implies that the high prevalence of underemployment in Bangladesh is indeed an issue for increasing labor productivity, because the number of informal sector workers—especially the number of casual day laborers—is still very large. The evidence of low TFP growth during the past decades means low technological change despite the improving workers' overall educational level, implying ineffectiveness in translating the increased educational levels of the labor force into economic productivity.

III.8. The expansion of labor-intensive non-agricultural sectors, including garments and manufacturing, was supported by a move of former agricultural workers and female workers—both low-skill, low-wage workers—into these sectors. The ready-made garment sector registered a phenomenal growth (12 percent annual growth between 1995 and 2010; McKinsey & Company 2011) in Bangladesh, mainly based on low-wage competitiveness. Despite being low, the manufacturing sector wage is still generally higher than the agricultural sector, where employment was already saturated. As a result, surplus agricultural workers shifted to the manufacturing sector, responding to opportunities. Further, female workers who used to stay at home increasingly participated in the manufacturing sector, supported by an increased education level (Hossain and Sawada 2012).

III.9. **The labor force’s transformation—including change in the employment status and rising income—greatly contributed to poverty reduction between 2000 and 2010.** During this period, Bangladesh experienced an average of 5.8 percent annual economic growth and a decline of poverty by 1.8 percent per year. Some 61 percent of poverty reduction is accountable to labor market-related factors such as increasing labor income—especially rising labor income in the farm sector and the incomes of unskilled labor in the non-farm sector (Inchauste et al. 2012). An increase in the agriculture sector’s wage premium is mainly due to the rising marginal productivity of land. Within the non-farm sector, changes in employment status from daily and self-employed work to salaried employment contributed to 9 percent of poverty reduction (Inchauste et al. 2012).

III.10. **The Vision 2021 of the government of Bangladesh for becoming a poverty-free middle-income country by 2021 attaches highest priority to building a large base of skilled workers.** The skills must be calibrated to match the growth and structural transformation of the economy, as well as expanding demand for Bangladeshi migrant workers in the global economy. Vision 2021 commits to providing universal access to education up to the secondary level and needs-based free tertiary education for students from low-income families. To materialize these long-term objectives, the National Education Policy (NEP 2010) emphasized equalizing education opportunities for all children and building productive workers’ skills to compete in the global economy, and the National Skills Development Policy (NSDP 2011) provided a scope for operationalizing the skills-development agenda. Similarly, the government of Bangladesh’s sixth Five-Year Plan provides a holistic view of education and skills development as engines of economic growth and social development.

III.11. **Given the historical pattern of growth in Bangladesh, it would require some level of transformation of the country’s economic structure and skills-development policies and practices, to avoid falling into a low productivity trap, and to move closer towards reaching the country’s economic targets.** Transforming the economy from low to high production requires human capital, and the macroeconomic and social infrastructures must be built and functional. Bangladesh competes across the world on the basis of low cost—mostly attributable to low wages in labor-intensive manufacturing rather than efficiency and higher productivity of labor. The current trend of economic and labor growth, in which increasing numbers of low-skill jobs are generating employment and leading to economic growth, would imply that in the global economy, Bangladesh is—and will continue to be in the near future—a factor-driven economy, where companies sell basic products and compete on the basis of low-labor cost (World Economic Forum 2012; see box 3). This pattern is not unusual. However, unless the economic structure is transformed, or different technologies become the main pillar of economic growth, a large proportion of these labor market entrants are likely to continue to work in labor-intensive sectors. One way, therefore, to move closer to the aim of reaching middle-income status, is through generating more employment, but at the same time, creating better jobs yielding higher productivity, which requires a higher skill base in the country to begin with.

Transforming the economy from low to high production requires human capital, and the macroeconomic and social infrastructures must be built and functional.

Box III. 3: The Global Competitiveness Index

Three stages of economic development, as discussed in the World Economic Forum's Global Competitiveness Report (WEF-GCR), are as follows: (i) factor-driven, (ii) efficiency-driven, and (iii) innovation-driven economies—and transitional stages within those stages. The Global Competitiveness Index (GCI) is an aggregate index generated by WEF-GCR that measures a country's overall competitiveness, and countries are classified into respective economy types based on the GCI score. Competitiveness is defined as the set of institutions, policies, and factors that determine a country's productivity level, and it involves static and dynamic components. The index is constructed on a weighted average of many macroeconomic components, each measuring a different aspect of competitiveness. These components are grouped into 12 pillars of competitiveness (see table 1).

Table III. 1: The Global Competitiveness Index and Bangladesh's Score

	Rank (out of 144 countries)	Score (1–7)
Global Competitive Index (2012–2013)	118	3.6
Basic requirements	119	3.7
1. Institutions	127	3.2
2. Infrastructure	134	2.2
3. Macroeconomic environment	100	4.2
4. Health and primary education	103	5.2
Efficiency enhancers	107	3.6
5. Higher education and training	126	2.9
6. Goods market efficiency	95	4.1
7. Labor market efficiency	117	3.9
8. Financial market development	95	3.7
9. Technological readiness	125	2.7
10. Market size	47	4.4
Innovation and sophistication factors	122	3.0
11. Business sophistication	108	3.5
12. Innovation	130	2.5

Table 1 also presents the score (1–7) and international ranking of Bangladesh out of 144 countries. Overall, Bangladesh is ranked 118th, with its score of 3.6 out of 7. From the index, it is clear that Bangladesh scores relatively poorly in terms of basic requirements—including institutions, infrastructure, the macroeconomic environment, and health and primary education.

Source: World Economic Forum 2012.

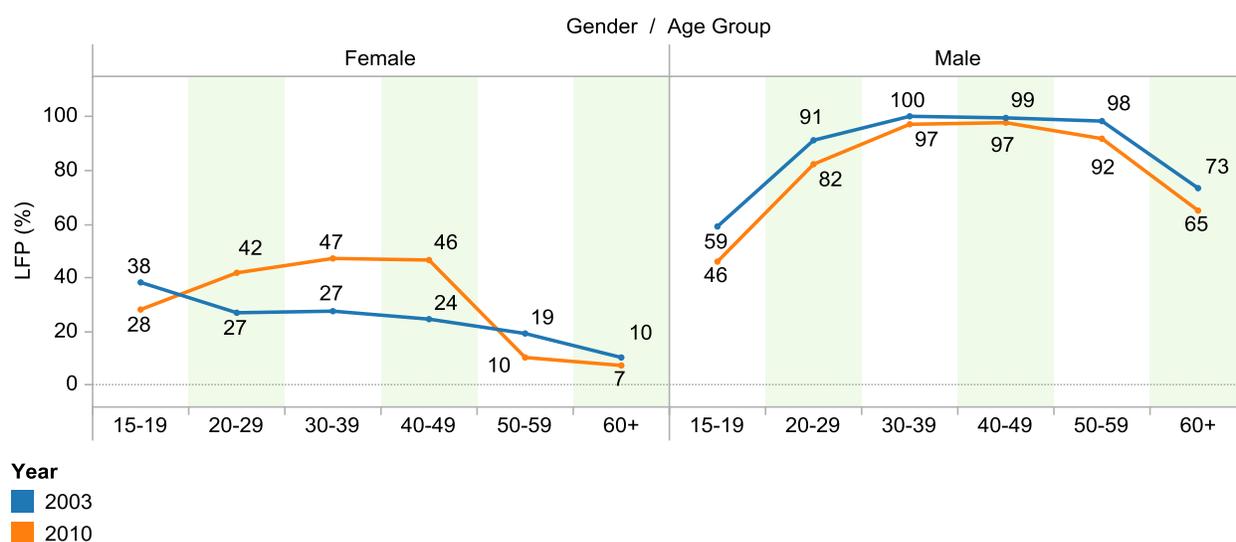
3. Characteristics of Labor Force and Skills

Bangladesh's labor force is predominantly low-skilled and possesses a low amount of education. Women increasingly participate in the labor market, and Bangladesh's rapidly expanding garment industry employs 3 million workers, 90 percent of whom are women. As the country becomes more urbanized, skills focus less on the agricultural sector and more in other arenas. The number of emigrant workers has been on the rise.

3.1 The Labor Force's Characteristics

III.12. **The Bangladeshi labor force is large and growing quickly.** The total number of workers in 2010 was 56.7 million and the labor force grew by an average of 1.3 million per year, from 46.3 million in 2003. The force's participation rate increased during this period from 57.3 to 59.3 percent, due to an increase in the female labor force's participation rate from 26.1 to 36.0 percent. By age group, participation increased especially among females in their 20s, 30s, and 40s (figure 2). The male labor force participation rate, on the other hand, marginally decreased in all age groups between 2003 and 2010. Despite a rapid increase of female labor force participation, it is less than half of the male participation rate, which is 82.5 percent, so there is great potential if the current trend continues (of increasing female labor force participation).

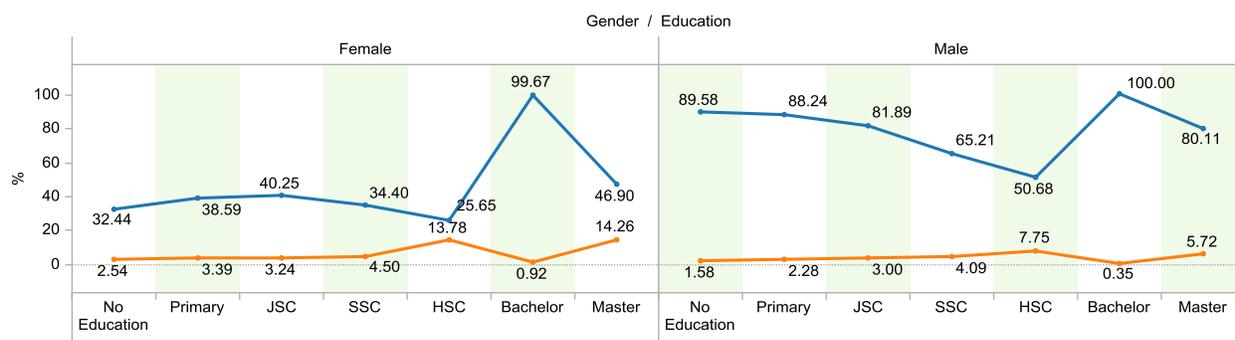
Figure III. 2: Labor Force Participation by Gender and Age Group (2003 and 2010)



Source: Authors' analysis using LFSs 2002/03 and 2010.

III.13. **Labor force participation follows a U-shape trend against educational attainment.** The labor force participation rate varies by level of educational attainment (see figure 3). The male labor force participation rate among less-educated workers is 90 percent, and it goes down to around 50 percent among Higher Secondary Certificate (HSC) graduates. It then jumps up to around 100 percent among bachelor-degree holders. A similar trend is observed among the female labor force. Those with university education are most actively participating in the labor market, while those with a mid-level education (high school graduates) have the lowest labor force participation rate. Two important implications from this trend are: (i) the high potential for rapidly increasing the labor force if more of the low-educated workers (especially women) start entering the labor market, and (ii) the labor market not benefiting from those with a mid-level education because of the low labor force participation rate. The second group is possibly discouraged by few opportunities for their educational level. This is also evident from high unemployment rates among male and female HSC graduates.

Figure III. 3: Labor Force Participation and Unemployment Rates by Education and Gender (2010)



Source: Authors' analysis using LFS 2010.

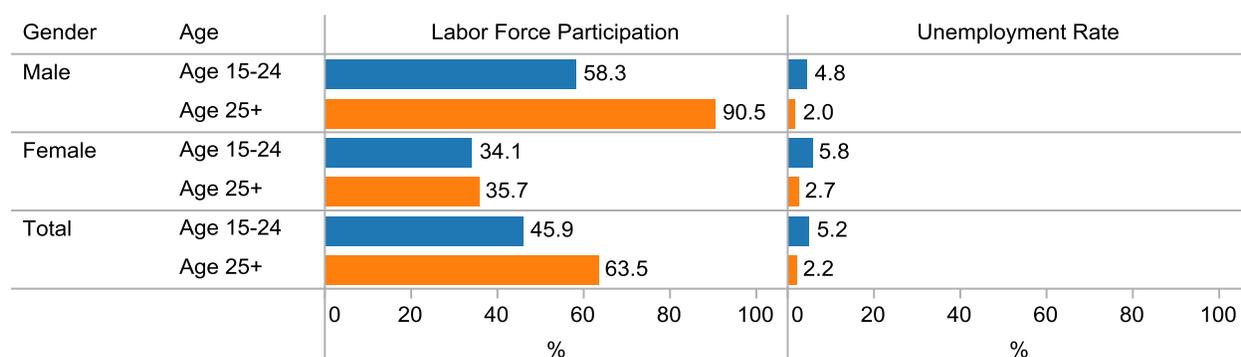
Note: The sample size for Technical and Vocational Education and Training (TVET) graduates in LFS 2010 is very small (0.1 percent of total sample) and there is no distinction between SSC (vocation), HSC (vocation), or Diploma in LFS. Due to a possible high sampling error, statistics for TVET graduates are not shown. Sample sizes for respective educational categories are: No education (51,770), Primary (27,515), JSC (17,102), SSC (21,453), HSC (6,254), Bachelor's (1,501), Master's (1,473), and TVET (112).

III.14. **While the unemployment rate is relatively low, the underemployment rate is very high.** According to the Labor Force Survey (LFS), the unemployed population's size was 2.6 million and the unemployment rate was 4.5 percent in 2010. This is up from 2.0 million and 4.3 percent in 2002. The increase in the unemployed population was led by doubling unemployed females from 0.5 to 1.0 million, as many more were seeking employment in 2010 than in 2002. While the unemployment rate remains relatively low—despite a worldwide unemployment rate increase because of the global economic crisis—the *underemployment* rate seems high.⁵⁵ Underemployment is estimated as 20.3 percent in 2010 (World Bank 2012a).

III.15. **The youth (aged 15–24) unemployment rate is slightly higher than that of their elders (aged 25 and above), and labor force participation is lower among young men.** According to the LFS (see figure 4), youths between the ages of 15 and 24 are less represented in the labor force. The male youth labor force participation rate (58.3 percent) is lower than those who are older (90.5 percent). This can be explained by the fact that most young males are still in school. The female labor force participation rate is about the same for young and older females alike, due to women's increasing labor force participation, especially among the youth. On the other hand, the unemployment rate is consistently higher for the youth—4.8 percent for male youths and 5.8 percent for female youths, as opposed to 2.0 and 2.7 percent for older males and females—implying difficulty in finding jobs for new entrants to the labor market.

⁵⁵ Underemployment is defined as those who worked less than 35 hours during the reference week of the survey (World Bank 2012a).

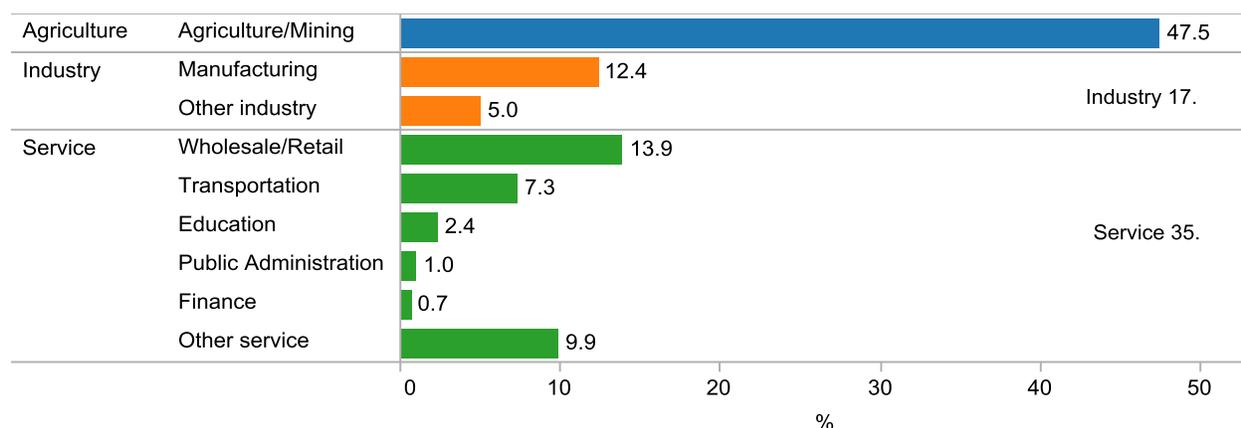
Figure III. 4: Labor Force Participation and Unemployment Rates by Age Group (2010)



Source: Authors' analysis using LFS 2010.

III.16. **Despite its shrinking trend, the agricultural sector⁵⁶ is still the Bangladeshi labor force's largest employer.** Close to half of Bangladeshi workers were engaged in the agriculture or mining industry in 2010, although this share is marginally shrinking from 51 percent in 2000 (Paci and Sasin 2008).⁵⁷ The industry sector, largely represented by manufacturing, takes up 17.4 percent of the labor force. The service sector employs 35.1 percent of workers. The majority of workers in the three largest sectors—agriculture, wholesale/retail, and manufacturing—are informal workers, defined as either working in unregistered business entities or working without a formal contract (see figure 5).

Figure III. 5: Composition of Labor Force by Economic Sector (2010)



Source: Authors' analysis using LFS 2010.

Note: Sum of all numbers adds up to 100 percent.

III.17. **The Bangladeshi labor force is also characterized by large informal sector employment.** In 2010, informal employment was estimated at about 88.5 percent of the total number of jobs in the labor market (ADB 2012).⁵⁸ Informal sector employment is found not only in informal sector enterprises but also in formal sector

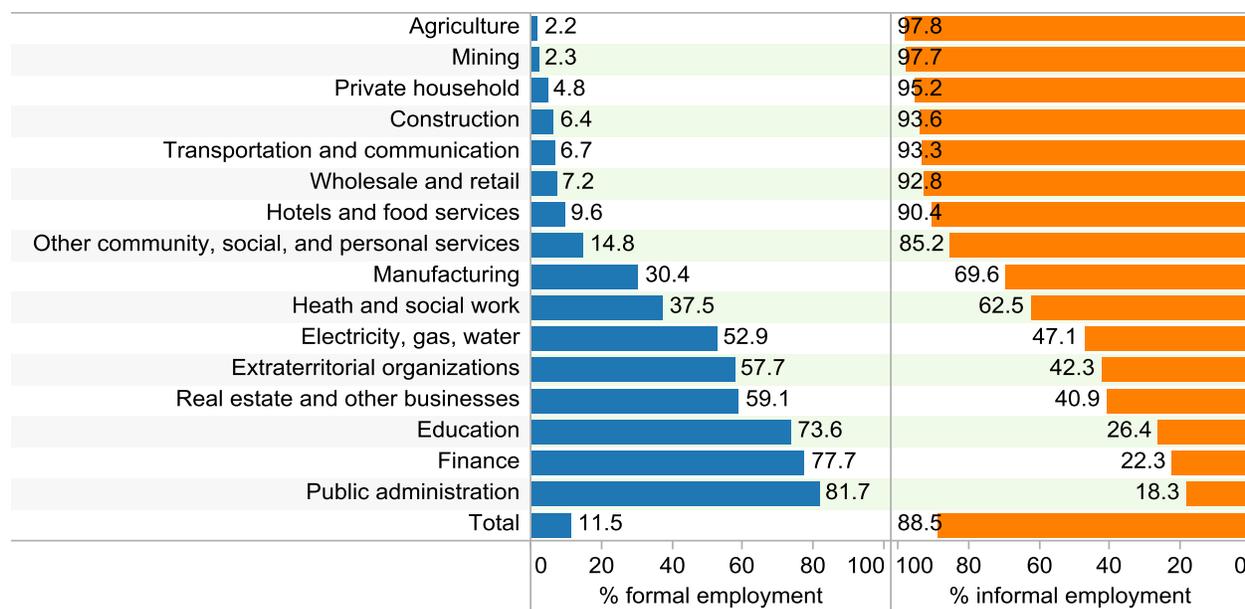
⁵⁶ The agriculture sector includes agriculture, hunting, forestry, and fishery.

⁵⁷ Paci and Sasin (2008) used HIES 2000 for this calculation.

⁵⁸ The definition of informal jobs is established in the 17th International Conference of Labour Statistics (ICLS) report. Informal jobs include four categories of workers: (i) employment in the informal economy, (ii) informal employment, (iii) employment in the informal sector, and (iv) informal employment outside the informal sector. Operationally, informal jobs in Bangladesh's LFS comprise work undertaken by wage workers under verbal agreement or under employment arrangements not subject to contractual agreement. Here, the presence of written contracts is used as an indicator for legal entitlement. Informal jobs also include the work of employers and own-account workers who only maintain informal financial records for their personal use. The jobs of all unpaid and contributing family workers are considered informal (ADB 2012).

enterprises.⁵⁹ Of informal workers, 36 percent are informal employees, 36 percent are self-employed, and 28 percent are family workers. Also, 53 percent of informal workers are in agriculture and fisheries. The share of informal sector employment also varies by economic sector (figure 6). Public administration, finance, and education are the three most formally organized sectors, and their share of formal employment is over 70 percent. On the other hand, jobs in agriculture, mining, private household service, construction, transportation and communication, wholesale/retail, and hotel and food services are mostly informal, with their share of the formal sector below 10 percent.

