



Education in Bangladesh during School Closures due to the Coronavirus (COVID-19) Pandemic

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EDUCATION IN BANGLADESH DURING SCHOOL CLOSURES DUE TO THE CORONAVIRUS (COVID-19) PANDEMIC

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DISCLAIMER

This study was conducted by BRAC Institute of Educational Development (BRAC IED), BRAC University at the request of the BRAC Education Programme.

Any opinions, findings, conclusion or recommendations expressed in this publication are those of the authors and do not necessarily reflect the view of the BRAC Education Programme or BRAC.

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EXECUTIVE SUMMARY

Before the coronavirus (COVID-19) pandemic, Bangladesh experienced tremendous success in its education sector with the lowest budgetary allocation compared to its South Asian neighbours. The success includes increased institutional facilities and enrolment at all levels of education. An increase in girls' and rural children's enrolment as well as gender parity are success points. Information and Communication Technology (ICT) facilities such as establishing computer labs in secondary schools also progressed. The quality of education did not improve at the same pace as access to education. The learning levels of students were generally low and unequal. A third of the country's teachers are untrained.

All educational institutions were closed for 18 months (from 17 March 2020 to 11 September 2021) due to the pandemic. Students in Bangladesh experienced one of the longest continuous school closures in the world. During the school closure, students were asked to study at home and to follow the instructions of their teachers and education ministries. Teachers were asked to be present in school if there were no lockdowns and to follow up and coordinate students' home education.

In this situation, the BRAC Institute of Educational Development (BRAC IED), BRAC University undertook a study to explore the impact of school closure on students' lives. The issues covered in this study are enrolment and dropout rates, students' access to ICTs (Information and Communication Technologies), strategies to continue education, learning losses during the pandemic, and classroom attendance after the reopening of schools. A total of 11,999 households were surveyed, 4,689 students of grades 5–10 were interviewed and brought under a literacy test, and 398 headteachers were interviewed. They were randomly selected from 200 neighbourhoods (village/mahallah) located in 100 upazilas/thanas throughout Bangladesh. The rural-urban ratio in the sample was 61:39. Data were collected through face-to-face interviews with the respondents from 12–26 June and from 24 August to 12 October 2021.

FINDINGS

Enrolment, dropout and attendance

1. School records show a considerable decrease in the number of pre-primary students from 2020 to 2021, an increase in the number of primary students, and no change at the secondary level. Overall, no difference was recorded in all three levels together. The net enrolment rate decreased from 62.7% in 2020 to 49.6% in 2021 at the pre-primary level and from 96.2% in 2020 to 93.6% in 2021 at the primary level. The rate was the same in both years at the secondary level.

2. At the pre-primary level, girls were ahead of boys in enrolment before the pandemic, a trend which disappeared during the pandemic. Although girls continued to surpass boys in the primary net enrolment rate during the pandemic, the gender gap increased due to a decrease in boys' enrolment rate. No area-wise difference was observed in the pre-pandemic period at any education level. Enrolment dropped during the pandemic at both levels because of a substantial decrease in enrolment in urban areas.

3. A high proportion of parents avoided admitting their children in early 2021 because enrolment took place while classrooms were closed. Some said that students lost interest in education or feared not being able to make up the learning gap. Girl-child marriage, participation in child labour, and a decrease in household income also hindered the school enrolment of a portion of students. There was an increasing trend in admission to *qawmi*, *hafizia* or *nurani madrasas* during the pandemic because these institutions remained open while others were closed.

4. After schools reopened, 78.6% of primary level and 80.6% of secondary level students attended classroom activities, totalling 79.7%. The attendance rate was higher for girls than boys (81.8% vs. 77.1%) and for rural students than their urban counterparts (80.9% vs. 77.5%). An increasing trend in the attendance rate was observed at the primary level, but no trend was observed at the secondary level.

5. Of the registered students of 2020, 7,163,002 did not attend in the classrooms after reopening. A third of students may naturally drop out, but the remaining two-thirds were at risk of dropout due to school closure. The number of students at risk of dropping out was 3,326,880 at primary and 1,521,473 at secondary levels.

Access to information and communication technologies (icts)

1. In 2020, more than 90% of the households had feature phones, 59.1% had smartphones, 57.1% had television sets, and a few had desktop or laptop computers or radio sets. The proportion of households with a smartphone increased to 66.2% in 2021. The Internet (mostly mobile data) was available to 53.4% in 2020, which increased to 63% in 2021. Urban households were further ahead in having smartphones, television sets, or the Internet compared to their rural counterparts.