Figure III. 6: Share of Formal Sector Employment

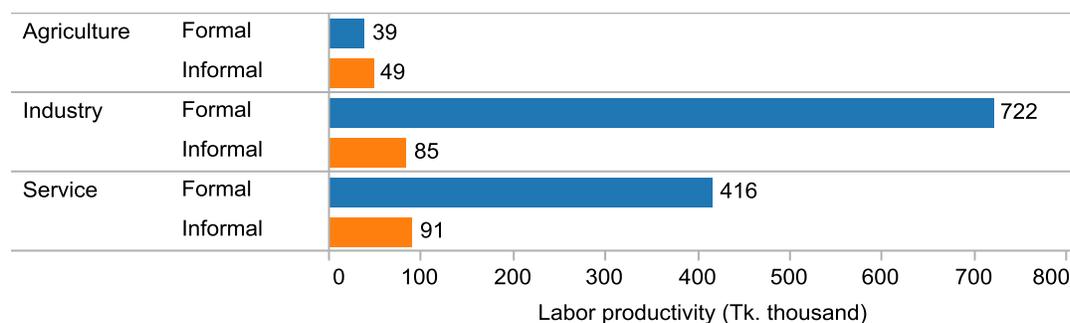


Source: Asian Development Bank (ADB) 2012, p. 16.

III.18. Labor productivity, defined as the gross value added per job, is much higher for the formal sector in industry and service sectors, while the pattern is opposite in agriculture. Labor productivity of the formal industry sector is 8.5 times higher than that of the informal sector; the difference is 4.6-fold in the service sector (figure 7). This reflects that the formal sector is more capital-intensive while the informal sector is more labor-intensive. Close to 70 percent of the workforce in manufacturing is in informal sector, but productivity, as measured by gross value added per job, of formal manufacturing is 6.4 times higher than that of informal sector manufacturing (ADB 2012).

⁵⁹ In this Policy Note, formal and informal sectors are separated by registration status to the government. ESS uses the sampling frame from the government's Business Registry, and this is the basis for discussing the formal sector. Informal workers in the formal sector are workers without formal contract.

Figure III. 7: Labor Productivity in Formal and Informal Sectors



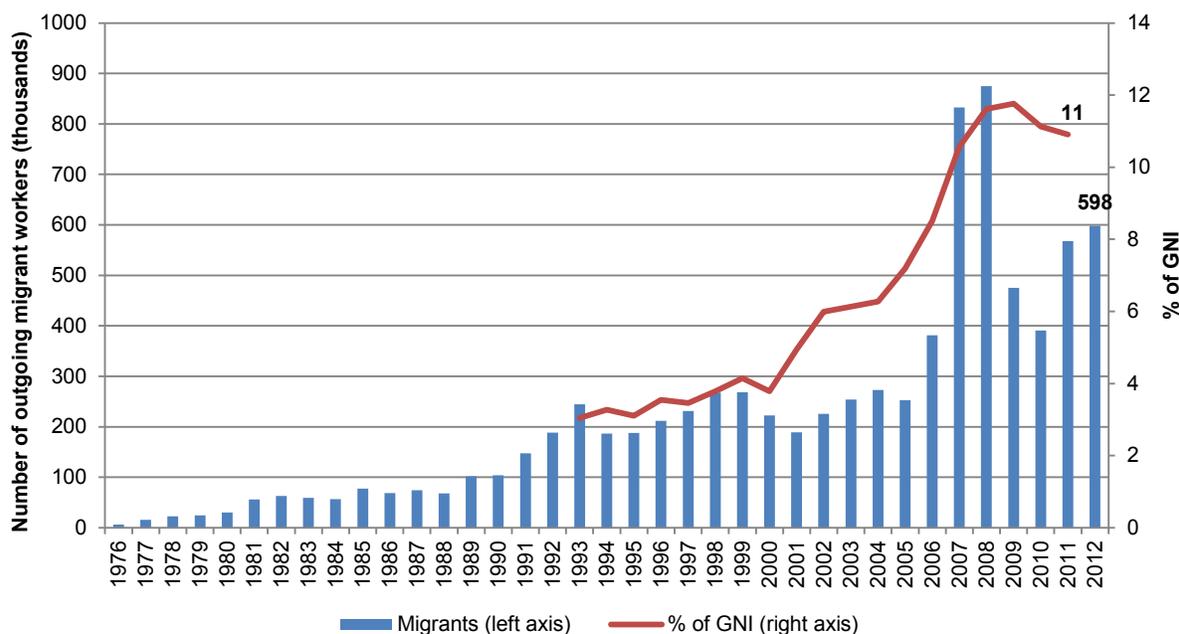
Source: Recalculated by authors using information in ADB 2012.

Note: ADB 2012 reported a simple average of sector productivity, while this report presents a weighted average.

3.2 Emigrant Workers

III.19. **International migration has become an increasingly important means for economic growth and employment generation in the Bangladesh economy.** In a market characterized by a growing labor force, caused by population growth and increased female labor force participation, out-migration (or *emigration*) has become an important employment option, helping to ease labor market pressures (Paci and Sasin 2008). The annual number of emigrant workers has increased from 104,000 in 1990 to 223,000 in 2000, and to 875,000 in 2008. Although the number has sharply dropped after the global financial crisis in 2008, the number again picked up to 598,000 in 2012. As a result of a growing number of emigrant workers, the contribution of remittances to the GNI has also increased from 3.0 percent in 1993 to 3.8 percent in 2000, and to 10.9 percent in 2011 (figure 8). The forces driving Bangladeshis to emigrate include push factors such as underemployment and low wages at home, and pull factors such as prospects of higher wages and full employment (World Bank 2012a). Since the mid-2000s, a rising demand for unskilled labor for the non-traded service sector comes from Gulf countries. This constitutes three-quarters of the emigrant labor in 2012, many of whom work as low-skilled workers.

Figure III. 8: Number of Emigrant Workers and Contribution of Remittances to GNI (1976–2012)

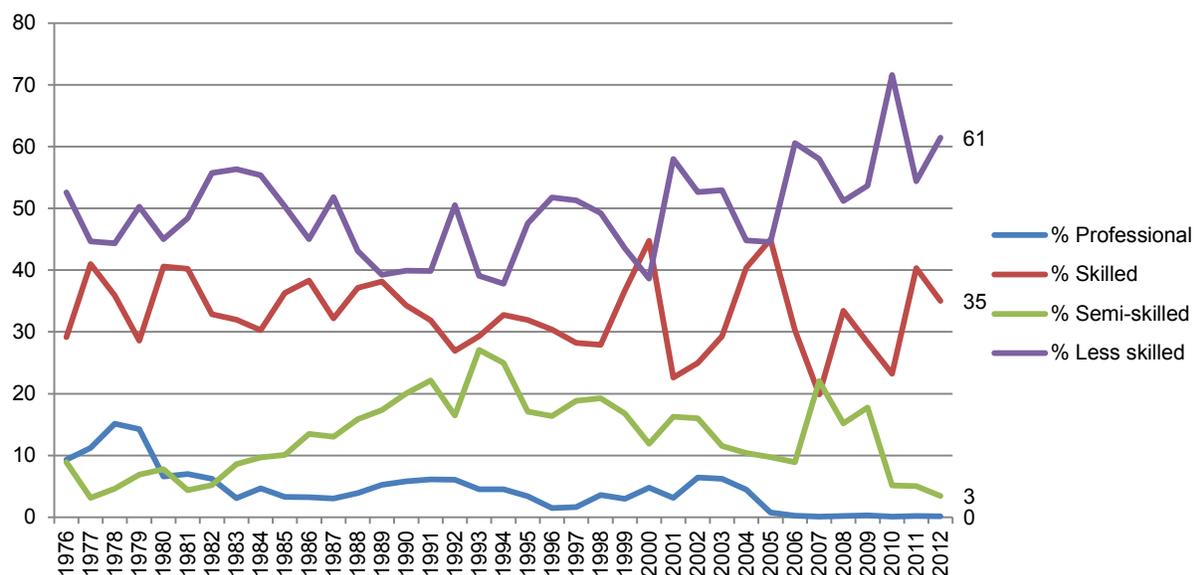


Source: Number of emigrant workers from the Bureau of Manpower, Employment, and Training (BMET); remittance data from the Bangladesh Bank website; Gross National Income (GNI) from World Bank, World Development Indicators (WDI) database.

III.20. **Bangladeshi emigrant workers are employed in low-skilled jobs.** Statistics show that historically, most migrant workers are less-skilled workers.⁶⁰ Although the share of professional migrant workers in Bangladesh was close to 6 percent in 2002, it has dwindled to close to zero since the mid-2000s. In recent years, the share of less-skilled emigrant workers is growing (see figure 9), reflecting that the largest demand for Bangladeshi workers in other countries is for low- or semi-skilled workers, mainly because of their willingness to accept low-profile jobs, including hazardous work with low wages (Maxwell Stamp 2010).

⁶⁰ The Bureau of Manpower, Employment, and Training (BMET) database classifies the skills of emigrant workers in four categories, which are made on the basis of the visa type that an emigrant worker gets, rather than emigrants' actual skills or educational levels, including: (1) *professional*—such as doctors, engineers, teachers, and nurses; (2) *skilled*—such as garment workers, drivers, and electricians; (3) *semi-skilled*—such as tailors and gardeners; and (4) *less-skilled*—such as hotel boys, cleaners, cart loaders, and carton pickers (Maxwell 2010).

Figure III. 9: Proportion of Emigrant Workers by Their Skill Categories (1976–2012)



Source: BMET.

III.21. **Although emigrant workers have, on average, higher educational attainment than the average worker in the domestic economy, limited public support for career matching, rampant use of private brokers, lack of pre-emigration training and the low skill nature of jobs taken up by Bangladeshi emigrant workers has created a “brand” of the Bangladeshi worker as one with low skills.** The largest share of emigrant workers tends to have some secondary education, although the jobs abroad they engage in require low skills. A study of 889 emigrant workers shows that 71 percent have completed somewhere between grades 5 and 12, while only 29 percent have finished primary school (Maxwell Stamp 2010). From a survey of 23,305 individuals, Sharma and Zaman (2009) observed that the propensity of being an emigrant worker peaks at grade 9. World Bank (2012a) reports from an analysis of HIES 2010 that the propensity peaks at 10.5 years of education. There is no employment agency that matches qualifications of aspirant emigrants with jobs abroad, and no pre-employment training provided by the Bureau of Manpower, Employment, and Training (BMET), a centrally managed agency in charge of managing overseas employment, controlling license of recruiting agencies, and collection of information on overseas labor market (Reza 2013). In fact, the BMET roster of skill categories does not register the educational or training status of aspirant workers, and there is no consideration of skill and expertise in selecting an aspirant emigrant (Reza 2013).

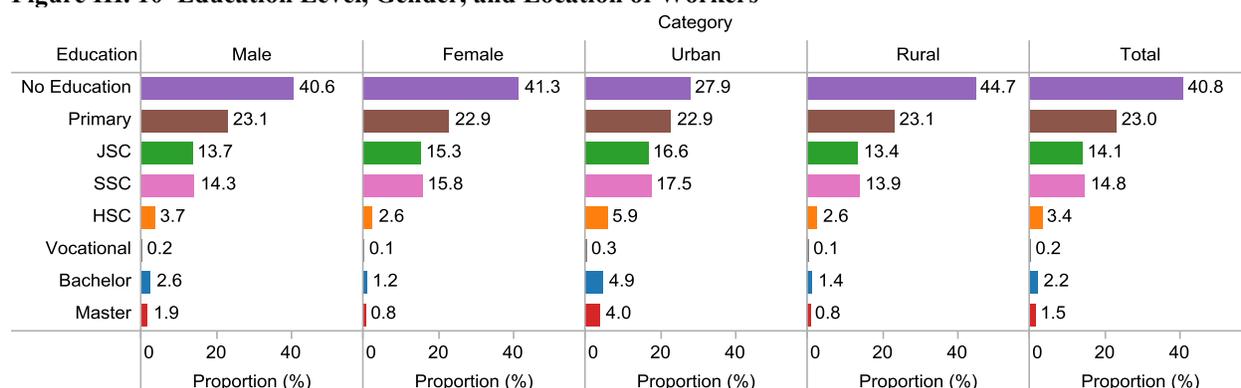
III.22. **Given the mostly unregulated environment and the prevalence of middle-men managing the contracts of emigrant workers, transaction costs for emigration are substantial, payable mostly by the less poor and open to abuse.** While 846 private agencies licensed by BMET play a role in recruiting aspirant emigrant workers, about 60 percent of recruitment is through individual initiatives and social networks (Siddiqui 2003), rendering a large part of migrant work contracts under unregulated arrangements. In fact, as a result of high transaction costs, selecting emigrant worker is determined by affordability.⁶¹ Consequently, only the households wealthy enough to afford the up-front costs can access the opportunity of emigration work. An analysis of HIES 2010 shows that the proportion of emigration rises continuously from 0.5 percent in the lowest decile to 6.8 percent in the ninth and tenth deciles (World Bank 2012a). Those unable to pay the costs upfront take large loans (67 percent of migrant workers take loans), and are bonded for years in difficult conditions (Siddiqui 2003, Reza 2013).

⁶¹ The labor migration process is highly complex, with a multitude of actors involved both at home and in destination countries; therefore, the up-front private cost of emigration is high and variable in a range from Taka 200,000 to Taka 300,000 (about US\$2,500–3,750; World Bank 2012a).

3.3 Educational Profile of the Bangladeshi Labor Market

III.23. **Ninety-six percent of Bangladeshi workers, including all those working in the formal and informal sector, have up to a secondary education.** Forty-one percent of the 56.7 million workers in the Bangladeshi domestic labor market have no education at all, and 23 percent have not completed their primary education. The pattern is similar for both males and females, but considerably different between urban and rural areas (figure 10). In urban areas, the share of workers with no education is 28 percent, while the share is 45 percent in rural areas. Secondary-level school dropouts, including Junior Secondary Certificate (JSC), Secondary School Certificate (SSC), and Higher Secondary Certificate (HSC), represent 14, 15, and 3 percent of the work force, respectively. The share of JSC and SSC workers is larger among the female workforce than among male counterparts. Only 0.2 percent of workers have a technical diploma, and 3.7 percent of workers have more than university degrees.

Figure III. 10 Education Level, Gender, and Location of Workers



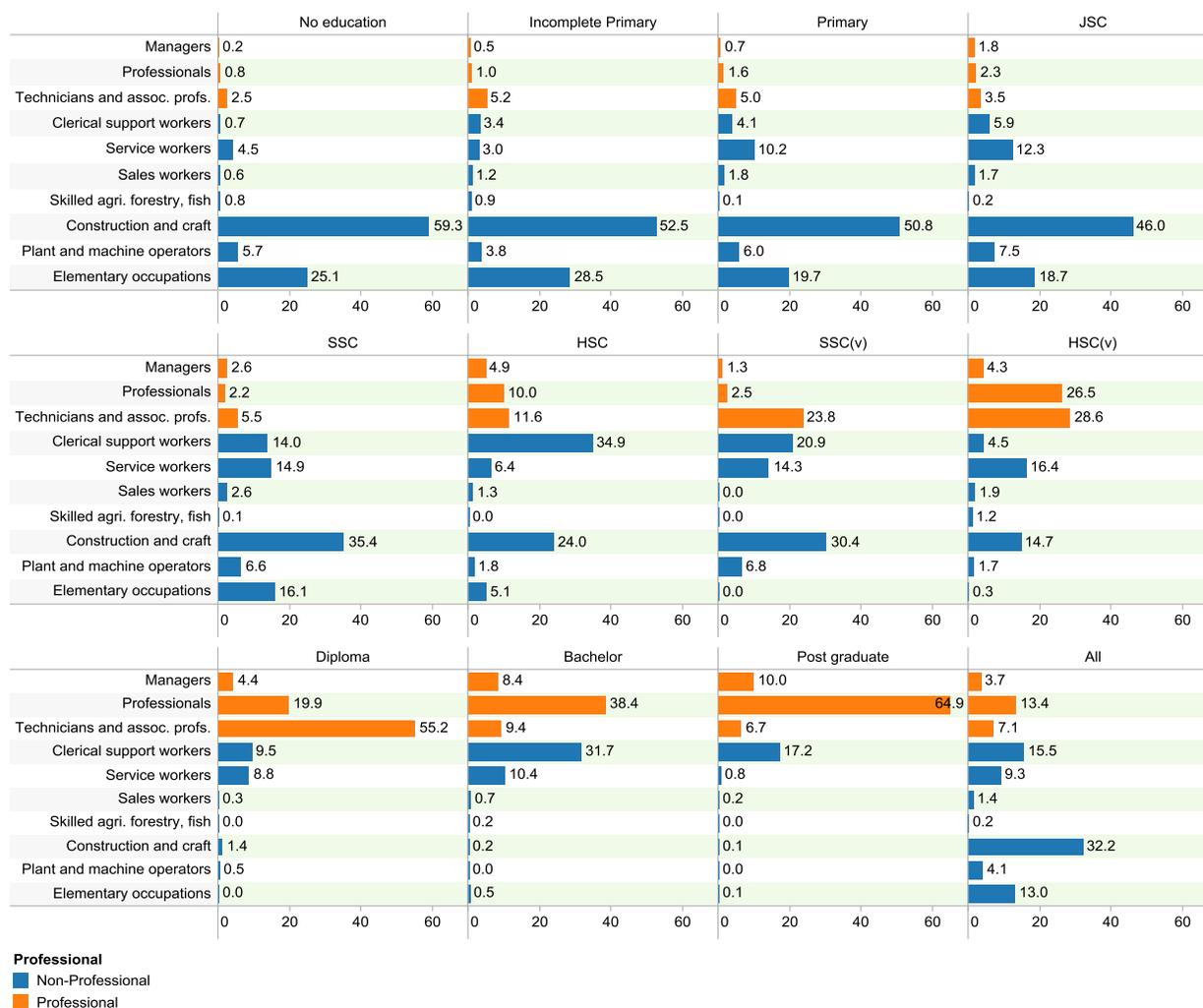
Source: Authors' calculation using LFS 2010.

3.3.1 Educational profile of workers in the formal sector

III.24. **Formal education is the key determinant of occupational differences in the formal economic sector.** Figure 11 shows that the proportion of workers' occupations differs greatly, depending on educational level, based on ESS 2012. The largest share of workers with less than a secondary education is in construction and craft, which also includes garment factory workers, followed by elementary occupations, with the share in professional-level work being less than 10 percent. The number of clerical or service workers goes up as the education level increases. Conversely, the number of construction and craft workers as well as elementary occupations gradually declines as the education level increases. For HSC graduates, the most common occupation is a clerical job (about 35 percent of HSC graduates have this job). Although graduates with either technical, vocational, or training degrees—such as an SSC (vocational), HSC (vocational), or Diploma—engage in both non-professional and professional occupations,⁶² they are more likely to find professional jobs than regular SSC or HSC graduates. Higher education graduates, including bachelor and post-graduate degree holders, generally work as professionals or managers, although a good portion of bachelor and post-graduate workers also take clerical support jobs (31.7 and 17.2 percent, respectively).

⁶² Compared to other levels of education, the shares of TVET graduates in the ESS sample was 0.3% (21 cases), 0.5% (50 cases), and 1.0% (71 cases) for the SSC (vocational), HSC (vocational), and Diploma, respectively (total sample size of 6,981). Because this is a small sample size, the sampling error is relatively large for these groups.

Figure III. 11: Proportion of Workers by Occupation for Each Educational Level



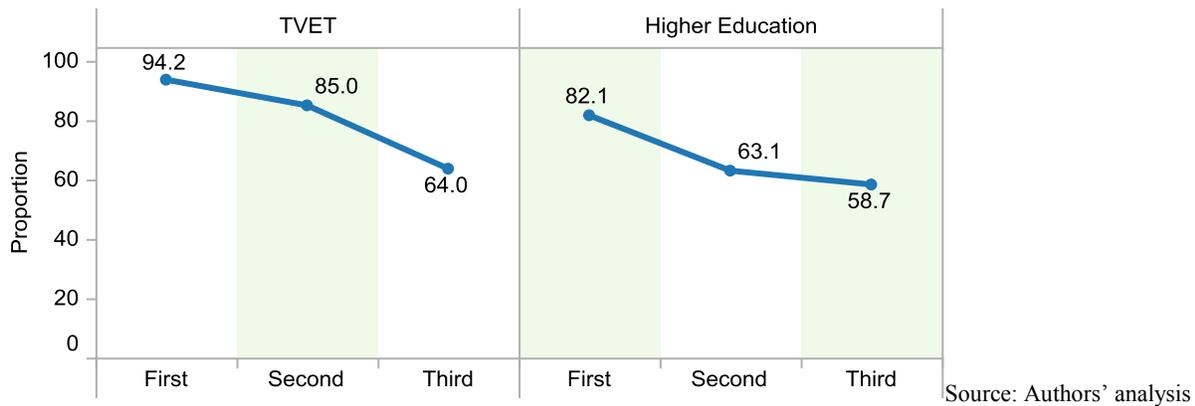
Source: Authors' analysis using Enterprise-based Skills Survey (ESS) 2012.

Note: Sum of all numbers add up to 100 percent for each education level. See annex 1, table A1-4 for more details about occupations. SSC(v) = SSC (vocational) and HSC(v) = HSC (vocational).

III.25. Beyond educational qualifications, academic performance also matters in getting a good job in the formal labor market. According to workers' self-reported school performance, those who performed better at school are more likely to take professional occupations—especially with TVET⁶³ and higher education. Ninety-four percent of TVET graduates who achieved first division in the school's final examination are in professional occupations, while 85 and 64 percent of TVET graduates with second- and third-division scores are in professional occupations (figure 12). Among university graduates, the proportions are respectively 82, 63, and 59 percent. This correlation implies that either employers screen the academic performance of the candidates or graduates with high academic performance are found more qualified for high-skills jobs through recruitment processes, and hence, they are offered better job opportunities.

⁶³ ESS 2012 considers SSC (vocational), HSC (vocational), and Diploma graduates as TVET graduates. It does not include trainees of short courses or non-formal TVET courses.

Figure III. 12: Proportion of Workers in Professional Occupations, by Academic Performance at Each School Level



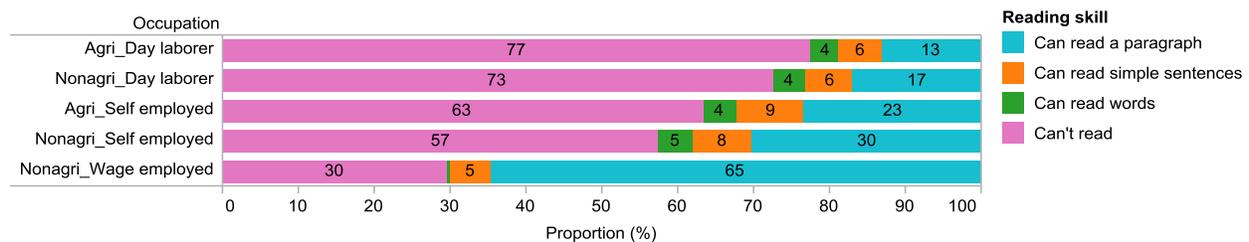
using ESS 2012.

Note: Categories for first to third divisions correspond to marks of final examinations as (i) 60–100, (ii) 45–60, and (iii) 33–45 percent. TVET graduates include SSC (vocational), HSC (vocational), and Diploma graduates, but not trainees of short courses or non-formal TVET courses.

3.3.2 Educational profile of workers in the informal sector

III.26. Workers in the informal sector have on average low levels of education. According to HIES 2010, average years of education among formal employees are: 10.1 years among public sector employees, 5.9 years among private sector employees, and 6.5 years among employers. In contrast, informal workers, including day laborers and the self-employed, have 2.1 and 4.2 years of education on average. There are 15 million day laborers and 20 million self-employed in the Bangladeshi domestic workforce. Of those, 9.7 million day laborers and 8.9 million self-employed have no education. An analysis of reading assessment among rural populations from the SEQAEP survey data shows that close to 77 percent of non-agricultural day laborers can't read, while the proportion is 57 percent among non-agricultural self-employed workers (figure 13).

Figure III. 13: Literacy Skills of Rural Informal Sector Workers



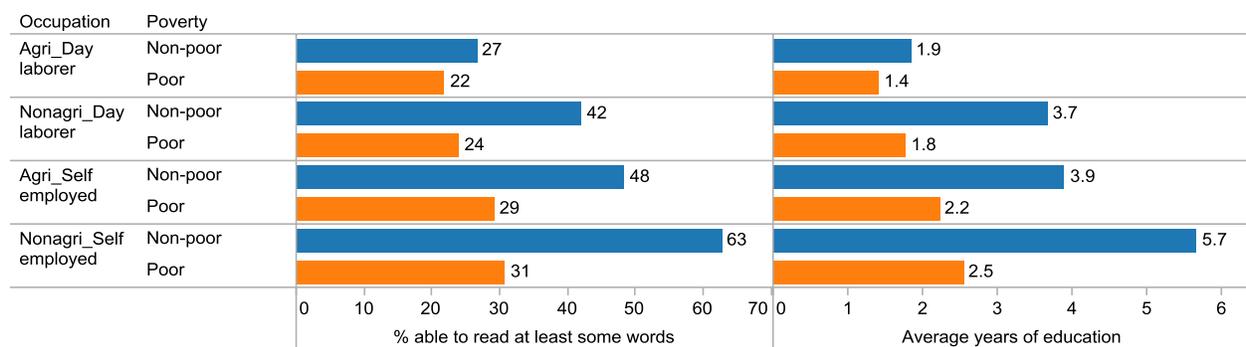
Source: Authors' calculation using the adult literacy module of the Secondary Education Quality and Access Enhancement Project (SEQAEP) Impact Evaluation Survey 2009.

Note: Total sample includes 4,564 working adults aged 15 and over who are in rural villages. There are 399 agricultural day laborers, 259 non-agricultural day laborers, 2,745 agricultural self-employed, 911 non-agricultural self-employed, and 226 non-agricultural wage employed. Non-agricultural wage employment is not considered informal sector work, but shown for comparison.

III.27. **Education and literacy skills matter to the success of self-employed workers.** There are two types of self-employed workers according to international literature: those who choose to be self-employed (entrepreneurs) and those who cannot enter the wage sector, although this is where they would prefer to be employed (De Mel et al. 2008). Following Gindling and Newhouse (2013), who assessed the success of self-employed workers in terms of their poverty status,⁶⁴ a poverty status was generated for informal sector workers (day laborers and the self-employed) in Bangladesh (figure 14). The analysis shows that education and literacy skills are different for the non-poor (successful) and poor (unsuccessful) self-employed workers. For example, 63 percent of the non-poor (successful) non-agricultural self-employed have some reading skills, while only 31 percent of the poor (unsuccessful) non-agricultural self-employed have some reading skills. The average years of education are 5.7 years versus 2.5 years for those two groups, respectively.

Analysis shows that education and literacy skills are different for the non-poor (successful) and poor (unsuccessful) self-employed workers. For example, 63 percent of the non-poor (successful) non-agricultural self-employed have some reading skills, while the corresponding share of the poor is only 31 percent.

Figure III. 14: Education and Literacy Skills of Successful (Non-Poor) and Unsuccessful (Poor) Informal Sector Workers



Source: Authors' calculation using the adult literacy module of the SEQAEP Impact Evaluation Survey 2009 and Household Income and Expenditure Survey (HIES) 2010.

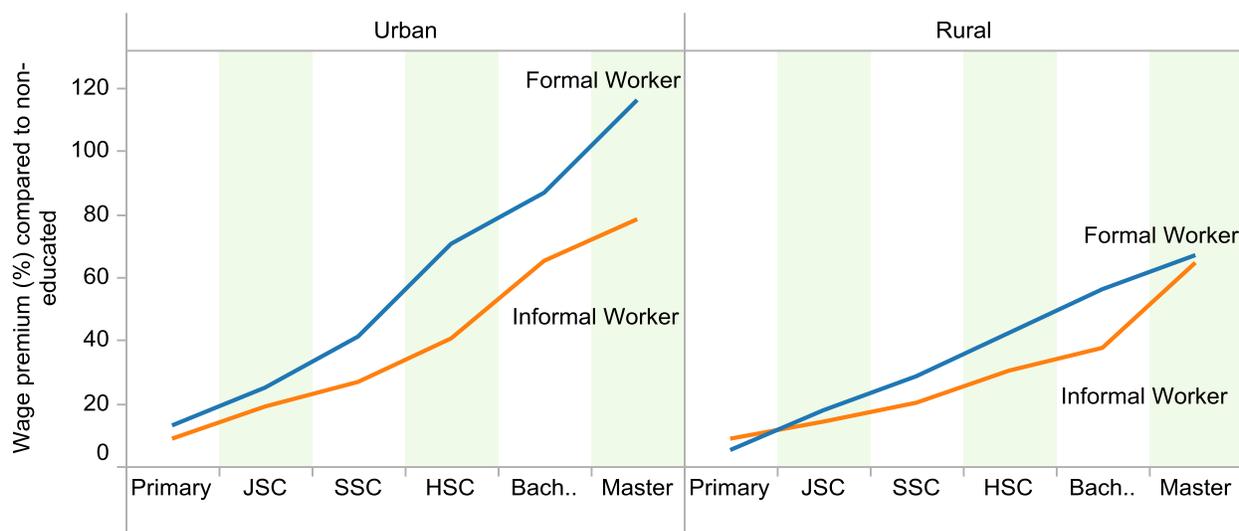
Note: Poverty is defined as the bottom 40th percentile of per capita consumption in the national level scale, obtained from HIES 2010.

3.4 Returns to Education

III.28. **Higher returns to education in the formal sector imply that education is in greater demand in the formal sector than the informal sector, especially in urban areas.** An analysis of earnings equations using LFS 2010 shows that there is a significant wage premium for working in the formal sector, in addition to an educational premium; on average, a formal worker earns 22 percent more than an informal worker (figure 15). Informal workers have lower returns to education compared to formal workers, especially for workers with upper education levels (SSC and above), although the difference does not exist for primary or JSC graduates. The wage premium of a formal worker is much bigger for urban workers than for rural formal workers.

⁶⁴ Gindling and Newhouse (2013) used two indicators as measures of success: (i) whether the self-employed worker is an employer (versus an own-account worker) and (ii) whether the self-employed worker belongs to a family with per capita consumption above the \$2/day poverty line.

Figure III. 15: Urban and Rural Wage Premiums of Education and Formal Work



Source: Authors' analysis using LFS 2010 (see annex 2, table A2-1 for details).

Note: Employees with no education are the reference group for this comparison. Formal–informal sector differences are computed by using interaction terms for informal sector dummies. Workers with TVET qualifications are not shown in this graph due to a very small sample available in the LFS.

III.29. Econometric analysis shows that positive non-cognitive skills are rewarded with higher remuneration at entry in a formal sector job.

Building non-cognitive skills is worth investing in, not only for recruitment opportunities, but also for the remuneration. An econometric analysis of ESS shows that workers with greater perseverance (or *grit*) and emotional stability enjoy a 1.8–2.5 percent higher starting salary than those who have weaker skills in these areas.⁶⁵ Although the sample uses only those who are already hired by employers, there is a consistent message that companies tend to select workers with stronger non-cognitive skills than cognitive or technical skills (see figure 22 on page 30 for employers' perception of non-cognitive skills). Once the educational criteria are met, strong non-cognitive skills are rewarded with better remuneration. This result is similar to Peru, where positive returns are also found on the grit scale, as observed through perseverance of effort and emotional stability (World Bank 2011b). It should be noted that this evidence has been found only for non-professional workers. Professional workers have less emphasis placed on their non-cognitive skills. While similar data does not exist for the informal sector, it is expected that the informal labor market places a high premium on these positive non-cognitive skills.

Workers with greater perseverance (or grit) and emotional stability enjoy a 1.8–2.5 percent higher starting salary than those who have weaker skills in these areas.

There is a consistent message that companies tend to select workers with stronger non-cognitive skills than cognitive or technical skills.

4. Channels for Skills Acquisition

In recent years, access to formal education has increased rapidly in Bangladesh. As a result, today's labor force consists of, albeit still a low number, but a relatively higher proportion of educated workers, as compared to just a

⁶⁵ Behavioral skills are assessed by using a questionnaire developed for the Skills Toward Employment and Productivity (STEP) Measurement Survey (see Sanchez et al., forthcoming). It lets employers construct a composite score for eight types of behavioral characteristics, including grit scale, emotional stability, agreeableness, decision making, extraversion, conscientiousness, openness, and hostile bias.

decade ago. Formal education is certainly a critical channel for acquiring skills, but it is not the *only* channel. Formal education can consist of general, technical, vocational, and higher education. Yet, there are also opportunities for those who have missed out on formal schooling—including basic skills training, such as literacy courses and non-formal vocational training, apprenticeships, and on-the-job training. The term *skills* is often associated with technical and vocational education and training in literature on educational development. However, the concept of skills has evolved to include various types of skills, including cognitive, non-cognitive, and technical or vocational skills (see box 2).⁶⁶ While different types of skills are developed through lifelong experiences, this section focuses on opportunities that further people’s education or training.

4.1 General Education

III.30. **General education is the largest supplier of skills in Bangladesh.** As noted earlier, 96 percent of the Bangladeshi labor force has less than a secondary education. Although the composition changed marginally from 2005–2010, most workers still have little or no education. An increase in girls’ enrollment in primary and secondary schools has affected their labor force participation. The percent of workers having informal employment is 84, 73, and 77 for primary, JSC, and SSC graduates, respectively (LFS 2010). Despite increasing access to primary and secondary education, the quality of education is a growing concern. The National Student Assessments (NSA), a learning assessment conducted in 2011, reported that only 25 percent of grade 5 students master Bangla and 33 percent master mathematics competencies. Weak academic performance continues in secondary education (for more details, see the Policy Note on Education Quality).

4.2 Formal Technical and Vocational Education and Training

III.31. **Formal TVET consists of SSC, HSC, and Diploma courses.** These programs are provided by public and private institutions, most of which are under the supervision of Directorate of Technical Education (DTE) or BMET,⁶⁷ and affiliated with the Bangladesh Technical Education Board (BTEB). The programs include time-bound, institution-based, and graded training with formal certification. Currently, seven ministries offer formal training through their departments or directorates (Mohiuzzaman 2013). SSC courses are offered at grades 9 and 10, and upon completion of the program, students can move to a two-year HSC course (grades 11 and 12) or four-year Diploma course at a polytechnic. SSC vocational graduates also have the option to apply for the academic HSC, depending on their academic performance.⁶⁸

III.32. **The formal TVET sector is small but growing.** Less than one percent of Bangladeshi workers (less than half a million workers) acquire skills through formal TVET. About 500,000 students are currently enrolled in 3,000 formal TVET institutions. Thirty percent of the enrollment is in large public institutions. The rest of the students study in small private institutions (making up 92 percent of the 3,000 institutions). Male graduates outnumber female graduates.

⁶⁶ United Nations Educational, Scientific, and Cultural Organization (UNESCO 2012) categorizes the skills as the following: (i) foundational skills—the literacy and numeracy skills necessary for getting work that pays enough to meet daily needs; (ii) transferrable skills—analyzing problems and reaching appropriate solutions, communicating ideas and information effectively, being creative, showing leadership and conscientiousness, and demonstrating entrepreneurial capabilities; and (iii) technical and vocational skills—specific technical knowledge, such as using a sewing machine, engaging in bricklaying, and so on.

⁶⁷ Eight ministries in total are providing more than one-year formal training programs, although the number of institutions and enrollment is much smaller. Those ministries include the Ministries of Textiles and Jute, Agriculture, Environment & Forest, Fisheries and Livestock, Health & Family Welfare, and Civil Aviation and Tourism (Mohiuzzaman 2013).

⁶⁸ There is a tendency among secondary school students to take the SSC (vocational) exam, which is considered easier than the academic secondary, and therefore an easier path to obtaining admission to high schools.

III.33. **Because of its diversity—with multiple providers, target groups, and modalities of service delivery—the TVET system appears fragmented.** The TVET system consists of (i) various service providers, including public, private, non-governmental organization (NGO), and industry trainers; (ii) various target audiences, including secondary and post-secondary students, unskilled youth and vulnerable populations, people with previous work experience, or workers who are currently employed; (iii) various modalities—such as long and short courses, informal training, and on-the-job training; and (iv) various types of skill levels—including an array of industry-specific skills, basic numeracy and literacy skills, and behavioral and communication skills. Until recently, there was no effective mechanism to coordinate among various service providers, audiences, and modalities.

III.34. **To better coordinate the skills-development sector, in recent years Bangladesh formed a National Skills Development Council (NSDC), which developed NSDP, and is closely working on a National Technical and Vocational Qualifications Framework (NTVQF).** The NSDC, a public-private partnership initiative, developed the NSDP in 2008 and is working to help establish a robust skills-development system in the country. The policy aims to improve the skills development arena's quality and relevance; to establish more flexible and responsive delivery mechanisms; to improve access to skills development for various groups; and to involve industry organizations, employers, and workers in skills training and acquisition processes. Then, NTVQF helps enact these concepts by using consistent and nationally recognized qualifications and credentials for both formal and non-formal skills and education, administering them in two pre-vocational levels, five vocational levels, and one technical level (MoE 2011).

4.3 Higher Education

III.35. **Roughly 3.7 percent of workers in the formal and informal economy acquire skills through higher education, and most of them are employed in the formal sector.** In today's labor market in Bangladesh, 3.7 percent of workers or about 2 million acquire skills through higher education. Male graduates outnumber female graduates. The labor force participation rate of higher education graduates is almost 100 percent for both genders, with about 72 percent working in the formal sector (LFS 2010). In the formal economic sector, 56 percent with a bachelor degree and 82 percent with a post-graduate degree have professional occupations. The most popular destination is education and public administration.

III.36. **The higher education system in Bangladesh comprises two completely separate systems: (i) universities in the public and private sectors and (ii) a vast number of government and non-government colleges affiliated with the National University (NU).** There are 31 public universities and 51 private universities. Although public universities provide courses for various academic disciplines, private universities have emerged to cater to market demands. There are 239 public colleges and 1,251 private colleges affiliated with the NU, which also offer bachelor, master, and PhD courses. In addition, there are various types of professional colleges, institutions, and madrasahs that provide tertiary education. The public generally views the large public universities and metropolitan colleges as the best institutions in Bangladesh, and hence, admission to these institutions remains extremely competitive, despite the proliferation of private universities. Close to 80 percent of higher education students attend colleges affiliated with the NU (World Bank 2013a).

III.37. **Enrollment in higher education has been expanding rapidly as a result of the increased number of graduates from lower education levels.** Increased pass rates at the secondary education level combined with increased enrollment in primary and secondary education have created a huge demand for higher education (World Bank 2013a). Enrollment in higher education increased from 1 million in 2004–2005 (University Grants Commission [UGC] 2006) to 2.2 million in 2011 (UGC 2011). The proliferation of private universities has helped ease the pressure on enrollments at public universities. Enrollment in private universities increased from 8,700 in 1998 to 280,000 in 2011 as a result of an increasing number of private universities after the enactment of the Private University Act in 1992 (UGC 2006). Although the number of colleges did not change during this period, the number of college students increased rapidly from 773,000 in 2004 (UGC 2006) to 1,925,000 in 2010, as a result of their capacities expanding (World Bank 2013a). The Bangladesh Open University (a distance-learning university) enrolls 105,000 graduate-level students, and higher madrasahs enroll 131,000 students at the Kamil level, which is the equivalent of grade 16 (Bureau of Educational Information and Statistics [BANBEIS] 2011).

III.38. **One-third of students study the arts and humanities and one-fourth of students study business administration at universities.** At universities, the arts and humanities as well as business administration are two popular academic disciplines, followed by engineering (see table 2). Public and private universities have different enrollment distributions. Public universities have a larger proportion of students in arts and humanities, science, and social science, while private universities enroll more students in business administration and engineering.⁶⁹

Table III. 2: Number of Students by Academic Discipline in Higher Education

Discipline	Enrollment			Proportion		
	Private	Public	Total	Private (%)	Public (%)	Total (%)
Agriculture	578	17,151	17,729	0	5	3
Arts and humanities	30,601	150,939	181,540	11	48	30
Business administration	122,837	26,477	149,314	44	8	25
Economics	2,029	6,548	8,577	1	2	1
Education	954	7,515	8,469	0	2	1
Engineering and technical	71,778	31,039	102,817	26	10	17
Law	26,509	3,786	30,295	9	1	5
Medical, nursing, and health services		993	993	0	0	0
Pharmacy	8,905	1,468	10,373	3	0	2
Public administration and planning		1,692	1,692	0	1	0
Science	7,842	39,682	47,524	3	13	8
Social science	7,633	20,787	28,420	3	7	5
Others		8,247	8,247	0	3	1
Subtotal (universities)	279,666	316,324	595,990	100	100	100
Colleges	1,854,141		1,854,141	-	-	-
Grand total	2,450,131		2,450,131	-	-	-

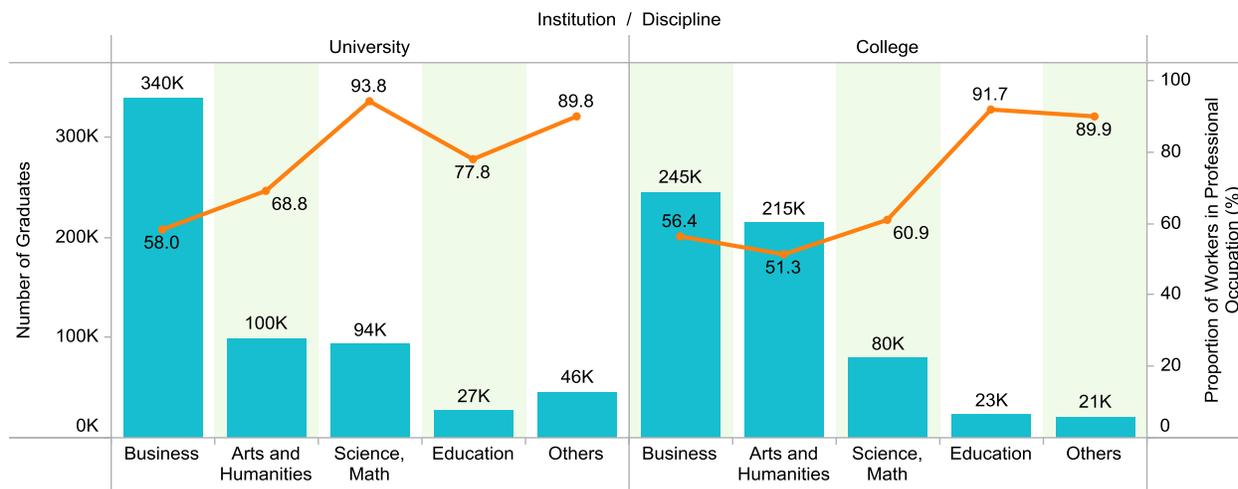
Source: University Grants Commission (UGC) 2011.