2. In most cases, the ICT devices belonged to the parents or senior members of households. However, 14% of students in 2020 and 16.4% in 2021 had their own devices. A very high gender and area-wise difference persisted, where girls and rural students lagged behind boys and urban students.

3. Overall, 46.8% of students had the opportunity to use ICT devices for academic purposes, which increased to 51.2% in 2021. In both years, the proportion of students using ICT devices increased with the increase in their grades. The rates were significantly higher for boys than girls and for urban students than rural students.

Academic activities at home

1. Most students engaged in self-studies at various levels; however, household members also tutored 44% of students, and 69.6% had private tutors. Over 54% of students were tutored privately outside the home, with 35% by school teachers contradicting the school closure policy.

2. More than 76% of students never watched academic programmes on television, while another 13.4% rarely watched them. Less than 10% of students usually or always submitted assignments online. Students complained that teachers were reluctant to provide feedback on submitted assignments. A small section of students participated in online classes (10.5%) or browsed academic content on the Internet (19.8%).

3. Rural students lagged behind urban students in each of the above activities. Girls were less likely to get household members' tutoring, private tutoring, online classes, and the scope to browse the Internet. No gender differences were observed in watching academic programmes on television or submitting assignments.

4. In 2020, students read 60% of prose and 53.2% of poetry items in their Bangla textbooks and 64.4% of the chapters in mathematics textbooks. These figures were far less than the year before the pandemic. Overall, 23.2% of students read 80% or more of the items/contents. Girls were ahead of boys and urban students read more than rural students.

Understanding learning losses

1. The heads of educational institutions expressed their concern about various degrees of learning loss among students. According to the heads, only 3.7% of students may not face any loss, but 35.4% may lose more than 75% of their achievements, 22.4% may lose 50–74%, and 20.2% may lose 25–<50%.

2. The literacy rate of students was 45.8% in 2002, which increased to 53.3% in 2016. Although the projected rate was 56.3% in 2021, the actual figure was 48%. Therefore, the learning loss due to school closure was $(56.3 - 48.0 =) 8.3$ percentage points. The loss was 9.7 percentage points in writing, 5.7 percentage points in the application, 2.8 percentage points in numeracy, and 1.6 percentage points in reading.

3. The learning loss was 7.3 percentage points in grade 5, 8.3 percentage points in grade 6, and around 10 percentage points in grades 7–10. It was higher for boys (9.7 percentage points) than girls (6.2 percentage points). The loss was more among rural students than their urban counterparts (10.6 percentage points vs. 8.3 percentage points).

4. A gradual decrease in learning loss was observed with the increase in parental education. Students who had mothers with 10 or more years of schooling did not have any learning loss; instead, their literacy rate was two percentage points higher than the projected rate.

5. Students' background characteristics contributed more than academic activities at home during school closure in predicting literacy skills. Of the activities, self-studies at home proved to be the most important factor in achieving literacy skills, followed by reading textbook content. Private tutoring and participation in online classes also had a significant contribution in predicting students' literacy skills. The other initiatives had no role in predicting literacy skills.

6. About 70% of the headteachers anticipated a loss in their teachers' skills. They estimated that half of teachers may face a loss in teaching skills. The loss may be higher among secondary school teachers than primary and in rural areas than urban areas.

The 2021 primary net enrolment rate was equivalent to that in 2009, indicating a loss of 12 years. Again, a loss of 13 years accounted for the students' literacy levels. The country reopened the classroom doors on 12 September 2021, which again closed down on 21 January 2022 for one month due to the third wave of the coronavirus. The schools reopened for the second time on 22 February 2022.



RECOMMENDATIONS

Reopening schools and doing business as usual may not be enough in the new normal to recover the losses experienced during the coronavirus pandemic. Some short and medium-term affirmative actions may help recover the losses. The losses in terms of years estimated in this study may seem too difficult to recover and progress further, but the years required to achieve the pre-pandemic state may be much lower if the right strategies are identified and implemented. Following are some recommendations in this regard.