III.39. **The academic disciplines of higher education graduates do not always match their occupations in the formal sector.** Figure 16 presents the number of workers in five formal economic sectors, breaking down the numbers by academic disciplines and the proportion of workers who take professional occupations. By absolute number, business majors are the most prevalent—however, the occupations they end up taking are considerably lower than the positions they prepared for academically, because many of them accept secretarial jobs. Meanwhile, a high proportion of university science and mathematics graduates get professional jobs, but this is not as prevalent with college graduates. Overall, there is no strong correlation between academic disciplines and the occupation level attained by graduates.⁷⁰

⁶⁹ Data on enrollment by academic disciplines at colleges are scarce and incomplete.

⁷⁰ This does not deny the differences in specific occupations within the same occupation level. For instance, some business majors might end up working as accountants and some science majors might end up working as researchers.

Figure III. 16: Number of Graduates by Academic Disciplines and Proportion of Professional Workers



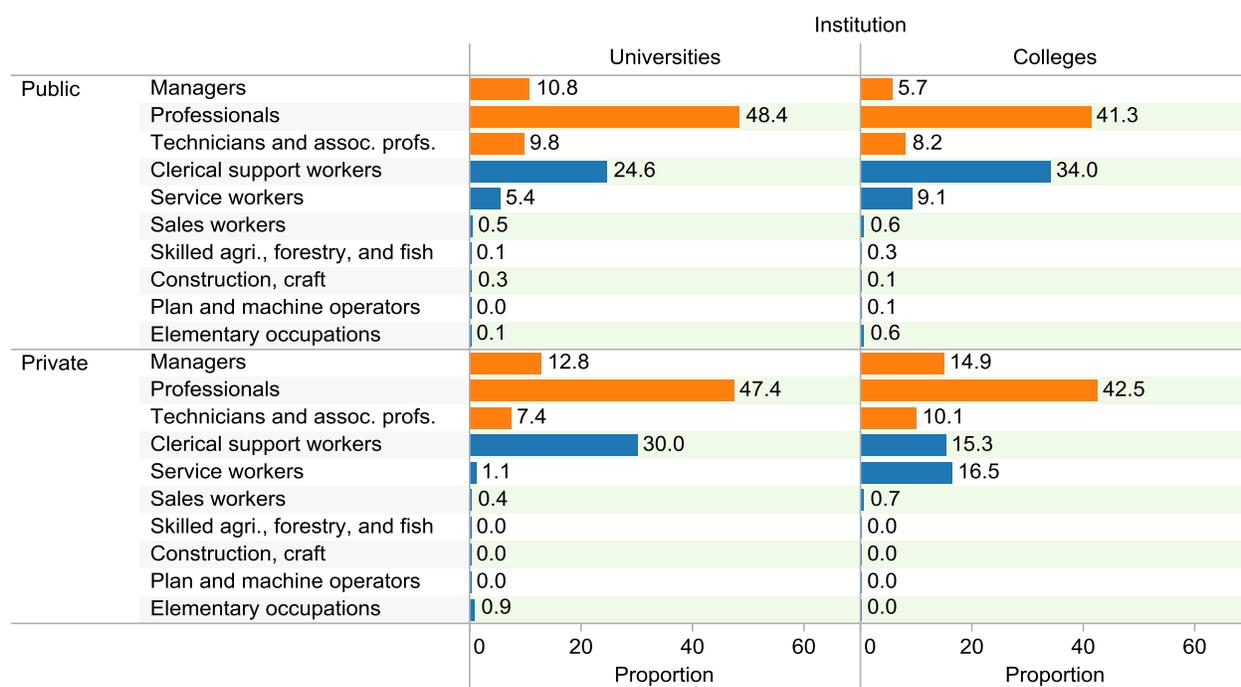
Source: Authors' analysis using the ESS 2012.

III.40. **Despite the common perception that a college education is significantly lower in quality, graduates from these institutions, both public and private, are equally likely to enter professional occupations.** Given the general perception in Bangladesh that universities are imparting far better skills and knowledge than generally under-funded colleges, one would expect that the formal labor market differentiates between graduates of the two institutions. Further, it could be expected that some sort of differentiation is made between graduates from prestigious public universities. To the contrary, as illustrated in figure 17, graduates of public and private universities and colleges are equally desirable employees in the formal labor market. Currently, 69 percent of graduates from public universities become professionals, compared to 67.6 percent of graduates from private universities, 55.2 percent from public colleges, and 67.5 percent from private colleges. Thus, except for the lower number reflected in public colleges, overall, graduates from the other institutions have about the same statistical chance of entering professional positions.

Graduates of public and private universities and colleges are equally desirable employees in the formal labor market.

Currently, 69 percent of graduates from public universities become professionals, compared to 67.6 percent of graduates from private universities, 55.2 percent from public colleges, and 67.5 percent from private colleges.

Figure III. 17: Higher-Education Graduates' Occupations



Source: Authors' analysis using ESS 2012.

III.41. **Although enterprises offer higher entry salaries to university graduates, as opposed to college graduates, the differences diminish over time.** In the five surveyed economic sectors, university graduates average a 13 percent higher salary at entry. Such wage differences disappear over time, though, and there is no wage differential between university and college students among experienced workers. This shows that the market provides wage premiums for university graduates over college graduates, but no systematic differences exist in the productivity of those workers, and hence, college graduates' salaries catch up with those of university graduates during their career.

4.4 Short Courses and Reskilling Opportunities

III.42. **Other education and training opportunities exist besides formal education, and among them short training courses are better organized.** There are two types of short training courses: formal and non-formal training. Formal training programs are regulated by ministries or various authorities, and are affiliated with BTEB, leading to certification. Non-formal training programs, provided by both public and private institutions, offer structured courses with organized learning objectives, but are not affiliated with BTEB (Mohiuzzaman 2013). Among formal training programs, there have been five levels of National Skill Standards (NSS) training programs, including a 360-hour NSS basic program, a one-year NSS II program, and an NSS III program; all of these will be replaced by NTVQF. A downside of non-formal training is that it does not lead to formal certification. Seventeen ministries provide non-accredited non-formal training programs,⁷¹ including the Ministry of Youth and Sports, which has 110 training centers offering basic skills classes that last 1–6 months. Several non-government organizations such as the Underprivileged Children's Educational Program (UCEP), Mirpur Agricultural Workshop

⁷¹ Seventeen ministries are providing some kind of short-training programs, but not all training programs are for the general public. Some short training courses are identified as professional training for specific ministry-associated staff (Mohiuzzaman 2013).

& Training School (MAWTS), and Dhaka Ahsania Mission (DAM) also provide non-formal skills training. UCEP's programs last 6–12 months (see box 4), while MAWTS programs last 1–8 weeks (Mohiuzzaman 2013).

Box III. 4: Non-Formal Training Run by a Non-Governmental Organization

The Underprivileged Children's Education Program (UCEP) is one of the largest local non-governmental organizations (NGOs) that deliver skills training to urban poor working children. Currently, UCEP provides education to 45,000 students in its 53 schools that offer both general and vocational courses (through *integrated general and vocational* [IGV] schools) and 10 technical schools at various locations. IGV schools equip students with entry-level vocational training in 21 types of courses, including auto mechanics, welding, electronics, textile weaving, and industrial sewing. The main features of UCEP's vocational programs include flexible hours, focusing on practical skills, on-the-job training, reviewing curriculum with employers' involvement, and networking with other training providers. Ninety-five percent of the 5,000 graduates who complete UCEP's vocational training have been placed in jobs.

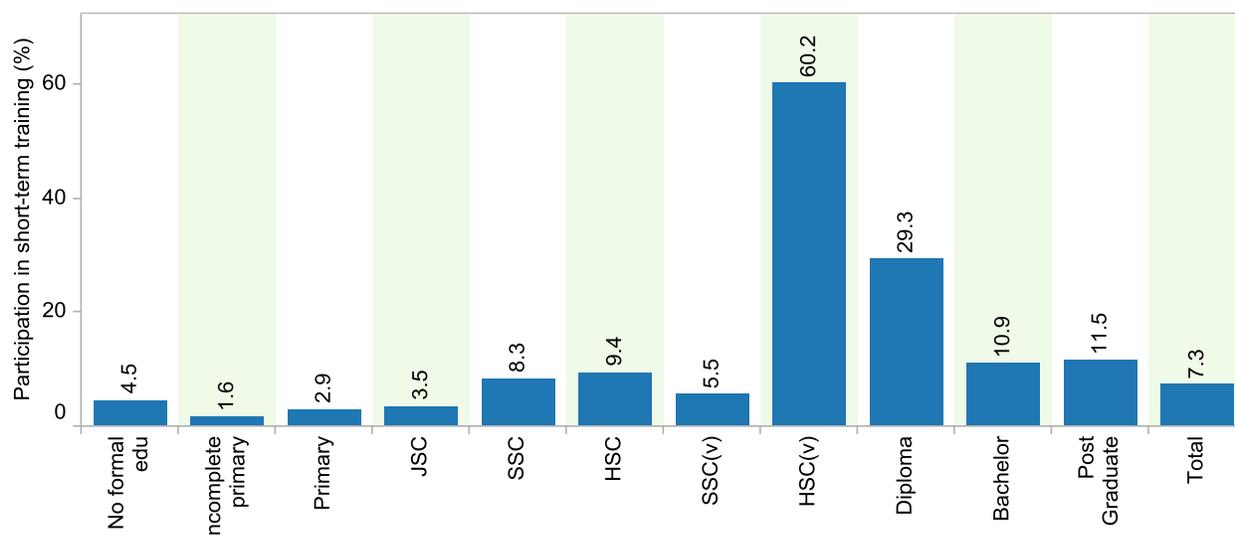
Source: Mohiuzzaman 2013.

III.43. **Short-term formal TVET programs could provide skill-development opportunities to current and potential informal sector workers, but are currently not being availed by them.** Short-term training courses are supposed to provide basic skills training to workers who are already in the labor market but don't have an education, so that they can have breadwinning skills in hands. However, the courses do not usually benefit the intended audience, because the courses require a minimum grade 8-level education.⁷² The ESS reported that employees with a lower level of education are far less likely than highly educated groups to access these programs (figure 18). For instance, only 2–5 percent of workers with less than a junior secondary-level education take short-term courses, but more than 10 percent of post-secondary graduates take them, and 60 percent of HSC (vocational) graduates take them. This implies that informal sector workers, the majority of whom have no or low education, also have limited opportunities for participating in short-term training.

Informal sector workers, the majority of whom have no or low education, also have limited opportunities for participating in short-term training.

⁷² The new NTVQF will open a door to the uneducated through pre-vocational levels of training.

Figure III. 18: Percent of Workers Who Took Short-Term Training Courses



Source: Authors' analysis using ESS 2012.

4.5 Apprenticeships and Internships

III.44. **Apprenticeship, equally applicable to workers in the formal and informal economy, appears to be a relatively uncommon path for skills acquisition in Bangladesh.** Apprenticeship involves training a new generation of practitioners using a structured competency-based set of skills. Education Watch 2012 reports that the proportion of youths aged 10–24 who participated in apprenticeship training was 5.7 percent. Boys are more likely to engage in apprenticeship at 7.8 percent, compared to girls at 3.6 percent. Apprenticeship is mostly informal—only 0.3 percent of workers are engaged in formal apprenticeship (CAMPE 2013). However, considering that a large proportion of students drop out before finishing primary school (see the Policy Note on Access and Equity), and many of them start working at a young age without having skills in hand, the prevalence of apprenticeship seems relatively small. One possible explanation for this low occurrence is that most informal enterprises and self-employed workers do not have the capacity to accept apprentices for training purposes. Workers probably engage in informal on-the-job training rather than a formal apprenticeship.⁷³

III.45. **Apprenticeship and internship opportunities are also limited in the formal sector, despite current legislation encouraging apprenticeship.** Chapter XVIII of the Labor Act (2006) regulates the structure and legal preconditions of formal apprenticeship training. It encourages apprenticeships for enterprises with more than 50 employees and provides incentives, including income tax relief for all costs incurred by apprenticeship training and a rebate. The scheme is still uncommon, however, and many employers are unaware of the legislation (Cordier et al. 2012). According to ESS, about 3 percent of formal sector enterprises offer apprenticeship/internship opportunities, and such opportunities are mostly provided by large enterprises (table 3). Finance industries seem to offer more of these opportunities, while the manufacturing sector offers far fewer opportunities. More than 55 percent of internship opportunities last more than 10 weeks, but 53 percent of enterprises offering internships said that less than 10 percent of those interns/apprentices were hired after the training period. In the formal sector, apprenticeships/internships function more as a means of testing whether applicants are suitable for the firms rather than for training purposes. The NSDP acknowledges the need for a strategy to strengthen apprenticeship in the informal sector, but it has not taken place yet.

⁷³ This could be an issue of semantics. Most family-employed businesses train children through apprenticeship, but they may not formally call it an apprenticeship.

Table III. 3: Percent of Firms (by Size) That Used Apprenticeships/Internships

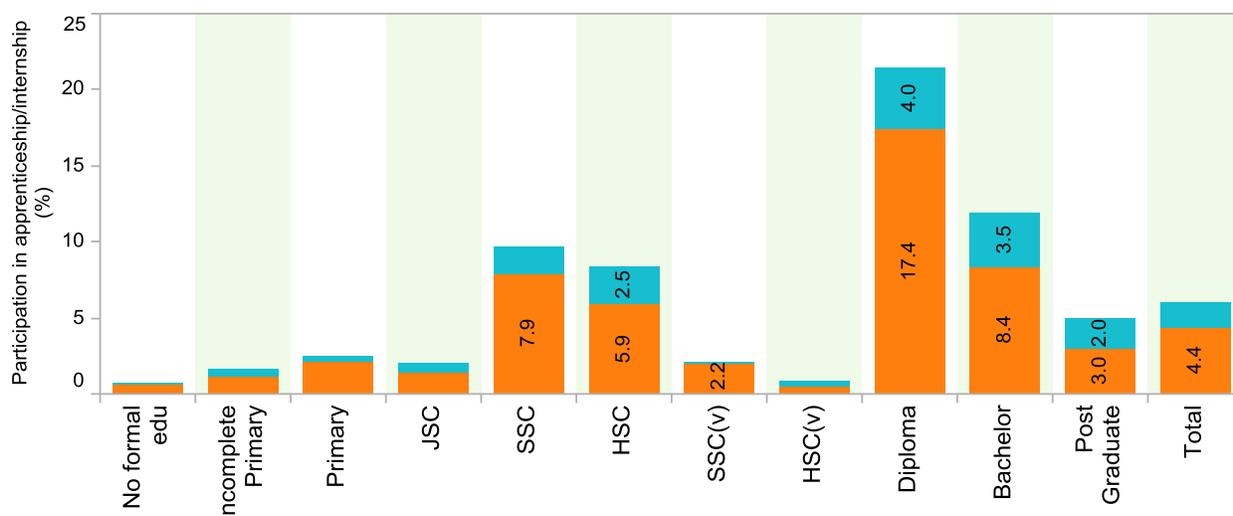
Job sector	Small (%)	Medium (%)	Large (%)	Total (%)
Commerce	2	0	11	2
Education	5	0	15	4
Finance	2	0	33	3
Manufacturing	0	0	12	2
Public administration	0	5	9	3
Total	3	1	12	3

Source: Authors' analysis using ESS 2012.

Note: The survey statistics are based on the last 12 months.

III.46. **Participation in apprenticeships/internships in the formal sector is more common among higher-educated workers.** The ESS found that diploma graduates are the most likely candidates for both formal and informal apprenticeships/internships because most apprenticeship opportunities are provided for technicians and associate-level professionals (21.4 percent total; see figure 19). The next groups who are most likely to participate are graduates with a bachelor degree (11.9 percent), SSC (9.6 percent), and HSC (8.4 percent). Given that most formal sector internship positions are for professional workers, the issue arises of inequitable training opportunities for less-educated workers.

Figure III. 19: Participation in Apprenticeships by Education Level



Source: Authors' analysis using ESS 2012.

III.47. **NSDP aims to strengthen apprenticeship programs for formal and informal sector workers.** The policy aims to establish formal apprenticeships that involve competency-based training and assessment with training delivery occurring both on-and-off the job, with support from public and private training organizations. Apprentices will receive nationally recognized qualifications under the NTVQF, and although incentives may be limited initially to occupations prioritized by industries, the government will explore the potential of making apprenticeships available at all levels of NTVQF in all industry sectors. Also, the government will explore links between apprenticeships and the new National Service System for the youth of Bangladesh. The policy requires all state-owned enterprises to take on apprentices. The policy also encourages apprenticeship in the informal economy, and provides incentives—such as equipment, skills training, and micro finances (MoE 2011). Pilot programs have already started in the leather and ship-building sectors, and a few thousand apprentices were trained up to NTVQF level 2 (ILO 2012b). However, for employers to embrace these apprenticeships, a balance must be struck between rewards for their time investment versus the risk of losing a newly trained worker. Employers with a huge need for

semi-skilled workers (in the ready-made garments industry, for example) complain about the high overturn of employees working for competitors after training. One potential solution is a collective apprenticeship, as practiced by the leather industry through the Center of Excellency for Leather (COEL).

4.6 Post-Employment Training

III.48. **Post-employment training, or enterprise-based training, is important for career development, but formal training options are relatively limited.** Enterprises, especially those in the formal sector, play a major role in training and enhancing workers' skills. ESS found that 14.5 percent of Bangladeshi firms provide off-the-job training,⁷⁴ and 18.8 percent provide on-the-job training (table 4).⁷⁵ In contrast, from the workers' perspective, about 7 percent of workers said that they participated in off-the-job training and 30 percent received on-the-job training. Overall, 34 percent of formal sector workers reported that they received some kind of formal training after employment. The share of formal enterprises providing formal training is relatively small from an international perspective. For comparison, a survey shows that the percentage of companies providing new hire training is: Brazil (97), Mexico (97), the United Kingdom (96), India (93), the United States (93), Germany (90), Morocco (68), Saudi Arabia (64), and Turkey (41) (McKinsey Center for Government 2012). The incidence of formal on-the-job training is lower in South Asia than any other region. In East Asia and Latin America, more than 70 percent of the firms larger than 250 employees provide training, while 30 percent of the firms smaller than 10 employees provide formal on-the-job training. On the other hand, in South Asia, the share of firms providing on-the-job training in these respective firm sizes are 40 and 5 percent (World Bank 2012d).

Table III. 4: Firms Providing Formal Off-the-Job/On-the-Job Training or Informal Training

Firm	Total amount of firm's formal off-the-job training (%)	Firm's formal, on-the-job training (%)
By industry		
Commerce	7.7	26.1
Education	22.0	6.4
Finance	32.3	44.0
Manufacturing	1.5	17.9
Public administration	30.7	41.2
By size		
Small (≤ 20)	13.0	11.9
Medium (21–70)	20.2	27.0
Large (≥ 71)	9.2	39.9
Total	14.5	18.8

Source: Authors' analysis using ESS 2012.

Note: The survey statistics are based on the last 12 months.

III.49. **Enterprises build on the general skills of newly recruited workers by providing job-specific skills and reward skill development with pay increases.** About 86 percent of post-employment, off-the job training (see figure 20) is focused on job-specific skills, followed by computer skills (6 percent) and general thinking skills (4 percent). This may reflect two situations. First, enterprises expect general or non-cognitive skills rather than job-

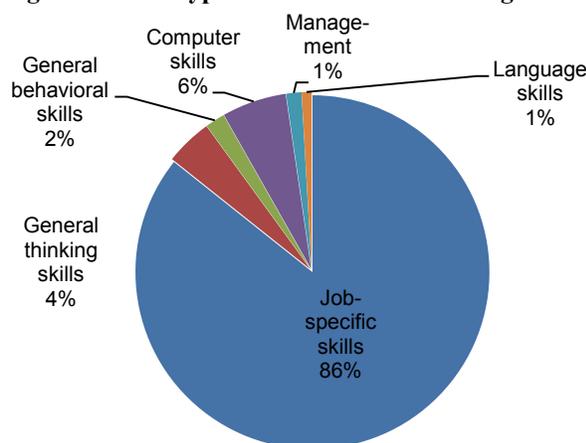
⁷⁴ Off-the-job training is a structured training organized outside the regular work place (such as a training class). On-the-job training takes place in the regular work place (for example, in a factory production line), and employees are informed that their status is "trainees" while this training takes place.

⁷⁵ Off-the-job training takes place off-site, away from the workplace—implying that the employee does not count as a directly productive worker while such training takes place. On-the-job training, on the other hand, takes place in the workplace, using the actual tools, equipment, documents, or materials that employees will use when fully trained.

specific skills from newly recruited workers, and then provide job-specific (non-transferrable) skills after employment. Second, a supply-side constraint exists, in which fresh graduates' skills are usually low and they cannot rely on their skills without upgrading them. In either case, there is room for formal education to play a stronger role in providing better pre-employment skills. Employees who make it through basic training receive salary increases of 18–28 percent once they enhance their skills with further job-specific or computer skills training (see annex 2, table A2-2). Because on-the-job training is more prevalent, most workers in formal enterprises are indirectly paying such training costs when they enter. If workers can attain such job-specific skills before entering the workforce, then wage attenuation for on-the-job training may be avoided.

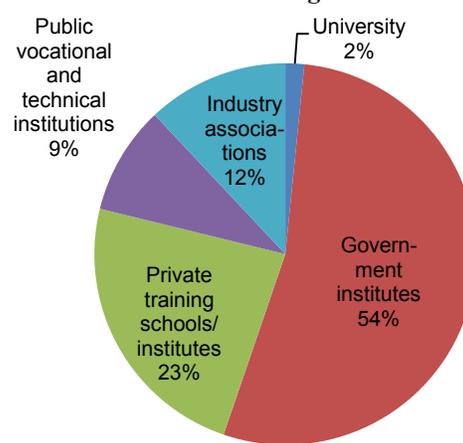
III.50. Government institutions and formal education institutions are major providers of post-employment training. Although the survey focused on the five largest formal economic sectors, the role of government institutions in providing post-employment training is significant (figure 21). Government institutions provide 54 percent of off-the-job training for their employees. Private training institutions and public vocational and technical institutions provide 23 and 9 percent of training, respectively.

Figure III. 20: Types of Off-the-Job Training



Source: Authors' analysis using ESS 2012.

Figure III. 21: Share of Training Providers



Source: Authors' analysis using ESS 2012.

5. Skills-Development Issues

There are many components involved in developing students' abilities and imbuing them with desirable work skills for future employment. Skills development is not only dependent on the education system. The economic conditions and job markets are equally important factors that affect employment opportunities of graduates and determine what levels of education and training and what types of skills one would acquire. In Bangladesh, bottlenecks exist in both the education and training side and the job market side, as well as in the transition from education to work. This Policy Note discusses the following five key issues affecting skill development in Bangladesh: (i) inadequate education outcomes as observed by low skills of workers, affecting both formal and informal sector workers; (ii) overall low incentives for up-skilling, especially for workers currently in the informal sector; (iii) weak support for effective school-to-work transition in the formal sector; (iv) inequity in skills-development opportunities; and (v) limited provision of skilling geared towards informal sector workers. Within these issues, mismatches abound—between the skill requirements of the labor market and the skills available; between the prerequisites for a quality work force and the focus areas of pre-employment education and skill building; between the skills being demanded by students and those that are being sought by the labor market; and between employers' and employees' perceptions of a high-quality, high-skilled, and effective worker.

5.1 Inadequate Education Outcomes as Observed by the Low Skills of Workers, Affecting Both Formal and Informal Sector Workers

III.51. **Even though the number of graduates from all levels of education has increased, most graduates lack the basis for effective work skills.** Available evidence shows that low skill levels of the current workforce is attributed to the low quality of education and absence of quality standards. As discussed in the Policy Note on Education Quality, many students in primary and secondary schools (which provide the bulk of the workforce today and for the next few decades, for the formal and informal economy) do not perform well on curriculum competencies and lack foundational skills that could be useful for them in their work life. This becomes particularly challenging for the skill development of workers in the informal economy, who are more likely to depend almost entirely on the acquisition of formal primary and, increasingly, secondary education for their skill development. Lack of reliable quality standards in the current provision of TVET and higher education also contributes to a mismatch between the quality of skills available and those demanded in the labor market.

III.52. **It appears that the current labor force lacks some non-cognitive skills for effectiveness at work.** In recent surveys of the formal labor market, employers were asked to evaluate employees' skills among 12 categories, weighing the importance of those skills, and listing their satisfaction with employees' skills.⁷⁶ Employers weighted non-cognitive skills (namely responsibility, communication, problem solving, and team work; see figure 22) as more important than cognitive (numeracy and literacy) and technical skills (vocational or information and communication technologies [ICT]).⁷⁷ For professional workers, three non-cognitive skills were ranked as most important: responsibility, communication, and problem solving, followed by two cognitive skills: numeracy and literacy. On the other hand, for non-professionals, seven non-cognitive skills occupied the top ranks: responsibility, problem solving, team work, customer care, communication, motivation, and creativity, followed by cognitive and hard skills. However, employers do not feel that employees are sufficiently equipped with those skills. Only 43 percent of professional employers reported that employees are sufficiently responsible, and only 17 percent of non-professional employers reported that employees are sufficiently responsible. Employers' satisfaction with employees' skills are generally higher for professionals, but there is a considerable gap for all skills between what employers deem as important versus what they feel employees sufficiently possess or embody.

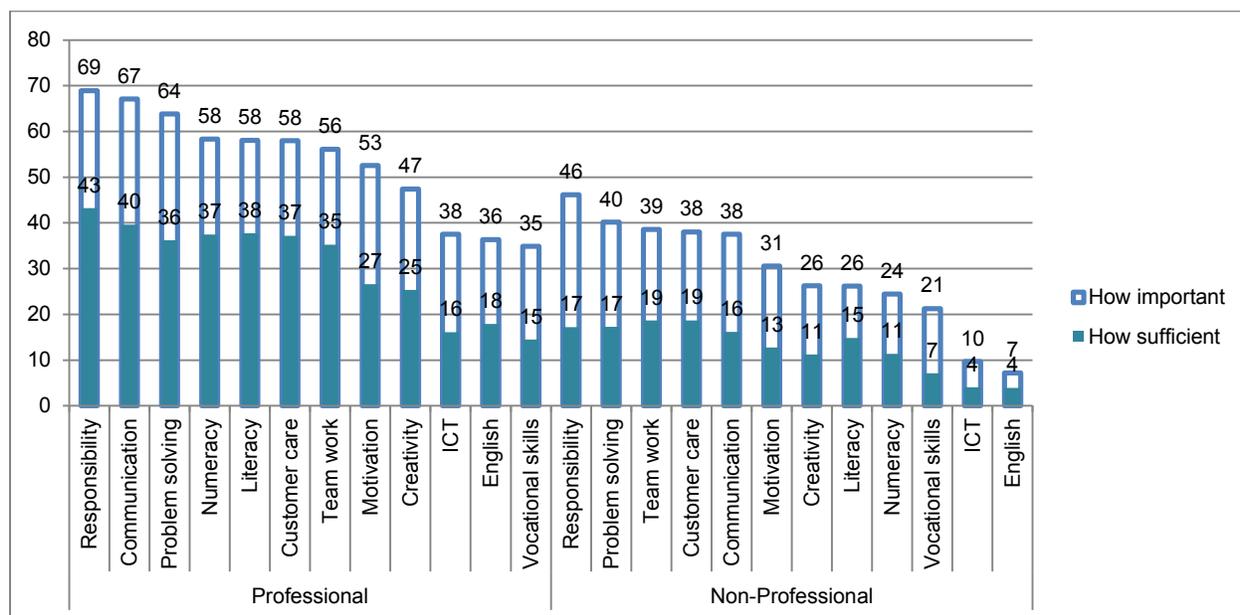
In recent surveys of the formal labor market, employers were asked to weigh the importance of employees' skills among 12 categories.

Employers weighted non-cognitive skills (namely responsibility, communication, problem solving, and team work) as more important than cognitive (numeracy and literacy) and technical skills.

⁷⁶ These categories are adopted from similar skills surveys from other countries, including England, Poland, and Macedonia (see World Bank 2012b, Martin et al. 2008, Rutkowski 2010, and Rutkowski 2011). Some categories are modified after the pilot tests, to adjust to Bangladesh's context, but it maintains comparability in terms of categories.

⁷⁷ Similar findings are also found in other countries. In Poland, the top three valued skills are: (i) responsibility and reliability, (ii) motivation and commitment, and (iii) teamwork (World Bank 2012b; Rutkowski 2011). In Macedonia, the top three are: (i) responsibility and reliability, (ii) literacy, and (iii) communication (Rutkowski 2010).

Figure III. 22: Employers' Perceptions of Skills' Importance and Employees' Skill Sufficiency



Source: Authors' calculation using Enterprise-based Skills Survey 2012.

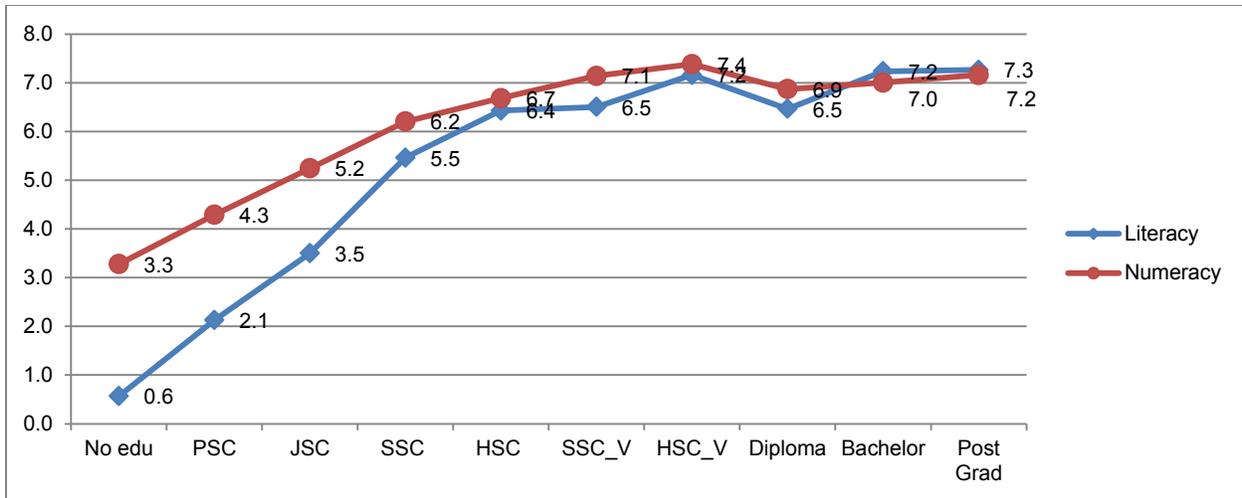
Note: All information is presented in percentages. ICT = information and communication technologies.

III.53. **It is expected that apart from basic literacy and numeracy, social and interpersonal skills play an important role in raising the value attached to informal laborers, and could play an important role in reducing their vulnerability.** While information from a similar survey is not available for workers in the informal sectors or those on informal contractual arrangements in the formal economy, the demands for their skills would be close to, if not replicate of those expressed for non-professional workers in the formal sector—responsibility, problem solving, team work, customer care, communication, motivation, and creativity, followed by cognitive and hard skills. In fact, one could make the case that perhaps these socio-emotional and core non-cognitive skills would be even more demanded in the informal sector, where employment so often depends on personal relations. It could be further extrapolated that perhaps the acquisition of such interpersonal skills could, although not lessen the vulnerability due to informality of contracts, reduce the risk of long periods of unemployment among informal workers, who are at a high risk of being laid off in case of economic pressures or a change in personal relations.

III.54. **A major portion of the Bangladeshi workforce lacks basic literacy and numeracy skills.** ESS measured literacy and numeracy skills of formal sector workers, testing them with eight basic (primary education-level) questions.⁷⁸ As figure 23 shows, the average score among groups of different educational levels increases from 0.5 among non-educated to 2.1 among primary school completers, 3.5 among junior secondary school completers, and 5.5 among secondary school completers. However, considering that this assessment measures primary education-level competencies, a score of 5.5 points out of 8 for secondary-school graduates (grade 10) is quite dismal. The numeracy score average is slightly better for groups with less than a secondary education. Even those with no education scored 3.3 out of 8 questions on average, a skill quite possibly stemming from their functional experience. Yet, given that the assessment measures only primary-level competency, an average of 6.2 points is still too low for secondary graduates.

Figure III. 23: Literacy and Numeracy Test Scores by Education Level

⁷⁸ The literacy test consisted of eight questions, including reading of words and sentences, and understanding short passages, grammar, and English translation. The numeracy test consisted of simple mathematical operations (addition, subtraction, multiplication, division, measurement, and functional mathematics, such as cost calculation). Scores were calculated by assigning one point for each item that an interviewee answered correctly (minimum = 0, maximum = 8).

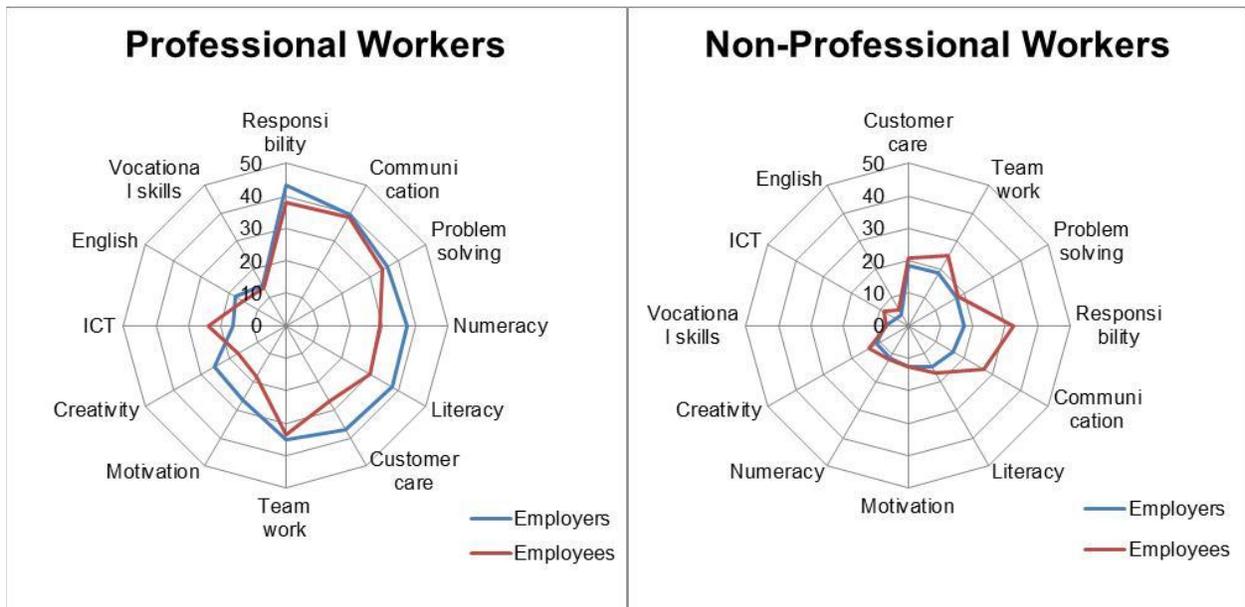


Source: Authors' analysis using ESS 2012.

III.55. **Although employers consider certain non-cognitive skills critical for effective workers, such skills are not weighted with much importance in the education system.** In contrast to employers prioritizing non-cognitive skills (especially for non-professional staff), followed by cognitive and technical skills, education policy does not consciously either focus on developing or measuring students' non-cognitive skills. While non-cognitive skills are shaped and developed informally in individuals' daily lives, the education system, particularly at the lower levels, has a potentially significant role to play in introducing and enhancing those skills, as students learn norms of behavior (problem solving, self-regulation, relationships with self and others) through effective teaching and learning techniques at schools.

III.56. **Employees' evaluations of their skills do not correlate with employers' evaluations.** Professional employees give relatively humble evaluations of themselves. Except for ICT skills, employers evaluate the skills of professional workers more highly than professional workers evaluate themselves (figure 24). Conversely, non-professional workers' self-assessment is generally higher than their employers' evaluation, creating a mismatch between employers' expectations and employees' perceptions. For example, only 17 percent of employers think non-professional workers possess a sufficient sense of responsibility, while more than 30 percent of non-professional workers think their responsibility skill is sufficient.

Figure III. 24: Comparison of Skills Evaluation (% Sufficient) by Managers and Workers



Source: ESS 2012.

Note: Skills are presented clockwise, in order of highly evaluated categories by employers.

III.57. **Prospective and current employees strive to obtain more technical skills, but both employers and employees have a low opinion of the capacity of training institutions.** TVET programs are intended to build students' practical skills, but the vast majority of formal TVET institutions in Bangladesh are equipped with obsolete machines (or machines that do not work), and classes are taught by instructors lacking adequate industry experience. An SSC (vocational) study has highlighted that only 30 percent (6 out of 20) of headmasters and 40 percent (8 out of 20) of instructors had three years of industry experience (Hossain 2012). Low mastery of vocational skills partly results from ineffective practical sessions and an absence of competency-based assessment, as the TVET programs' curriculum is generally theory-oriented and students' academic achievement is assessed largely on rote learning of facts rather than practical skills. Part of the problem is related to weak instructor capacity, because they are not adequately trained to assess trainees' skill levels. Several of these issues are being addressed through the three larger skill-development projects (box 5). However, as discussed next, recent initiatives are being undertaken to develop competency-based curriculum and assessments to improve the working population's vocational knowledge.

Box III. 5: TVET Sector Support and the Skill and Training Enhancement Project

Three externally financed projects, coordinated under the National Skills Development Council (NSDC), are supporting development of the TVET sector and implementation of a National Skills Development Policy (NSDP). The EC-ILO TVET Reform project focuses on technical assistance and capacity building to reform the TVET system. The Skill Development Project (SDP) by Asian Development Bank aims to enhance relevance of the TVET system through establishment of partnerships with industry and development of curricula, teacher guides, learning materials, and assessment tools. The Skills and Training Enhancement Project (STEP) by the World Bank focuses on strengthening training quality and employability of trainees in selected public and private training institutions, while supporting various sector reform activities.

STEP provides, on a competitive basis, institutional development funds to selected technical institutions with Diploma courses or Short Courses for carrying out quality enhancement measures. Activities include, inter alia, improving the infrastructure and modernizing equipment, capacity development in the forms of upgrading training materials and teacher training, and increasing the labor market relevance of training by involving industry trainers, organizing industry visits, and improving partnership with industries to improve students' skills and their job placements. The project also provides stipends to disadvantaged students and girls for improving their opportunities for skills development.

III.58. **In both TVET and higher education, initiatives for developing quality standards have begun, but they are not yet operational.** As previously mentioned, in an attempt to establish quality standards of skills, the TVET sector drafted NTVQF to define knowledge skills and assign responsibilities for classifying the quality of skills (see box 6). Recently, the National Skills Quality Assurance System (NSQAS) was developed and is being pilot tested. However, because of the specialized and diverse nature of TVETs, competencies corresponding to the qualification framework for many of the trades have not yet been determined, and it is difficult to involve industry in the process of operationalizing the framework (Mohiuzzaman 2013). For tertiary education, a national-level quality assurance mechanism does not yet exist, although there are discussions about establishing one. Neither are there any known internal university-wide quality assurance cells within public universities and most private universities, although some departments may have established such cells. The Strategic Plan for Higher Education 2006–2026 has proposed establishing an independent Accreditation Council, catering to both public and private universities. A concerted effort has been made to start an initiative under the leadership of the Ministry of Education (MoE) and UGC, by drafting the Private Universities Accreditation Council (PUAC) Act. Some mechanism of quality assurance is likely forthcoming.

Box III. 6: The National Technical and Vocational Qualifications Framework

The National Technical and Vocational Qualifications Framework (NTVQF) is a comprehensive, yet flexible, framework for all qualifications in the skills-development system. It describes eight qualification levels, ranging from pre-vocation level 1 to NTVQF level 6 (see table 5). Certificates are awarded based on nationally agreed-upon competency standards; the standards are developed primarily by combining competency areas into groups that correspond to meaningful job roles in the workplace, and then aligning these competencies to the framework.