1. There should be different strategies for students already in school from the pre-pandemic period and those newly admitted after schools reopened. The two groups of students faced different experiences with education during the pandemic. The shock was more impactful to the former group of students.
2. A mass campaign should be organised to bring all children to school. A school catchment area-wise list of out-of-school children needs to be prepared – one for those still absent from schools and the other for those who became eligible to admit to school but did not do so. A committee may be formed by the headteachers collectively with teachers, parents and the local civil society organisations to prepare the list and conduct the campaign. Local volunteers can be utilised in this. In addition, the local public representatives can play a vital role through public meetings and Uthan Baithak (courtyard meetings). Upazila and district-level education offices can keep track of each school's progress. Non-Governmental Organisations (NGOs) such as BRAC may also be involved as previous experiences show their effectiveness at bringing unschooled children to schools.
3. A baseline assessment of all students should be in place to know their current competence level, categorise them, and implement the remedial measures and strategies. This should be done individually for each school and for all students by engaging all teachers to use a simple tool on basic mathematics and languages (basically Bangla but English as well for higher grades). Grade-wise standard competencies or learning objectives set in the curriculum should be the basis of this assessment. Parents should be engaged in the recovery process to share a portion of the tasks. Peer support

should be explored and utilised. Context and need-based care should be provided to students. These should be backed by several follow-up assessments of students to monitor progress and reset the strategies.

4. Results of school-level assessments of enrolment, dropout and student competence should be made public at all levels – school, union, upazila, district, and national. This would help increase mass awareness about the losses, be empathetic to the reality facing students, and contribute to the remedial process. A mass media campaign including facts, government strategies, and expectations from students, teachers, parents and communities can be a helpful tool. Similar to the Educational for All (EFA) movement, utilisation of the civil society organisations, and the NGOs, both at national and local levels, should be a serious consideration.

5. Particular emphasis needs to be given to boys and rural students in the remedial strategies. In each case, context-specific solutions must be implemented. Further exploration is required to understand the case of boys who had higher learning losses despite getting more support from their families. Measures should be taken to address inequity in access to ICT resources in terms of gender and area of residence.

6. Experiments need to be initiated to improve the quality of online and television classes, the assignments, and their management. The former two are potential areas which go with the nation's goal of creating a 'Digital Bangladesh'. The ICT facilities/labs that already exist in many secondary schools need to be utilised fully in the new normal, and new similar facilities must be provided in the remaining schools. Developing a successful blend of a face-to-face and remote model needs to be emphasised.

7. Recovery of teachers' lost skills should be a serious concern. Refresher training on traditional teaching methods and new training courses on remote teaching methods, along with how to combine them while implementing recovery strategies, are key areas to focus on for teacher development. Teachers should be at the forefront of implementation.

8. Coming out of the historical tradition of low allocation to the education sector, the national budget should act as an instrument to make the recovery strategy a success. A 'mega project' of eight years from fiscal year (FY) 2022–23 to 2030 should be formulated side by side with the national budget. The additional allocation under the project should be used in executing the above-mentioned assessments and experiments, teachers' capacity development, digitalisation of the schools, making ICT tools available to teachers and students, creating Internet facilities for all, and achieving the fourth Sustainable Development Goal - ensuring inclusive and equitable quality education for all.



CHAPTER

1

Introduction

BACKGROUND

The COVID-19 pandemic has caused enormous disruption in human life worldwide. Every aspect of life, including employment, food, physical and mental health, education, and security was impacted. The spread of coronavirus was swift. Until 2021, the coronavirus affected more than 289.7 million people from 223 countries or territories globally, of which nearly 5.5 million died (WHO, 2021). The number of active cases was still more than 30 million. During the same period, 1,585,909 people were confirmed as positive for coronavirus in Bangladesh, of which 28,076 died. As of 23 April 2022, 1,186 infections per 100,000 of the population were recorded in Bangladesh.

The pandemic hit the education sector hard. To intercept the spread of the virus, most countries temporarily closed their educational institutions of all levels. As estimated by UNESCO (2020), 1.6 billion students in 192 countries, who constitute 91.2% of the total enrolment, faced the closure of their educational institutions for varying durations. The closure did not occur equally at each level of education nor for different parts of the world. For instance, from January 2020 to May 2021, the OECD (Organisation for Economic Co-operation and Development) countries kept the pre-primary schools fully closed for 55 days, the primary for 78 days, the lower-secondary for 92 days, and the upper-secondary for 101 days (OECD, 2021). On the other hand, most countries in Asia and Africa closed down their schools for longer periods. A recent estimate by UNESCO (2021) shows that globally, 77 million school students from six countries missed full classroom instruction time, and 54 million school children from five countries missed three-quarters of classroom instruction time from March 2020 to September 2021. It is anticipated that the pandemic may have caused severe setbacks to provide Education for All (EFA).