Table III. 5: National Technical and Vocational Qualifications Framework

Level	Knowledge	Skill	Responsibility	Job classification
6	Comprehensive actual and theoretical knowledge within a specific study area, with an awareness of the limits of that knowledge.	Specialized and restricted range of cognitive and practical skills required to provide leadership in developing creative solutions to defined problems.	Manage team/teams in workplace activities where there is unpredictable change. Identify and design learning programs to develop team members' performance.	Supervisor, mid-level manager, or sub-assistant engineer
5	Very broad knowledge of the underlying concepts, principles, and processes in a specific study area.	Very broad range of cognitive and practical skills required to generate solutions to specific problems in one or more study areas.	Take overall responsibility for completing tasks in work or study. Apply past experiences in solving similar problems.	Highly skilled worker or supervisor
4	Broad knowledge of the underlying concepts, principles, and processes in a specific study area.	Range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying the full range of methods, tools, materials, and information.	Take responsibility, within reason, for completing tasks in work or study. Apply past experiences in solving similar problems.	Skilled worker
3	Moderately broad knowledge in a specific study area.	Basic cognitive and practical skills required to use relevant information to carry out tasks and to solve routine problems using simple rules and tools.	Work or study under supervision with some autonomy.	Semi-skilled worker
2	Basic underpinning knowledge in a specific study area.	Basic skills required to carry out simple tasks.	Work or study under indirect supervision in a structured context.	Medium-skilled worker
1	Elementary understanding of the underpinning knowledge in a specific study area.	Limited range of skills required to carry out simple tasks.	Work or study under direct supervision in a structured context.	Basic-skilled worker
Pre-vocation 2	Limited general knowledge.	Very limited range of skills and use of tools required to carry out simple tasks.	Work or study under direct supervision in a well-defined, structured context.	Pre-vocation trainee
Pre-vocation 1	Extremely limited general knowledge.	Minimal range of skills required to carry out simple tasks.	Simple work or study exercises, under direct supervision in a clear, well-defined structured context.	Pre-vocation trainee

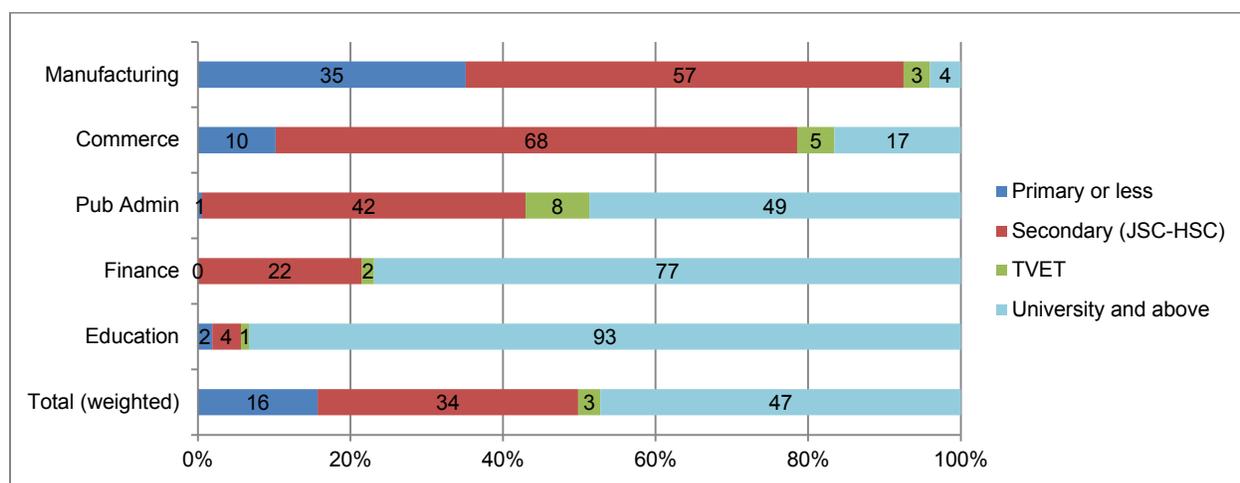
Source: Government of Bangladesh 2012.

5.2 Overall Low Incentives for Up-Skilling, Especially for Workers in the Informal Sector

III.59. **Although the formal economy values higher education, the majority of the labor demand is expected to continue to be for low-skilled work in the near future if the economic structure does not change, most likely in the informal sector.** The demand for Bangladeshi graduates with higher educational qualifications is significant

(figure 25). This, together with the finding on high rates of return to higher education (figure 15), indicates a robust demand for college and university graduates in the formal economy, especially in urban areas. And, as the country becomes more urbanized, this demand is likely to grow. It is also conceivable that a large number of mid- to upper-level positions in manufacturing, currently occupied by foreign workers (for example, the ready-made garment sector; McKinsey & Company 2011) would be replaced by Bangladeshi workers, especially as the quality of the graduates improves (box 7). However, higher education graduates are expected to constitute just about 5 percent of the entire country's labor market.⁷⁹ Moreover, the demand for university graduates comes mostly from the education sector and public administration.⁸⁰ In these sectors, the workforce size is relatively stable irrespective of economic growth. While the finance sector also expects to recruit a large portion of university graduates, with the finance sector being small, the need for university graduates is expected to remain relatively small, as a proportion of the entire labor force, in the three for-profit sectors (as opposed to non-profit sectors such as education and public administration).

Figure III. 25: Most-Recruited Graduates for the Next Three Years (%) Source: Authors' analysis using ESS 2012.



Note: TVET graduates include SSC (vocational), HSC (vocational), and Diploma graduates, but not trainees of short courses or non-formal TVET courses.

⁷⁹ This number is calculated as follows: the size of the formal sector jobs in the economy is 11 percent. Assuming a 47 percent demand for university graduates for the next three years, as expressed by employers in ESS (figure 25) in the formal economy, the proportion of higher education graduates is likely to be 5 percent.

⁸⁰ According to ESS, 63 percent of university graduates are working in education and public administration.

Box III. 7: Enhancing the Quality of Higher Education

The Higher Education Quality Enhancement Project (HEQEP, 2009–2015), supported by the International Development Association (IDA), is the first initiative of the government of Bangladesh that aims to develop the quality and relevance of higher education provided by universities. The government prepared the Higher Education Strategic Plan 2006–2026 and identified the weaknesses of higher education in Bangladesh. Identified issues include low quality of education, limited access, low levels of research, weak governance and management practices, weak planning and monitoring capacity, and inadequate funding.

To tackle these issues, HEQEP aims to improve the quality and relevance of the teaching and research environment in higher education institutions by encouraging both innovation and accountability within universities and by enhancing the technical and institutional capacity of the higher education sector. An Academic Innovation Fund (AIF) has been set up as a grant for all eligible public and private universities on a competitive basis. The AIF's goal is to improve the quality of academic activities and outcomes, to promote and implement departmental or programmatic self-assessment exercises, and to strengthen universities' links with national development efforts. It also will be used to encourage cross-disciplinary or inter-institutional academic collaboration, and to promote the use of modern communication technologies.

Source: World Bank 2009.

III.60. Market demand for TVET graduates (SSC and HSC level) and HSC graduates are low, providing little incentive for the up-skilling of graduates, most of whom are likely to work in the informal economy or in informal contractual arrangements in the formal economy. Several factors contribute to the low demand for TVET graduates. First, employers do not have much experience hiring TVET graduates—especially the graduates with degrees in formal vocational training—because there are so few TVET graduates in the labor market (they comprise less than 1 percent of the labor force). Some employers do not even know that there is such a degree as SSC (vocational) (Hossain 2012). Second, employers usually plan to train workers after employment (Hossain 2012; World Bank 2007). As figure 25 shows, public administration seems to demand the largest proportion of TVET graduates—these graduates comprise 8 percent of new recruitment. However, the demand for TVET graduates is mostly for diploma-level graduates and not SSC or HSC (vocational) graduates. Relatively limited opportunities are available for workers with an HSC-level. As seen in the form of comparatively high unemployment rates and low labor force participation rates among HSC graduates (figure 3), HSC-level graduates find relatively limited opportunities. As the country aims to increase the number of secondary school graduates, a lack of appropriate jobs for them is a concern. If the job market does not grow in this area, then workers with a mid-level education will end up taking low-skill jobs or becoming unemployed. Such a case could negatively influence secondary school students' aspirations to acquire more education.

III.61. Limited demand exists at present for technical and English skills, which could reflect a labor market that values lower-level skills and one that has limited expectations from pre-employment training. Although English education starts as early as grade 1 in Bangladesh, ESS discovered that speaking or writing English is one of the least-demanded or least-important skills in the formal sector at present. Only 36 percent of formal enterprises consider English an important skill for professional work (for non-professional work, it is only 7 percent). The importance of ICT skills is also relatively low (38 percent for professionals and 10 percent for non-professionals), although workers use ICT more often than English in their daily work. The relatively low importance of English and ICT skills is signaled through job advertisement, as only 13 and 18 percent of the jobs advertised require English and ICT skills (see box 8). These two skills have become scarce in the labor market, and as a likely result, only a small proportion of students pursuing selective occupations try to acquire such skills.

III.62. Demand for low-skill, low-wage workers in the current market and the pattern of emigrant work provide limited push to upgrade skills, affecting the informal economy worker most severely. The economy has benefited from a low-cost advantage, especially in the garment sector, while retaining labor-intensive processes

at the work place. As the low-cost manufacturing sector has expanded, and as the informality of working arrangements has prevailed, even in the formal sector, employment rates have risen. However, easy access to informal employment in the agricultural and non-agricultural sectors (as a day laborer, for example) means that there is less pressure for workers to acquire skills. Similarly, 60 percent of the 600,000 emigrant workers (in 2012) were employed in low-skill jobs such as hotel boys, cleaners, cart loaders, and carton pickers—there was almost no demand for professional-level workers. The increasing demand for low-skilled work in international labor markets has therefore not supported a culture whereby workers are inclined to acquire new skills.

Box III. 8: An Analysis of Vacancy Announcements in Bangla Newspapers

In November and December 2012, a total of 978 job openings with 5,382 posts were advertised in two of the most popular Bangladeshi newspapers, *Ittefaq* and *Prothom Alo*. The jobs advertised in the newspapers were mostly formal sector jobs. Seventy-three percent of the jobs required university degrees and 82 percent were for professional occupations (see figure 26). However, English and information technology (IT) skills were not commonly demanded—only 13 and 18 percent of the jobs required those skills, respectively. Although both skills are more commonly required for professional work, clerical support occupations had the highest requirement both for English and IT skills—18 and 27 percent, respectively.

Figure III. 26 Number of Posts Advertised by Occupation and Educational Requirements

Occupation	Educational Requirement									
	No education	Primary	Secondary	HSC	Diploma	Bachelor	Master	MBA	PhD	
Managers	3		1	6	3	64	52	37	3	
Professionals	16		15	48	8	175	131	49	12	
Technicians	13	1	13	23	3	73	45	8		
Clerical support	4		3	15	1	33	9	9		
Service workers	6	9	18			6	3			
Sales workers				4		5	2			
Construction and craft	1	1	2							
Plant and machine operators	7	4	11	1						
Elementary occupation	4	7	10	2						

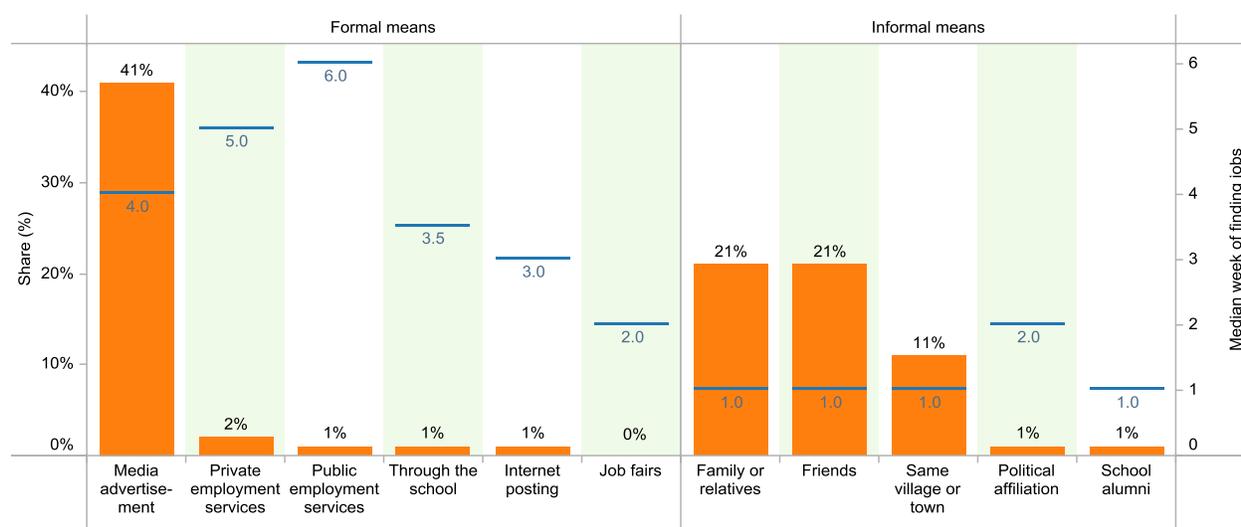
Source: Authors' analysis using ESS 2012.

5.3. Weak Support for Effective School-To-Work Transition in the Formal Economy

III.63. **Support for effective school-to-work transition is weak, even for formal sector employment.** The need for advanced school-to-work transition support is limited in an economy that is mostly informal, such as Bangladesh. Interestingly, the pattern of informality in recruitment preferences and practices permeates in the formal sector as well. Again, this is not unusual, given that the formal sector is small and relatively new and education access has only recently been universalized (almost) for primary education grades. Also, although it is increasing, education access remains low for upper levels of education. However, one of the outcomes of this phenomenon is that, despite a policy platform (for example, Vision 2021 and the NEP) that could promote educational and training institutions and labor market communication, the education system and labor markets coexist closely as two fragmented systems, with a lack of communication and utilization of knowledge of the other, on each side (World Bank 2007). As a result, there appear to be limited efforts between industry and education providers to match student skills with jobs—less than 1 percent of students find jobs through employment support provided by educational institutions, and less than 1 percent find jobs through job fairs (figure 27). The majority find jobs through informal networks. Even though academic degrees are used as important minimum criteria for selecting workers in the formal sector (table 6), only 42 percent of enterprises use media to advertise vacancies, and a third

depend on personal networks to spread the word on vacancies. This is equally problematic for emigrant workers, who, as reported earlier, are primarily working in low-skill jobs, mostly unrelated to their education.

Figure III. 27 How Workers Find Jobs and Median Weeks to Find Jobs



Source: ESS 2012.

Table III. 6: Criteria for Selecting New Hires in Each Sector (%)

Job type	Experience	Commerce	Education	Finance	Manufacturing	Public administration	Total
Professional	Academic degree	53	85	79	34	73	61
	Work experience	61	57	69	48	48	54
	Skill set	56	49	51	34	40	43
	Interview	31	40	41	17	43	31
	Personal network	23	7	13	14	9	11
	Political affiliation	2	5	8	3	10	5
Non-professional	Academic degree	26	42	54	14	43	31
	Work experience	39	32	39	38	25	35
	Skill set	26	18	22	19	20	20
	Interview	19	21	26	8	21	16
	Personal network	10	1	6	10	4	6
	Political affiliation	2	0	6	2	5	2

Source: Authors' analysis using ESS 2012.

III.64. Employment services need improvement, and TVET and higher education students do not receive much career-services support.⁸¹

Because the labor market heavily relies on informal networks to match job seekers with jobs, there is a risk that the optimal job matching may be constrained by the limited reach of informal networks. Relatively higher unemployment rates among the youth (figure 4) also implies difficulty of finding jobs for fresh graduates. To strengthen the job-matching mechanism, employment services—which match available jobs with job seekers—must be improved. These services comprise many different types of activities, including initial interviews at employment offices, in-depth counseling during unemployment, job clubs, and labor exchanges (Betcherman et al. 2004). A review of the impact of 21 employment service programs internationally revealed 16 cases with a positive impact on employment and 11 cases with a positive impact on earnings (Betcherman et al. 2004). Largely because of the absence of direct contact between educational institutions and industries, ESS found that the percentage

of formal sector workers who received some kind of career-development support from their educational institutions was only 24 percent among TVET graduates and 23 percent among higher education graduates.

The percentage of formal sector workers who received some kind of career-development support from their educational institutions was only 24 percent among TVET graduates and 23 percent among higher-education graduates.

5.4 Inequities

III.65. Inequities in skill-development opportunities increase in post-formal education. Figure 28 shows five different types of training opportunities available in post-formal education: short training, apprenticeship, formal off-the-job training within enterprises, formal on-the-job training within enterprises, and self-motivated training or learning. In all training opportunities, workers with more formal education are more likely to receive training. Formal on-the-job training seems the most equitably available opportunity to workers with less education.

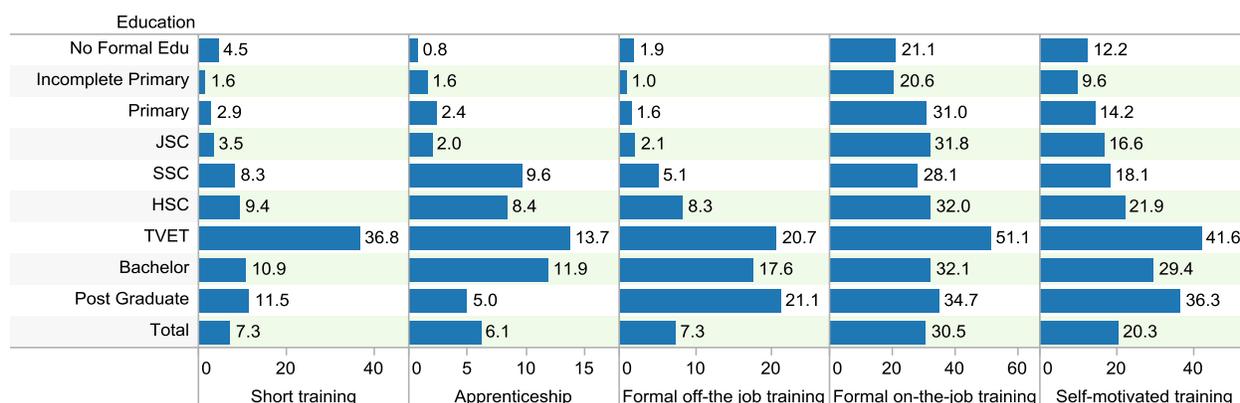
III.66. Employees with more education will be offered more post-employment training opportunities. One of the key determinants of post-employment, off-the-job training is an employee's education level. This causes increased disparity with skill-development opportunities between better-educated workers and less-educated workers. Other key determinants for training opportunities include tenure and occupations. Cognitive skills such as Bangla literacy, as assessed by a reading test in the ESS module, also positively correlated with a probability of receiving job-related training.

III.67. Employees with more education will seek and take more post-employment training opportunities. ESS finds that 20 percent of workers take initiative in pursuing training courses to build their skills. The proportion is higher among the more educated—42 percent among TVET graduates, 29 percent among bachelor-degree holders, and 36 percent among post-graduate-degree holders. On the other hand, the proportion is lower among the less educated—12 percent among the uneducated, and 10 percent among primary-school dropouts. Several reasons can explain low participation among low-educated workers. First, those with no or limited education may not have an established habit of taking career-building courses or attending classes outside of work. Second, the cost—in terms of direct training and foregone earnings⁸²—can be a potential deterrent to uneducated workers. Third, the information available to less-educated workers may be limited to access training. If workers are illiterate, they may not know about various opportunities for skills acquisition provided by various private and public entities. Fourth, the payoffs for improved training may not exist, especially for low skill, low wage workers hired with an informal arrangement. This implies that workers in the informal economy, as well as those who are likely to be on informal contracts in the formal economy, are least likely to access training opportunities.

⁸¹ These percentages are probably even smaller in reality, because the statistics do not include those who work in the informal sector or are unemployed.

⁸² Foregone earnings (or opportunity costs) are incurred while people are getting training and not working for income. Low income workers, who usually have no savings, face difficulties in stopping work and losing income for the period that they are being trained.

Figure III. 28: Use of Post-Formal Education Training Opportunities by Education Level (%)



Source: Authors' calculation using ESS 2012.

Note: TVET graduates include SSC (vocational), HSC (vocational), and Diploma graduates, but not trainees of short courses or non-formal TVET courses.

5.5 Limited Provision of Skill Development for Informal Sector Workers

III.68. While a significant proportion of the workforce is in the informal sector, education and training do not seem to be geared towards the needs of those working in this sector. As already noted in many instances, the informal economy workers are people who have either no education, or limited years of schooling as a result of dropout from the system prior to completion. Overall, current efforts through formal programs and training institutions are inadequate to meet the skills needs of the large workforce in the informal sector (World Bank 2012d). For most of these workers, remedial education in basic skills—such as literacy, cognitive, and behavior skills—would be important. In addition, self-employed workers need different sets of skills as they perform various functions similar to employers, including management skills and interpersonal skills (World Bank 2007, World Bank 2012d). As is the case for remedial education, opportunities for the development of entrepreneurship skills are limited. Skills-development opportunities for self-employed and informal sector workers are mostly through non-formal channels—that is, opportunities without BTEB certification (box 9). Among the public agencies, the Ministries of Youth and Sport organizes in their training centers a variety of training for building not only basic literacy and numeracy skills but also skills to run micro-enterprises. Their programs also offer some micro-credits for starting up self-employed work (Mohiuzzaman 2013). While the government and some NGOs and other social organizations offer sporadic training to informal sector workers, there has not been a specific strategy for training for the informal sector.⁸³

Current efforts through formal programs and training institutions are inadequate to meet the skills needs of the large workforce in the informal sector.

For most of these workers, remedial education in basic skills—such as literacy, cognitive, and non-cognitive skills—would be important.

⁸³ NSDP mentions the need for a strategy to engage in informal sector skills development, which is to be further elaborated.

Box III. 9: An Analysis of Skills Demand in Proxy Informal Sector

Although the ESS collected information from the formal sector enterprises, an analysis has been conducted to assess the skills situation of a proxy of the non-agricultural informal sector by focusing on small (less than 20 employees) manufacturing and commerce enterprises.

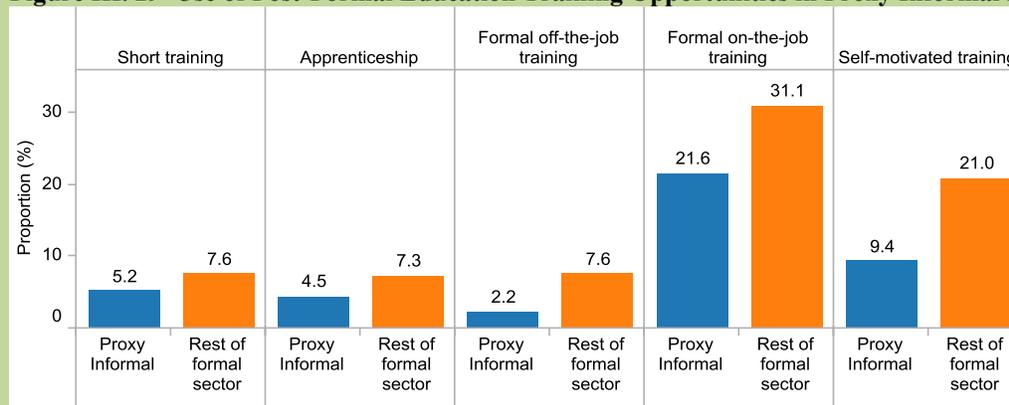
Stock of skills: Small enterprises in the proxy non-agricultural informal sector have a different skills composition from the rest of the formal sector. In these sectors, 59 percent of existing workers have up to primary education and 38 percent have up to secondary education, whereas the rest of the formal sector (finance, education, public administration, plus medium and large enterprises of manufacturing and commerce) consists of 27 percent of workers with up to a primary education and 48 percent of workers with up to a secondary education.

Skills demand: Proxy informal sector enterprises do not expect higher literacy and numeracy skills from newly recruited workers, but they expect improved behavioral skills. Teamwork (43 percent) and problem-solving skills (30 percent) are commonly identified as skills that need the most improvement (the proportion are 30 and 23 percent for the entire formal sector). On the other hand, the proportion of employers in proxy informal sector expecting literacy and numeracy skills at most are 3 and 4 percent, respectively (14 and 10 percent in the entire formal sector).

Recruitment process: The proxy informal sector enterprises rely mostly on informal networks for recruiting new employees. Eighty-eight percent of workers used informal networks to find the jobs. Family or relatives and friends are two key channels of informal networks. Work experience matters more than academic qualifications. While only 16 percent of the firms said an educational degree is important for non-professional workers, 36 percent said work experience is an important criterion.

Skills-development opportunities: Skill-training opportunities are limited for these workers when compared to the rest of the formal sector (figure 29). Before employment, workers in proxy informal sector have less exposure to short training and apprenticeship than the rest of formal sector workers. After employment, only 2.2 percent of workers had formal off-the-job training (7.6 percent for the rest of the formal sector), and 21.6 percent had formal on-the-job training (31.1 percent for the rest of the formal sector). The workers are less motivated for pursuing self-initiated training (9.4 percent as opposed to 21 percent among the rest of formal sector workers).

Figure III. 29 Use of Post-Formal Education Training Opportunities in Proxy Informal Sector



Source: Authors' analysis using ESS 2012.

6. Policy Directions

Bangladesh has achieved positive and accelerated economic growth for more than three decades by expanding the labor-intensive non-agricultural sectors, primarily in garments and manufacturing. Looking ahead, a demographic transition (in which a higher share of the working-age population and a declining dependency ratio will contribute to a faster per capita growth) continues to present growth opportunities by creating a demographic dividend. Bangladesh may not receive the full benefit of this demographic dividend, however, if the current growth pattern continues. Taking advantage of its low-cost edge over competitors, Bangladesh has the potential to become the “next China” with its potential export growth of labor-intensive manufactured products (World Bank 2012a). However, continuing the current economic growth path could lead the country into a “low-skill, low-productivity” trap, where workers’ skills are insufficient to spur innovation and the demand for skills is too low to encourage workers to acquire higher skills (World Bank 2012c). Thus, it is important for policy makers to consciously redirect the skills demand to higher skills, and build a strong foundation of skills among the populace. With this in mind, this Policy Notes proposes four directions: (i) articulate a single, long-term vision of skill development based on lifelong learning principles; (ii) improve the performance of the education system to deliver strong foundational and more market-relevant higher skills; (iii) support continuous and targeted skills building in the formal and informal employment; and (iv) improve the investment climate and jobs-creation potential.

6.1 Articulate a Single, Long-Term Vision of Skill Development Based on Lifelong Learning Principles

This Policy Note recommends that Bangladesh: (i) broaden the definition of skills development and (ii) nurture a culture of lifelong learning.

6.1.1 Broaden the definition of skills development

III.69. **In today’s global economy, the average worker changes jobs several times as opposed to spending a lifetime in one job.** This phenomenon will become more pervasive for the average Bangladeshi worker as the country undergoes further urbanization and structural reform to support the much-needed shift of the economy towards middle-income status. In this context, the definition of a “skilled worker” is one who has good foundational skills, including interpersonal skills, and market-relevant technical skills. Analysis from this Policy Note confirmed the same for Bangladesh, given the high value that the formal labor market puts on general and non-cognitive skills (the latter also being highly relevant for reduced vulnerability and high success rates in informal employment).

III.70. **Therefore, a good skills-development policy needs to recognize that skills are not built at a certain time of an individual’s life—skills development is an incremental and lifelong process, acquired through formal and non-formal education, from pre-primary through higher education, networks, jobs, and other means.** And, it relies on aspects that are beyond the control of the education system alone, such as nutrition and job creation. It is well established that a well-nourished child is more likely to complete education and gain greater cognitive abilities than one who is undernourished. Likewise, jobs pull skills and build them—without adequate job creation, skill development is not likely to be a valuable investment for the individual.

III.71. **The government of Bangladesh has a good national plan for poverty reduction—Vision 2021, the NEP, and NSDP.** While it is generally recognized that skills development cannot be done in isolation of the major economic sectors and both the public and private sector need to work closely together, skills development needs to be looked at more broadly and through a long-term vision—it is significantly more than just TVET as it involves investments in a broad range of areas. Such recognition will put in perspective the debate, the enormity of challenges, and force a discussion on priorities among various elements of skills development. It will also be

important to bring together the diverse actors, whether they are working on nutrition outcomes or pre-primary education, or TVET or higher education, to work together to contribute to the development of Bangladeshi citizens' skills. Finally, this would also require—from a national perspective—a discussion of tradeoffs between prioritizing one aspect of skill development over another.⁸⁴ For example, given the high rates of malnutrition in Bangladesh, the largely informal nature of the economy (both at present and for the near future), and the current patterns of skill acquisition, would it be a better investment to expand TVET or to build foundational skills? Given the large and growing inequalities in the labor market, impacting people through their lives and for generations, is it important to invest in improvements in nutrition and pre-primary education, which have proven to be successful in equalizing the cognitive and educational development of children from diverse socio-economic backgrounds? Likewise, there is a tradeoff to training the current workforce in socio-emotional skills and technical skills—in a recent study of Chile, it was found that the labor market impact of socio-emotional skill development was the same as that for highly technical and costly skills-development training. These are important and difficult questions, yet they are fundamental to answer before embarking on large investments for skills development in Bangladesh.

To move the skills-development agenda forward, Bangladesh will need to focus on providing solid foundational and interpersonal skills to its workforce by prioritizing good-quality primary and secondary education for everyone.

In this regard, it is important to question the current policy and practice in Bangladesh, which aims to segregate students between academic and vocational tracks at the secondary level.

6.1.2 Nurture a culture of lifelong learning

III.72. **Skills-development policies should aim to provide relevant education and training to prospective employees, along with motivation and the ability to current employees to upgrade their skills.** The traditional selective, degree-oriented formal education and training model can no longer respond to fast-changing demands for a nimble, skilled workforce by delivering new and updated skills (Wang 2012). While expanding access to vocational education can be an attractive option for policy makers seeking to improve labor market outcomes, studies have shown that there is a likely tradeoff, where gains in youth employment from vocational education may be offset by less adaptability later in life (see box 10). Once people have a strong foundation of literacy, numeracy, and non-cognitive skills, then it is much easier to acquire sector-specific skills. This approach is the main driver of economic growth and job creation: it lets people access learning opportunities as they need them (rather than because they have reached a certain age), and it is a crucial means of preparing workers to compete in the global economy (World Bank 2003, World Bank 2010a).

III.73. **At present, as documented in this Policy Note, the Bangladeshi labor force is mostly working in informal sector employment (through either the informal sector or through informal contracts in the formal sector).** Skills-development opportunities that could help this current stock of the labor market are limited, and where they do exist, they are likely to be used by the better-educated workers. Among the new entrants, although

⁸⁴ In the case of Peru, under the lifelong skills-development agenda, tradeoffs for public sector investment (in terms of fiscal resources and policy effort) have been identified. For example, the expansion of preschool provision needs to be reckoned with the efforts to improve the quality of basic education and the expansion of the coverage and quality of tertiary education. In reality, policy makers tend to intervene at all levels of the education system, with different emphases, as early skill investments have better chances of maturing with improved access to higher grades by removing binding supply and demand constraints. In making expenditure allocations, policy makers could gradually favor those investments that are most likely to remedy the bottlenecks and improve the incentives for families and firms to invest time and resources in skills formation. In practice, execution capacities and related resource constraints (such as availability and time to train new teachers) help balance out competing needs (World Bank 2011b).

many are coming with more foundational skills, the vast majority is not acquiring literacy and numeracy skills, and many are still dropping out before completing primary education. To move the skills-development agenda forward in this context, Bangladesh will need to focus on providing solid foundational and interpersonal skills to its workforce by prioritizing good-quality primary and secondary education for everyone. In this regard, it is important to question the current policy and practice in Bangladesh, which aims to segregate students between academic and vocational tracks at the secondary level. While different models exist around the world, many countries are aiming to provide a sound foundation of core competencies to all students up to the end of the secondary cycle. In this case, after completing secondary, students are able to choose among many tracks—vocational, academic tertiary, or even the labor market. At present, the Bangladeshi labor market does not value students who complete secondary or even higher-secondary vocational education, so it may be futile to segregate students at this level.

III.74. **Finally, it will also be important to create pathways to enable reskilling or skill-up gradation for the large majority of the workforce that will continue to face the dual challenges resulting from having achieved low-quality primary and secondary education and facing a labor market that is largely informal.** The current work on qualifications frameworks has some potential, but it will be important to see how in fact it is implemented, as many countries have struggled to implement these (see box 11 for an example from the Czech Republic). As a start, Bangladesh can make non-formal training and skill-building practices more accessible to the vast majority of its labor force. Incentives for skills building and continuous learning may also be brought in through targeted grants for skills development of active labor force participants, as is being implemented through STEP.

Box III. 10: Vocational versus General Education

Policy debates about the balance of vocational and general education programs focus on the school-to-work transition, and expanding access to vocational education can be an attractive option for policy makers in developing countries seeking to improve labor market outcomes. Worldwide, empirical evidence on the merits of vocational education is mixed. Vocational graduates enjoy higher returns in Egypt (El-Hamidi 2006) and Thailand (Moenjak and Worswick 2003), while general education graduates earn a higher wage in Suriname (Horowitz and Schenzler 1999), Tanzania (Kahyarara and Teal 2008), and Indonesia (Newhouse and Suryadarma 2011). No differences were found in East Germany (Lechner 2000), South Korea (KRIVET 2008), and Romania (Malamud and Pop-Eleches 2010).

On the other hand, an econometric analysis of employment and the wage impact of education streams in 18 countries (including 15 European countries, the United States, New Zealand, and Chile) using the International Adult Literacy Survey (IALS) conducted from 1994–1998 shows that there is a likely tradeoff, where gains in youth employment from vocational education may be offset by less adaptability later in life. A lifecycle employment effect occurs, in which general secondary-education graduates are initially less likely to be employed than those with a vocational education, but their employability becomes higher than vocational graduates later in their life. There are also observed wage effects, where general education graduates earn less initially, but over time they earn more than vocational graduates (Hanushek et al. 2011). In Indonesia, the wage premium for male general-education graduates against vocational graduates has increased dramatically because of the shift of economic growth drivers from the industrial sector to the service sector (Newhouse and Suryadarma 2011).

Box III. 11: The Czech Republic's Lifelong Learning Strategy

The Czech Republic adopted a Lifelong Learning Strategy in 2007 that identifies seven strategic directions:

1. *Recognizing prior learning* with the elaboration of a National Qualification Framework, qualifications standards, evaluation standards, and verification of professional qualifications;
2. *Promoting equal opportunities* in further education, particularly for disadvantaged groups, through financial and nonfinancial instruments, including information and counseling services.
3. *Developing functional literacy*, including the ability to use information technology, language skills, and other general behavioral skills.
4. *Introducing a system of labor market monitoring*, evaluation, and forecasting to harmonize educational opportunities with socioeconomic and labor market developments.
5. *Stimulating the demand for lifelong learning* through elimination of financial and nonfinancial barriers among individuals and employers, for example, through counseling support, assistance services, and the promotion of systems of human resource development in small and medium-size enterprises.
6. *Taking measures to enhance the quality of educational opportunities*, including a system of external and internal evaluations, certification of adult education teachers, and accreditation of educational programs.
7. *Developing information counseling services*.

The strategy is used as the guiding document for further reforms in adult education and training in the country.

6.2 Improve the Quality and Relevance of Education

This Policy Note recommends that for the prospective entrants to the labor market, Bangladesh should focus on: (i) prioritizing strong foundational skills with a focus on cognitive and non-cognitive skills; (ii) improving the relevance of post-secondary education; (iii) enabling a smooth transition between education and the labor market; and (iv) regularly measuring and assessing non-cognitive skill development.

6.2.1 Prioritize strong foundational skills with a focus on cognitive and non-cognitive skills

III.75. **Building a strong foundation of skills will help Bangladesh become a middle-income economy.** To enable the development of strong foundational skills, Bangladesh will need to: (i) build foundations of strong cognitive and non-cognitive skills and equalize learning opportunities by investing more in early child development (ECD); (ii) improve the quality of primary and secondary education, focusing on building strong cognitive and non-cognitive skills; and (iii) systematically measure improvement in cognitive and non-cognitive skills.

III.76. **Promoting ECD programs will build strong cognitive and non-cognitive foundations and diminish inequalities resulting from the socioeconomic status of a child.** Skills formation is a cumulative life-cycle process, which starts from early in an individual's life. There is a good deal of international literature and studies that show the importance of adequate health and nutrition for the first 1,000 days of a child in the development of basic cognitive and socio-emotional abilities and readiness to learn at school and in adult life. Literature also points to the strong potential that ECD programs have for reducing the disparities in cognitive and emotional development of children from diverse backgrounds, with the strongest impacts on children from the poorest families (Engle et al. 2007). A review of 20 ECD impact evaluation studies classified three types of ECD interventions, including: eight studies on center-based early learning, six parenting or parent-child programs, and six comprehensive programs. Interestingly, all eight evaluations that monitored center-based early learning programs recorded a substantial effect on children's cognitive development. Preschools were provided in Guinea and Cape Verde, Bangladesh, Burma, Nepal, Vietnam, and Colombia, and pre-primary schools were expanded in Argentina. Most reported gains in non-cognitive skills such as sociability, self-confidence, willingness to talk to adults, and motivation (Engle et al. 2007). Although enrollment in pre-primary education is still very limited in Bangladesh (see the Policy Note on Access and Equity), it is important to promote ECD and preschool education for building foundations for sustainable cognitive and non-cognitive skills, as well as reducing differences between performances (school attendance rates, acquisition of competencies, nutrition and cognitive development, and returns from education) of children from diverse backgrounds.

Although enrollment in pre-primary education is still very limited in Bangladesh, it is important to promote Early Child Development (ECD) programs and preschool education for building foundations for sustainable cognitive and non-cognitive skills, as well as reducing differences between performances of children from diverse backgrounds.

III.77. **A higher-quality education system is essential, especially at the lower levels, to focus on building strong cognitive and non-cognitive skills—and a child-centered, activity-based approach helps build such skills.** Bangladesh has successfully expanded access to primary education over the past decades, and the priority is gradually being shifted to the *quality* of education. The Policy Note on Education Quality discusses a number of initiatives designed to improve the quality of education in primary and secondary education. One pilot program that is worth discussing here, though, is the Each Child Learn (ECL) initiative (see box 12), which focuses on building foundational skills among primary school children. In particular, it aims to develop children's strong cognitive and non-cognitive skills by transforming classroom teaching and learning practices to make them more child-centered and focused on problem solving. This transformation will also require changes in the examination and assessment and teacher-development systems, not only in primary education, but across the education system.

Box III. 12: The Each Child Learn Initiative

Each Child Learn (ECL) is a pilot initiative introduced in 300 primary schools. The program's goal is to develop and strengthen cognitive skills (literacy and numeracy) by transforming classroom teaching and learning to a more child-centered, activity-based approach that focuses on problem solving. ECL encourages teachers to introduce activities such as group peer-learning and creative work (writing stories and diaries, and drawing pictures) that foster children's teamwork skills and creativity. Teaching and learning materials that nurture children's motivation and problem solving are also provided, including math exercise cards, charts, and books. These resources let children spend time doing exercises by themselves and in book-reading corners, where they get to choose from books that will develop their reading ability and let them follow their interests.

6.2.2 Improve the relevance of post-secondary education

III.78. **The ongoing TVET sector reform is expected to yield higher credibility for the sector and its students; this is a good start and needs to be expanded.** The TVET sector has launched a comprehensive reform of the education system by introducing competency-based assessment and operationalizing skills standards in NTVQF through NSQAS. The system is designed with three levels: (i) an internal quality-assurance system and evaluation by the training provider; (ii) a national system of external evaluation and accreditation; and (iii) an evaluation and accreditation of the national accreditation agency by international associations (BTEB 2012b). Newly designed NTVQF programs set occupational standards, which should help provide guidelines for developing non-technical or job-specific skills. The programs have a variety of generic modules that speak to the deficiencies commonly identified among new graduates (as identified by various Industry Skills Councils), including: (i) basic mathematical concepts; (ii) English in the workplace; (iii) operating in self-directed teams; (iv) applying occupational safety and health in the workplace; and (v) presenting and applying workplace information (Transport Equipment Industry Skills Council of Bangladesh 2010).

III.79. **For higher education, a quality assurance system is also urgently needed.** Recent expansion of higher education enrollment raises a concern about the quality of education, especially between colleges and universities. While an increase in higher education graduates is a positive development for the economy, graduates without relevant, qualified skills and knowledge could potentially saturate the market with unemployable, over-qualified job seekers.

6.2.3 Enable a smooth transition between education and the labor market

III.80. **Improve career services at educational institutions to support the school-to-work transition: It is also important for educational institutions to organize career guidance for students, to improve their academic performance and job placement.** Career services at schools commonly help students determine their interests, abilities, and qualifications, and how these criteria can translate into specific jobs. Such services also help students find out about what is involved in occupations, and they teach people how to search for, understand, and evaluate information about occupations (OECD 2004). Career guidance is an important support that educational institutions should provide, since educational institutions are the most likely to know the strength of their graduates and existing career options in the market. However, from the findings of this Policy Note, there are a number of examples indicating weak institutional support for students' career development in Bangladesh. The proportion of student receiving any kinds of career support from their own educational institutions is 24 percent among TVET graduates and 23 percent among higher education graduates (8 percent for all employees). More effective career support can possibly reduce the youth unemployment rate by providing better school-to-labor market transition. There are many ways to provide career-development support to students: (i) career counseling, (ii) partnering with industries, (iii)

participating in job fairs, and (iv) training students on how to hunt for jobs and apply for them. Job hunting requires specific skills. For example, applicants need to know where to look for jobs that they want, and how they can apply for such vacancies. They should be able to properly write curriculum vitae (CV) and cover letters, and present themselves well at interviews.

III.81. **Job search assistance—where services provide information on employers’ job vacancies and offer counseling and placement support to job seekers—is effective in improving employment and earnings at a low cost.** Although the existence of jobs vacancies is a precondition for this program to be successful, more effective matching can have positive productivity effects (World Bank 2012c). Job search assistance has been regarded less relevant in countries where a majority of the workers are farmers and self-employed, yet there is an emergence of successful job-matching systems available via mobile phones. Babajob in India, for example (see box 13), was launched in 2007 and it is now the largest digital marketplace for low-end jobs in India, with more than 320,000 job listings and more than 80,000 job seekers (World Bank 2012c).⁸⁵ In Bangladesh, Web-based job-matching services have also become widely available—such as BDjobs.com—although those services are still mainly for high-end jobs. It is important for public policy to promote such initiatives to serve all job seekers. Likewise, it is important for potential emigrants to be placed in jobs, and trained through pre-employment training (ideally a combination of cognitive, non-cognitive, and technical skills) so that their prospects for working in higher-skill jobs are enhanced.

Box III. 13: A Technology-Based Job-Matching Service in India

The business of job matching with the help of mobile phones emerged in the late 2000s. Babajob in India was established in 2007 and has grown to serve a large number of clients. Compared to other similar services, Babajob’s approach is the most inclusive for job seekers, because it provides a wide variety of registration options. Babajob uses branch offices to advertise their services, but they also visit where blue-collar workers live to explain their services face-to-face. If the job seekers are illiterate, they can also listen to automated voice messages by calling Babajob and following their service menu, including registration, job information, and changing their profile. Once job seekers are registered, employers can search for potential employees by looking at skill sets, pictures, work location preferences, and availability. Employers then identify the candidates, and they can set up an interview by calling them and/or sending text messages. The final hiring process still happens in a traditional hiring manner, such as face-to-face or via phone interviews. Yet employers see an advantage in Babajob, because the service can reduce the time and cost of recruiting and finding the right person.