To reduce coronavirus spread, all educational institutions in Bangladesh were closed down on 17 March 2020 through a general holiday notice, initially for two weeks. The duration of the 'holiday' was

Countries	School closure (in weeks) ¹			Number of students affected
	Total	Fully	Partially	
Afghanistan	57	35	22	10,003,625
Bangladesh	73	63	10	40,322,688
Bhutan	67	20	47	190,656
India	82	25	57	330,041,248
Maldives	16	14	2	141,702
Nepal	82	35	47	8,830,083
Pakistan	61	37	24	47,831,316
Sri Lanka	71	49	22	5,243,446
Total				442,604,764

Note: ¹As of 30 November 2021.

Sources: UNESCO global dataset on the duration of school closure, World Bank education COVID-19 school closures map

Table 1.1. Duration of full and partial school closures and number of students affected in South Asian countries

was extended several times, continuing until 11 September 2021. Schools were totally shut down for nearly 18 months. During the closures, the government asked students and teachers to stay at home, obey the health guidelines and continue their studies. The government also imposed restrictions several times for various durations on mass gatherings and public movements (lockdown) throughout the country. The local administration also exercised imposition of restriction at the *upazila/district* level as and when deemed necessary. Students in Bangladesh were fully out-of-school much longer than their South Asian neighbours (Table 1.1).

As a result of the school closures, the classroom teaching of 41.7 million students in Bangladesh fell into uncertainty. Of the students, 3.9 million were pre-primary, 17.6 million at primary, 12.7 million at secondary, 3.2 million at higher secondary, 3.7 million at tertiary levels, and the remaining in technical and vocational education or various short courses (BANBEIS, 2021). The implications included students losing interest in education, their involvement in child labour or household chores, and an increase in girl-child marriage. The concerns related to education included increased dropout, decreased attendance after reopening, and learning losses. Therefore, increases in educational inequalities due to dropout, absenteeism and learning loss were expected as potential threats. This research explores the state of learning practice at home during school closure and its impact on learning among school students in Bangladesh.

INTERNATIONAL EVIDENCE

A UNESCO-UNICEF-World Bank Survey on National Education Responses to COVID-19 School Closures observed that 94% of the countries had practised remote learning policies with a variation by countries' economic strengths (UNICEF, 2020). Whereas 31% of students from pre-primary to upper secondary levels couldn't be brought under remote education globally, it was 38% in South Asia. The number of such students in South Asia was 147 million. The pre-primary students were the greatest sufferers, followed by those in primary and lower and upper secondary levels.

The above shows how badly the COVID-19 pandemic touched the lives of future generations. Although coronavirus is perceived as a health issue and most sufferers of the pandemic have been the elders, those who will perhaps pay a price throughout their lives are the children, adolescents, and youth. This can be termed a hidden paradox of pandemics. As a corollary, the Pakistan earthquake in 2005 documented no evidence of enrolment decline in the affected areas; still, the children of those areas continued to lag behind in grades and learned less than their counterparts living far from the earthquake (Das, Daniels & Andrabi, 2020). The World Bank estimated that in Lower-Middle-Income Countries (LMICs), learning adjusted years of schooling (LAYS) will fall by 8% (from the pre-COVID-19 baseline of 6.3 years) in the intermediate scenario for school closures due to COVID-19, while it is 3% in optimistic and 11% in pessimistic scenario (Azevedo et al., 2020). In Kazakhstan, the gap between the two extreme quintiles in the Programme for International Student Assessment (PISA) reading score is estimated to increase from 45 points in pre-COVID-19 to 53 points in the new normal (World Bank, 2020). Students are also expected to suffer a learning loss in European Union (EU) countries, which will negatively influence cognitive and non-cognitive skills acquisition (Di Pietro et al., 2020). Dorn et al. (2020) estimated learning loss among US school students and its consequent effect on earning in later life, where Black and Hispanic students with low income will be the greater sufferers.

Standardised achievement tests are conducted in many parts of the world to assess learning losses due to school closures during the pandemic. For instance, 44% of the Organisation for Economic Co-operation and Development (OECD) countries in 2020 and 37% in 2021 arranged standardised achievement tests to assess learning losses at the upper secondary level (OECD, 2021). These studies documented learning losses even in wealthy environments. The case of the Netherlands can be cited here. Despite the country having a relatively short lockdown (8 weeks), world-leading broadband access rates, and the government providing equitable school funding, students of the Netherlands still experienced learning losses (Engzell, Frey and Verhagen 2021).

Along with overall learning loss, concerns about the potential exacerbation of inequalities due to school closure are raised in England and France. In England, in the first half of 2020, learning losses in reading among secondary-level students were estimated at 1.8 months, whereas it was at 2.2 months among students who experienced disadvantages. Although overall, the learning losses were estimated at 1.7 months in reading and 3.7 months in mathematics among primary-level students, the losses reached 2.2 months and 4.5 months, respectively, among disadvantaged students (Education Policy Institute and Renaissance Learning, 2021). France experienced a decline in reading and mathematics performance at the primary level in September 2020, which reversed by January 2021. Students from disadvantaged schools showed lesser improvements in reading than their peers (Ministère de l'éduca-

tion Nationale, de la jeunesse et des sports, 2021, cited in Engzell et al., 2021). The Netherlands study also demonstrated greater learning loss among students with disadvantages than their peers (Engzell et al., 2021).

THE PRE-PANDEMIC SCHOOL EDUCATION IN BANGLADESH

Bangladesh operates one of the largest school education systems in the world, with 3.95 million students at pre-primary, 17.60 million at primary, and 12.74 million at the secondary level (BANBEIS 2021). Two ministries are responsible for implementing school education in Bangladesh. The Ministry of Primary and Mass Education (MoPME) looks after pre-primary and primary education, and the Ministry of Education (MoE) looks after secondary, vocational, madrasa and tertiary education.

The country made significant improvements expanding its school education system leading to decreased dropout rates and achieving gender parity in enrolment. The latest official statistics show that 86.8% of the grade 1 enrollees complete pre-primary education, and the primary net enrolment rate is 97.8%, with a dropout rate of 17.2%. The transition rate from primary to secondary is 96.4%. The secondary net enrolment rate is 71.9%, with a dropout rate of 35.8%. Girls are admitted to school and attend classrooms more in numbers than boys, and it is the reverse in the case of dropouts. There are three terminal examinations throughout the school years – the first one is at the end of grade 5 (called Primary Education Completion Examination or PECE), the second one is at the end of grade 8 (called Junior Secondary Certificate or JSC), and the final one is at the end of grade 10 (called Secondary School Certificate or SSC). School teachers are the largest professional group in Bangladesh with a size of about one million. Only two-thirds of teachers have basic teacher training – certificate course in education (C-in-Ed) for primary and bachelor in education (BEd) degree for secondary (DPE, 2021; BANBEIS, 2021).

Contrasting the above, Bangladeshi students' learning levels are generally low and unequal. Most school children do not reach their grade-level competencies. National Student Assessment (NSA) results for grades 3 and 5 show a decreasing trend from 2013 to 2015 and a slight increase afterwards (DPE, 2018). As per the latest NSA, over half of grade 5 students did not achieve grade-level proficiency in Bangla and mathematics, while 26% and 58% of grade 3 students did not do so in these subjects. Among students in grade 8, the achievement levels in English and mathematics are 44% and 35%, respectively. A significant difference exists across grades among subpopulations: students from families that are well-to-do and from urban areas do better than those from families with a lower income and those residing in rural areas. Surprisingly, the pass rates in various terminal examinations are very high. In 2019, these were 95.7% in grade 5, 87.6% in grade 8, and 83.8% in grade 10.

A World Bank (2019) study observed that the average learning attainment of Bangladeshi students is lower than the average attainments of South Asian and LMIC students. Another study observed that school closures are likely to push more children into learning poverty (Rahman and Sharma, 2021). It was previously found that 58% of Bangladeshi children could not read and understand a simple text by the end of the primary education cycle. It is estimated that the effects of COVID-19 will push this percentage up to 76% if all children are equally affected by school closures (Rahman and Sharma, 2021). A study on adolescents observed their decreased access to schooling has resulted in increased time spent on household chores and negative future job aspirations (Baired et al., 2020). The impacts are enormous for girls and those from the most vulnerable households.