Source: Imaizumi 2011.

6.2.4 Regularly measure and assess non-cognitive skill development

III.82. **Continuously monitor skills’ labor market relevance: An effective national database system must be developed to track and monitor the skills-development sector.** Coping with the ever-changing skills demands of the global economy requires policy makers to gather and use information for guiding skills development. A lack of comprehensive information about available jobs, growing sectors, and students or trainees’ skills is one of the constraints for having effective skills-development policies. Although TVET institutions maintain information about graduates’ job placement, these data are not used for policy planning or improving the relevance of training programs or job-matching functions. To gather such data, a National Skills Data System has been initiated recently in the TVET subsector, collecting and maintaining information on the overall supply and demand for skills, and analyzing new employment prospects and skills required by different sectors (ILO 2012a). It is important that this

⁸⁵ See Imaizumi (2011) for reviews of similar initiatives in the world, including Souktel (based in Palestine, and serving in Palestine, Morocco, Somalia, Egypt, and Uganda), LabourNet (India), Assured Labor (in Nicaragua and Mexico), Konbit (Haiti), and Puls (Pakistan).

information is regularly collected about job placement—through tracer studies, for example—to monitor the labor market relevance of the students’ skills (as well as their quality). This knowledge database should cover not only the TVET sector, but the entire skills-development sector.

III.83. **It will be important for Bangladesh to begin systematically monitoring progress in non-cognitive skills.** Since non-cognitive skills are highly desired by the formal and informal labor market, at home and abroad, and as yet, they are not well supported by the education and training systems, it will be important to introduce incentives to elevate the importance of these skills. One way of doing this is to systematically measure non-cognitive skills. Countries have increasingly started to do this through participation in the Program for International Student Assessment (PISA) (see box 14).

Box III. 14: Assessment of Problem-Solving Skills in the Program for International Student Assessment

In addition to regular reading, mathematical, and science skill assessments, the Program for International Student Assessment (PISA) 2012 has re-introduced an assessment of problem-solving skills and financial skills. Problem solving was an additional assessment domain in PISA 2003, and it was not conducted in the 2006 and 2009 rounds. The PISA 2012 defines the problem-solving competency “as an individual’s capacity to engage in cognitive processing to understand and resolve problem situations where a method of solution is not immediately obvious. It includes the willingness to engage with such situations in order to achieve one’s potential as a constructive and reflective citizen” (OECD 2013). A competency involves far more than the basic reproduction of accumulated knowledge. It involves a mobilization of cognitive and practical skills, creative abilities, and other psychosocial resources such as attitudes, motivation, and values. The PISA 2012 assessment of problem-solving competency will not test simple reproduction of domain-based knowledge; rather, it will focus on the cognitive skills required to solve unfamiliar problems that are encountered in life and that lie outside traditional curricular domains. Prior knowledge is important in solving problems. However, problem-solving competency involves the ability to acquire and use new knowledge, or to use old knowledge in a new way to solve novel problems (that is, problems that are not routine). The results of the survey are expected to be released in 2013.

Source: OECD 2013.

6.3 Support Continuous and Targeted Skills Building in Formal and Informal Employment

III.84. **Rebuild the foundational skills of the current labor force in both the formal and informal sector: Beyond *diversifying* future workforce entrants’ skills, TVET can and should play a critical role in *reskilling* current workers.** Internationally, the importance of reskilling workers has been highlighted, especially since the global financial crisis in 2008 caused high unemployment rates. Boosting and refurbishing current workers’ foundational skills (including their non-cognitive skills) will help them remain viable or upwardly mobile. As an example from Singapore shows (see box 15), constantly upgrading current workers’ skills is imperative to remain competitive in the global market. Much work has already been done in the TVET sector to establish a system of rebuilding skills for the existing workforce. Introducing competency-based training and assessment (CBT&A) will help assess the existing labor force’s skills by certifying their competency levels under the Recognition of Prior Learning (RPL) program (BTEB 2012a). RPL could then offer credit for competencies gained through previous learning, training, or work and life experiences as part of skill assessment. Once workers’ skill levels are certified, they have access to take further skills-building formal training opportunities.

Box III. 15: Adjusting Skills-Development Policies in Singapore

As a small country with virtually no natural resources, Singapore has identified human resources as its most important strategic capital. In the early days of its economic development, the efforts at human resource development came under the rubric of manpower development, general education, and technical education and training. However, as it moved to investment- and innovation-driven economic growth, the government has embarked on a more sophisticated human resource development strategy, and the strategy has been continuously revised and adjusted in conjunction with other national strategic economic policies to meet industry demands (Osman-Gani 2004).

The Workforce Development Agency (WDA) was established in 2003 under the Ministry of Manpower as a statutory board. To make employees resilient, multi-skilled, and agile, the WDA established an Employability Skills System. The three levels of skill sets under the system include: (i) generic employability skills; (ii) industry knowledge and skills; and (iii) occupational skills. Generic employability skills are foundation skills that help workers become effective at work—they are transferrable in different industries, thereby increasing the workers' mobility. Industry knowledge and skills are generic skills and knowledge relevant to an industry cluster, and any occupational skills refer to specific skills within the industry cluster.

The Employability Skills System is recognized by Singapore's industries and employers, and it provides guidance for workers, potential workers, graduates, industries, and employers (WDA 2006). In 2008, after the global financial crisis, the WDA launched the Skills Program for Upgrading Resilience (SPUR). The program supports skill enhancements for those already employed, and provides career development courses that help workers find jobs. In 2010, the program added long-term sustainable economic development to its focus, supporting enterprises to build a culture of innovation and continuous improvement by providing access to seminars, programs, and master's classes on upper-level skills and technology (WDA 2011).

III.85. The inequity between educationally advantaged and disadvantaged people can be best addressed though the policy of focusing on targeted skills building, concentrating on foundational skills. Reskilling opportunities could help rebalance the inequity of post-formal education training opportunities. Training opportunities are biased against low-educated workers in the formal and informal sectors. Therefore, a government policy is required to promote post-employment training for the workers who have lower skills (that is, the less educated) in the formal and informal sector. Government may not be the best providers of training for informal workers, but they have an important role to play as facilitators (World Bank 2012d). Instead of delivering training themselves, the government could focus on creating an environment to support non-public providers by performing the roles of: establishing a policy framework (regulations and incentives), supporting curriculum development, training of trainers, stimulating investment in training through tax incentives or financial support, and fostering apprenticeship through the revision of acts and provision of grants to prospective trainees (World Bank 2012d).

III.86. Encourage post-employment training in the formal employment sector. From an international perspective, the incidence of enterprise training is relatively limited in Bangladesh—14.5 percent of firms offer formal off-the-job training and 18.8 percent provide on-the-job training. Post-employment training represents a major part of the total education and training received by workers during their life as they spend more time in the work place than in educational institutions. While it is important that educational and training institutions improve the quality of education and training, the government policy should also acknowledge the effectiveness of enterprise-based training for building relevant skills for particular industries. NSDP acknowledges its importance and proposes an engagement through public-private partnership.

III.87. Expand entrepreneurship programs for self-employed and informal sector workers. Self-employed workers have different skill needs. A review of 37 entrepreneurship programs around the world shows that 41

percent of the programs include training, 67 percent include financing, and 21 percent include counseling schemes (Cho and Honorati 2012). Training consists of: (i) vocational training; (ii) life skills training, such as problem solving and critical thinking; (iii) business training, such as general knowledge of business management, including customer relations, inventory, financial management, and marketing; and (iv) financial training, which constitutes accounting and investment decision making. The study concludes that impact is maximized when vocational training programs are combined with counseling or financing, although business training tends to work better as a stand-alone. An impact evaluation study of business training for rural women in India shows that business training has a positive impact on starting up businesses by taking loans from banks, increased income, and increased discussion about business plans with family members (Field et al. 2010). A successful example of the government facilitating provision of training to small- and medium-sized enterprises is found in Mexico (see box 16).

Box III. 16: A Proactive Approach to Small- and Medium-Sized Enterprise Support in Mexico

The Integral Quality and Modernization Program (CIMO), established in 1988, has been effective in reaching small- and medium-sized enterprises and assisting them to upgrade worker skills, improve quality, and raise productivity. The program, administered by the Ministry of Labor, was decentralized to the state level in 2002 under the name Training Support Program (Programa de Apoyo a la Capacitación [PAC]) and in 2009 under the name Productivity Support Program (Programa de Apoyo para la Productividad [PAP]). Set up as a pilot project to provide subsidized training, CIMO/PAP evolved when it became apparent that lack of training was only one factor contributing to low productivity.

All states and the Federal District of Mexico have at least one CIMO/PAP unit, each staffed by 3 or 4 promoters. Most units are housed in business associations that contribute office and support infrastructure. The promoters organize workshops on training and technical assistance services, identify potential local and regional training suppliers and consulting agents, and actively seek out enterprises to deliver assistance on a cost-sharing basis. They work with enterprises to conduct an initial evaluation of the firm, as the basis for training programs and other consulting assistance. CIMO/PAP is expanding in two directions—assisting enterprises with specific sectoral needs, and providing an integrated package of services, including information on technology, new production processes, quality control techniques, and marketing as well as subsidized training. With an estimated budget of about \$75 million, CIMO/ PAC trained about 1.6 million workers between 2001 and 2006, and benefited more than 226,000 firms.

Source: Excerpts from World Bank 2007 and World Bank 2012d.

6.4 Improve the Investment Climate and Jobs-Creation Potential

III.88. Jobs needing and pulling skills: Jobs and skills are closely interrelated, and the direction of influence is mutual. One way to describe the relationship between jobs and skills is: “*Jobs need skills, pull skills, and build skills*” (World Bank 2012c). Building skills does not happen without developing jobs and vice versa. Therefore, establishing a constructive relationship between jobs and skills is important for Bangladesh to foster skills-led economic growth and poverty reduction. This Policy Note recommends that Bangladesh approaches this structural issue by focusing on job market development, creating a pull for more (or higher) job skills, and intervening in the education sector to develop a skilled labor force.

III.89. Conscious interventions are required in the labor market and economy in addition to improvements in the education sector. Although the formal economy values higher education, the majority of the labor demand is expected to continue to be for low-skill work in the near future, most likely in the informal sector. Continuously growing demand for low-skill, low-wage workers and the pattern of emigrant work provide limited push to upgrade skills, affecting the informal economy worker most severely. In this context, improving the education sector will not be fully translated to a productive and high-skilled work force. Skills development requires interventions in the labor market to generate more and better jobs.

III.90. **Improving the investment climate to attract high-skill jobs: The public sector must create a better investment climate for attracting high-end jobs.** In South Asia, several issues related to business are commonly identified as key constraints for creating more and better jobs, including electricity, corruption, political instability, and labor regulations (World Bank 2012d). Despite increasing foreign investment in Bangladesh, the country is still not the most investor-friendly country in the region. The *Doing Business Report 2013* ranked Bangladesh as 129 out of 185 countries for its ease of doing business. Bangladesh's lowest scores were in registering properly (with a ranking of 175), enforcing contracts (182), and getting electricity (185) (World Bank 2013b). For the rural non-farm sector, transport and road access are major issues, and for informal firms, access to financing is also a constraint (World Bank 2012d). Although the investment climate is not an area where the Policy Note on Skills Development would intervene, it is clear that such bottlenecks should be eliminated, so that more high-quality job opportunities are pulled into the country, thereby stimulating the demand for higher skills.

III.91. **Bangladesh can attract more high-skilled jobs by promoting Export Processing Zones (EPZs) as better investment opportunities.**

A review of international studies (Javorcik 2012) show that jobs created by Foreign Direct Investments (FDI) are generally good jobs, both from the workers' and the country's perspective. From the workers' perspective, this translates into higher-paying jobs (see, for example, Indonesia, Sjöholm and Lipsey 2006; Arnold and Javorcik 2009) and giving more training opportunities (for example, Malaysia, World Bank 1997). From the country's perspective, FDI inflows tend to increase the aggregate productivity of the host country and create knowledge spillovers by introducing new technologies (for example, in Latvia and Czech, Javorcik and Spatareanu 2005). In Bangladesh, the attraction of FDI has been seen especially in the garment sector. The Bangladesh Export Processing Zone Authority (BEPZA) was established in 1980, and the first EPZ was set up in Chittagong. Despite the EPZ's original aim to attract high-technology companies, the EPZ was not successful in attracting such companies, and the growth of EPZs accelerated with the attraction of the garment sector during the 1990s. Today, approximately 290 companies operate in eight EPZs under BEPZA. Sixty-one percent of companies in the EPZs are fully foreign-owned, and 65 percent are in the garment sector, with a number of other labor-intensive manufacturing sectors making up the rest (including footwear and leather, metal products, plastic, and food and beverages) (Shakir and Farole 2011). In the last decade, nearly 15,000 new jobs have been created annually in the EPZs. However, EPZs have been criticized for generating mostly low-skilled work, poor working conditions, and improper respect of workers' rights. Maintaining a competitive labor cost position while also delivering high-quality production is a persistent challenge. So far, EPZs have been less successful in diversifying the economy or creating high-skilled jobs; instead, they have further entrenched Bangladesh's reliance on the garment sector (Shakir and Farole 2011). Future economic policy should aim to diversify the sectors in the EPZs by providing different options and more drastic incentives for attracting high-skilled jobs. Similar initiatives have already begun to attract some high-end industries. For example, the Bangladesh Hi-Tech Park Authority (BHTPA) was established in 2010 to attract Hi-Tech Parks, and the development of such a park has started in Kaliakoir, a suburb of the capitol city, Dhaka (Hi-Tech Park Bangladesh).

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Future economic policy should aim to diversify the sectors in the EPZs by providing different options and more drastic incentives for attracting high-skilled jobs.

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Annex III Enterprise-Based Skills Survey

Table AIII-1 Number of Establishments and Employees by Economic Sector

Sector	Establishments		Employees	
	N	%	N	%
Manufacturing	35,993	36	3,405,629	65
Commerce (wholesale, retail)	4,008	4	95,616	2
Financial and insurance	8,008	8	219,609	4
Public administration	8,073	8	423,571	8
Education	30,984	31	638,003	12
Subtotal for sampled sector	87,066	87	4,782,428	91
Agriculture, forestry, and fishery	76	0	3,287	0
Mining and quarrying	132	0	8,560	0
Electricity and gas	474	0	38,436	1
Water and sewage	81	0	4,850	0
Construction	271	0	13,815	0
Transportation	1,164	1	56,476	1
Hotel and restaurants	3,502	3	69,158	1
Information and communication	864	1	30,464	1
Real estate	149	0	5,250	0
Professional	591	1	24,590	0
Administrative	698	1	24,739	0
Health	2,930	3	140,357	3
Entertainment	399	0	15,170	0
Other service	1,793	2	61,872	1
International organization	1	0	12	0
Subtotal for non-sampled sector	13,125	13	497,036	9
Total	100,191	100	5,279,464	100

Source: Authors' calculations using Business Registry 2009.

Note: The original database has 16,361 establishments with missing industry information, but with detailed activity information. Classifications for those industries were imputed by the authors. There is missing sector information for three establishments.

Table AIII-2 Number of Establishments Surveyed by Size and Sector

Sector	Small	Medium	Large	Total
Commerce	42	24	9	75
Education	40	22	13	75
Finance	41	22	12	75
Manufacturing	85	54	60	199
Public administration	34	20	22	76
Total	242	142	116	500

Source: ESS 2012

Table AIII-3 Number of Employees Interviewed by Sector and Firm Size

	Small less than 20	Medium 21–70	Large 71+	Total
Commerce	252	336	246	834
Education	249	306	420	975
Finance	255	312	360	927
Manufacturing	528	846	1770	3144
Public administration	204	282	615	1101
Total	1488	2082	3411	6981

Source: ESS 2012

Table AIII-4 List of Occupations

Managers	
Chief executives, senior officials, and legislators	Traditional chiefs and heads of villages
Managing directors, administrative, and commerce managers	Sales managers, production managers in agriculture, mining, and construction
Business services and administration managers such as Finance managers, Human resource managers, advertising and public relations managers	Specialized services managers, such as managers in health services, hotels, retail or wholesale, and sports center managers
Professionals	
Science professionals such as physicists, astronomers, chemists, geologists, biologists, farming or fisheries advisers, environmental protection professionals	Administration professionals, sales and marketing, and public relations professionals
Social and religious professionals such as economists, sociologists, authors, social workers, religious professionals, translators	Information and communications technology professionals, such as software developers, programmers, and Web developers
Teaching professionals—all teachers	Legal professionals, such as lawyers and judges
Architects, planners, surveyors, and designers	Librarians, archivists, and curators
Health professionals such as doctors, nurses, midwives, veterinarians, dentists, physiotherapists, and dietitians	Business and administration professionals, accountants, and financial advisors
Engineering professionals, in industrial, mining, construction, and so on	Creative and performing artists, such as dancers, actors, radio announcers, and musicians
Mathematicians, actuaries, and statisticians	
Technicians and associate professionals	
Science and engineering associate professionals, such as engineering technicians, electrical engineering technicians, mining and metallurgical technicians, power plant operators, incinerator operator, mining supervisors, construction supervisors, and draughts persons	Health associate professionals such as medical and dental technicians, laboratory technicians, nursing associate professionals, veterinary technicians and assistants, community health workers, and ambulance workers
Agricultural and forestry technicians	Administrative and specialized secretaries such as office supervisors, legal secretaries, and medical secretaries
Business and administration associate professionals, such as finance dealers and brokers, credit and loans officers, insurance representatives, sales and purchasing agents, real estate agents, and property managers	Legal, social, cultural, and related associate professionals, religious associate professionals, athletes, sports coaches, photographers, decorators, library and museum technicians, and chefs
Ship and aircraft controllers and technicians, such as ships' engineers, deck officers, ship pilots, air traffic controllers, and aircraft pilots	Information and communications technicians, such as user-support technicians, Web technicians, and broadcasting technicians
Clerical support workers	

Office clerks, general secretaries, customer service clerks, bank tellers and clerks, and debt collectors	Data entry clerks and data entry operators
Client information workers, such as travel consultants and clerks, telephone operators, and receptionists	Accounting and bookkeeping clerks, payroll clerks, stock clerks, mail carriers, and filing clerks
Travel consultants and clerks	
Service workers	
Domestic housekeepers, cleaning and housekeeping supervisors in offices, hotels, and other establishments	Fortune tellers, undertakers, pet groomers, animal care workers, and driving instructors
Call center operators	Travel attendants, conductors, and guides
Personal care health workers, health care assistants, child care workers, and teachers' aides	Firefighters, police officers, prison guards, and security guards
Hairdressers, beauticians, and related workers	Cooks, waiters, and bartenders
Building and housekeeping supervisors, building caretakers	
Sales workers	
Street and market salespersons, shopkeepers, shop supervisors, sales assistants, and sales demonstrators	Door to door salespersons, and contact center salespersons
Cashiers and ticket clerks	Service station attendants
Fashion and other models	Food service counter attendants
Skilled agricultural, forestry, and fishery workers	
Market gardeners and crop growers	Market-oriented skilled forestry, and fishery and hunting workers
Animal and poultry producers, dairy producers	Subsistence farmers, fishers, hunters, and gatherers
Construction, craft, and related trades workers	
Building and related trades workers, such as carpenters, bricklayers, masons, plumbers, roofers, plasterers, and painters	Food processing, wood working, garment and other craft and related trades workers. Bakers, butchers, and pastry cooks
Metal, machinery and related trades workers	Printing trades workers
Sheet and structural metal workers, molders, and welders	Tobacco preparers and tobacco products makers
Blacksmiths, toolmakers, and related trades workers	Electrical and electronics trades
Handicraft workers such instrument makers, potters, jewellery workers, workers in wood, basketry, textiles and leather, sign writers, and decorative painters	Garment workers, tailors, dressmakers, shoemakers, and upholstery workers
Wood treaters, cabinet makers, and related trades workers	Underwater divers, blasters, fumigators, and other pest controllers
Machinery mechanics and repairers	
Plant and machine operators, and assemblers/drivers	
Mining, mineral, and stone processing plant operators, and miners	Chemical and photographic products plant and machine operators
Well drillers and borers and related workers	Other stationary plant and machine operators
Cement, stone, and other mineral products machine operators	Mobile plant operators such as earthmoving operators, crane operators
Metal processing and finishing plant operators	Locomotive engine drivers and related workers
Wood processing and papermaking plant operators	Car, van and motorcycle drivers, and bus and lorry drivers
Rubber, plastic, and paper products machine operators	Assemblers
Textile, fur, and leather products machine operators	Ships' deck crews and related workers
Food and related products machine operators	
Elementary occupations	
Domestic, hotel, and office cleaners and helpers	Street vendors (excluding food)
Vehicle, window, laundry, and other hand cleaning workers	Refuse workers and other elementary workers
Agricultural, forestry, and fishery laborers	Messengers, package deliverers, and luggage porters

Laborers in mining, construction, manufacturing, and transport	Odd-job persons
Transport and storage laborers	Meter readers and vending-machine collectors
Food preparation assistants	Water and firewood collectors
Street and related sales and service workers	