INITIATIVES DURING SCHOOL CLOSURE

The government engaged in initiatives to help students continue their education and keep them connected to the schools. After a few months of school closure, the two education ministries in Bangladesh asked the respective school teachers to connect schools with students from pre-primary to secondary levels. If the existing mass communication was restricted, teachers were advised to reach their students over the telephone or through home visits. The purpose was to see whether students

were studying at home as they reported. Soon after, the ministries started providing education for all school grades through two TV channels - Bangladesh Television (BTV) and Sangsad Bangladesh Television (Sangsad TV) - , and Bangladesh Betar (radio) for primary grades only. The programmes' names for the pre-primary and primary grades were *Ghare Boshe Shikhi* (Let's Learn at Home) and *Aamar Ghare Aamar School/Madrassa* (My School/Madrassa at My Home) for secondary grade students. Lessons were regularly aired or transmitted through these channels. The lessons were repeated several times ensuring students didn't miss them or allowing students to revisit them if required.

Some schools organised classes using various online platforms such as Google Meet or Zoom. The success of the online classes depended on the availability of Internet facilities, appropriate devices, and an appropriate environment at home for both teachers and students. Some NGOs tried to connect with students through mobile telephones, FM radios, or the Internet. The ministries also supplied assignments to the schools to distribute to students of grades 1–10. These, no doubt, were good initiatives in an uncertain time, but the scale of reach of these initiatives and students' responses were not clear enough. Studies on various sub-groups of the population have indicated inequality in reaching students during the pandemic. There were also serious questions on the quality of these new initiatives as Bangladesh has not seriously considered (or practised) these provisions before. Therefore, an important question for the future is how much learning loss could be evaded or minimised through these initiatives.

Due to the pandemic, PECE and JSC examinations were not held in 2020 or 2021. The 2021 SSC examinations were held, based on a shortened syllabus, after nine months of scheduled time. Interestingly, the SSC pass rate went up by over 10 percentage points – from 82.9% in 2020 to 93.6% in 2021.

RATIONALE OF THIS STUDY

We know that the state of pre-COVID-19 learning was not at a satisfactory level. It is hypothesised that students' learning achievement will further decrease due to school closure. As seen above, however, it was not reflected in the SSC examination results. Students are deprived of learning vital cognitive, social, physical, and emotional skills if they do not go to school. Taking a long break may lead them to forget what they have learned (Cooper et al. 1996). From a life-cycle perspective, children's skills learned at a younger age set the stage for acquiring advanced skills later. Missing out on opportunities to learn these skills might lower the total skills expected to develop in a lifetime (Meyers and Thomason 2017; Gibbs et al. 2019; Andrabi, Daniels, and Das 2020).

In line with the fourth Sustainable Development Goal (SDG 4), two critical tasks for Bangladesh and other countries are preventing students from the risk of dropout and absenteeism and helping them recover from learning losses. To perform these tasks, it is crucial to know the varying factors related to COVID-19, including geography, gender, school type, household, and individual. Measurement of school dropout and absenteeism and learning losses resulting from school closure and their recovery history would help to formulate the right policies to minimise losses and help formulate education policies in the new-normal period. Lessons learned from Bangladesh may also allow other low and lower-middle-income countries to prepare their education systems accordingly.

STUDY OBJECTIVES

Keeping the above in mind, we have initiated a longitudinal study to measure and analyse the short- and long-term impacts of school closure on educational outcomes. The present study is a baseline for this which explores the following issues:

- Changes in school enrolment from pre-primary to Grade 10 during the pandemic, students' classroom attendance after reopening of schools, and estimation of absenteeism;
- Students' access to information and communication technologies (ICTs) and the strategies taken by the school, students and their families to continue studies at home during school closure;
- An estimation of the literacy skills level of students and its comparison with a projected level of the same; and finally,
- Intra-relationship of some of the above issues and those with students' background.

ORGANISATION OF THE REPORT

Following this introductory chapter, methods and materials used to achieve the study's objectives are provided in Chapter 2. Chapter 3 presents the background of students and their households under investigation. The findings are provided in three consecutive chapters: enrolment and attendance in Chapter 4, studies at home during school closure in Chapter 5, and understanding learning losses in Chapter 6. The final chapter discusses the findings, major conclusions and policy recommendations.



CHAPTER

2

Methods and Materials



This research is mainly based on primary data collected during the pandemic. Secondary data generated under *Education Watch* and selected data provided by the Directorate of Primary Education (DPE) and Bangladesh Bureau of Educational Information and Statistics (BANBEIS) were also used. Sample surveys were the main method for primary data collection which included a household survey, student interviews, a literacy test, and head teacher interviews. The household survey data and school records helped address the first set of issues mentioned in the objective section. Data generated from student and head teacher interviews helped address the second set of issues. The literacy test data were used to address the third set of issues. Multiple data sets were used to address the fourth set of issues.

THE INSTRUMENTS

Four instruments were used: household survey questionnaire, literacy assessment test, student questionnaire, and headteacher questionnaire. These are described in short in the following paragraphs

Household Survey Questionnaire: The research team developed this by reviewing several similar questionnaires and doing pilot tests in different locations. This has three major sections— household demography, school enrolment for the population aged 3–20 years, and socioeconomic information.

Literacy Assessment Test: To measure the test-based literacy status of the population aged 11 years and above, the Education Watch group created a tool in 2002 following a rigorous development process (Ahmed, Nath & Ahmed, 2003; Nath & Chowdhury, 2016). This was the first of its kind in Bangladesh. The definition of literacy utilised was –

Possession of skills in reading, writing and numeracy related to familiar contents and contexts and the ability to use these skills in everyday life in order to function effectively in society.

The tool contains four sections which are reading skills, writing skills, numeracy skills, and the application of these skills. The table of contents for the literacy test is provided in Table 2.1. The number of items in the tool is 23. It is a one-to-one basis test. The average duration of testing a person is about 40 minutes. The reliability coefficient of the literacy test instrument, measured through the Spearman-Brown formula, is 0.90. Note that in addition to two National Literacy Surveys in 2002 and 2016 by the *Education Watch* group, this tool was used by Dhaka Ahsania Mission (DAM) in 2005 and the Bangladesh Bureau of Statistics (BBS) in 2008 (DAM 2007; BBS 2008). Therefore, four national literacy surveys have already been carried out using this tool.

Student questionnaire: The research team developed this questionnaire through piloting in different locations. This has five sections: general information on education, access to ICTs, studies during school closure, contact with schools during the closure, participation in private tutoring, and chapter-specific study of Bangla and mathematics textbooks.

Headteachers questionnaire: The research team also developed this questionnaire through piloting. Various sections of this questionnaire included the number of students enrolled in school in 2020 and 2021, steps taken by the schools to continue educational activities of students during pandemic and challenges faced in doing so, their views on students' participation in various actions taken by the ministries, potential dropout of students and learning loss.

THE STUDY SAMPLE

Measurement of student literacy skills was considered the key in calculating the sample size for the study. The Education Watch datasets of 2002 and 2016 were used to project literacy skills for 2021.

Reading	Writing	Numeracy	Application
Two words with three alphabet characters in each	Two words familiar in everyday life	<ul style="list-style-type: none"> Counting objects Finding out a missing number 	<ul style="list-style-type: none"> Recognise time Recognise left and right on a picture
Two sentences related to everyday life	Two sentences in a familiar context	Simple arithmetic <ul style="list-style-type: none"> Subtraction Multiplication 	<ul style="list-style-type: none"> Know the sides of a map Ability to write own address Ability to prepare a simple balance sheet
A comprehension passage followed by two MCQs	Describe an object with five sentences	Problem-solving needing skills of <ul style="list-style-type: none"> Subtraction and division Multiplication and division 	<ul style="list-style-type: none"> Absorbing message from a billboard

Source: Ahmed, Nath & Ahmed (2003)

Table 2.1. Table of contents for literacy assessment test

These contain literacy data from nationally representative samples of 11 years and above. Since no students currently enrolled below grade 5 were there in the previous datasets, this study concentrated only on students currently enrolled in grades 5–10. The following formula was used to calculate the sample size.

$$n = \frac{pqz^2}{\alpha^2} \times d \times r$$

Where p is the probability of students achieving literacy skills, q is the probability of students not achieving literacy skills (i.e., $q = 1-p$), z is the confidence limit, α is the error of precision, d is the design effect, and r is the adjusted factor for dropout of students.

Considering half of the students achieving literacy skills, 95% confidence limit, 5% error of precession, 1.5 design effect, and 38% dropout rate, it was estimated that a sample of size 795 is required to have a valid estimate of literacy skills. Therefore, it was decided to take a sample of size 800 for each grade of students, totalling 4,800 (800 x 6) for the whole study. The number of households required to be surveyed was estimated through back-calculation in such a way that it allows getting the necessary number of students for the literacy test.

A multistage sampling strategy was adopted. In the first stage, 100 *upazilas/thanas* were selected at random. Figure 2.1 presents the map showing the sampled *upazilas/thanas*. Two *villages/mahallahs* were selected from each selected *upazila/thana* at the second stage, totalling 200. The latest database (community series) of the Bangladesh Bureau of Statistics (BBS) was used for the above selection. In each selected *village/mahallah*, a household survey was carried out covering 60 households. The households were selected starting from the northwest corner of the *village/mahallah*, moving anti-clockwise, and skipping every four successive households. Therefore, the total number of households planned to be surveyed was 12,000.

Students currently enrolled in grades 5–10 (in other words, grades 4–9 in 2020), irrespective of school type, were prepared for each two-*village/mahallahs* from the household survey. In each two-*village/mahallah*, eight students were randomly selected from each grade for administering the literacy test, totalling (8 x 6 =) 48.

Lists of four types of schools, viz., government primary, newly nationalised primary, non-government secondary and the *madrasas* [where *dakhil* level (grades 6–10) is taught] were prepared with the assis-

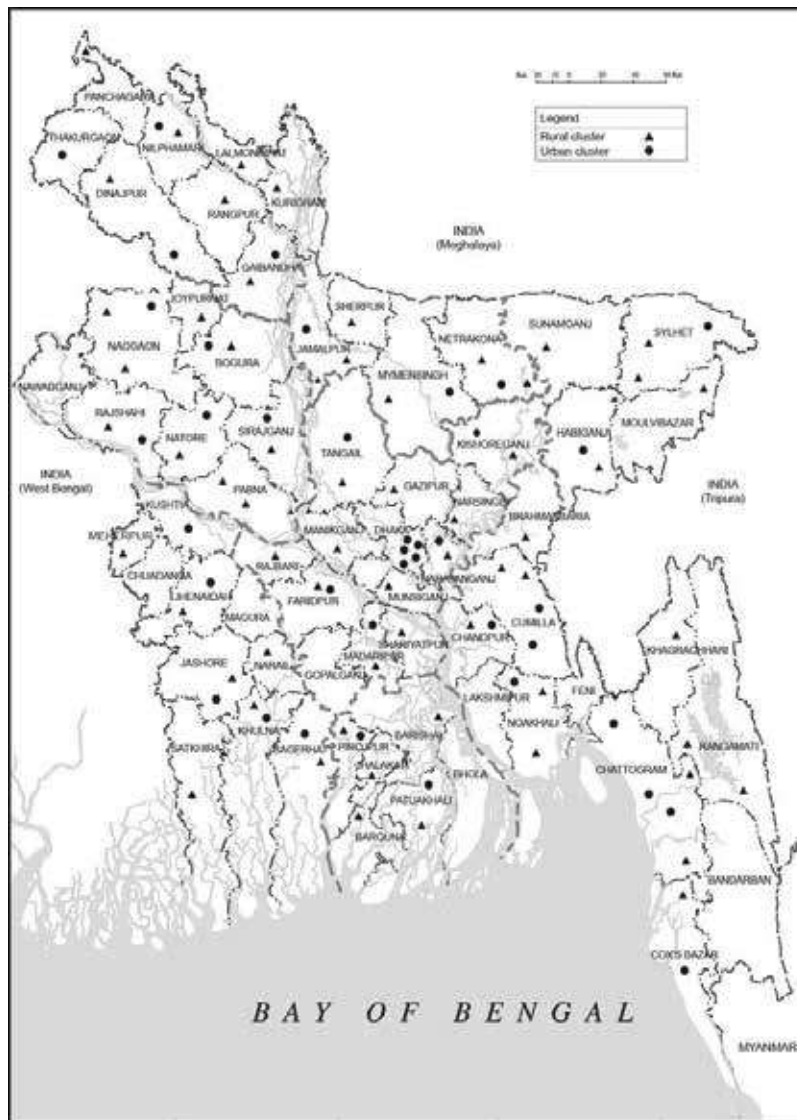


Figure 2.1. Map showing the sample upazilas/thanas

tance of the local community. The area covered for this was the respective *union/ward* of the surveyed *village/mahallah* and its adjacent *unions/wards*. A total of 400 schools were selected for head teacher interviews.

Overall, 11,999 households were surveyed from 200 *villages/mahallahs* under 100 *upazilas/thanas* (Table 2.2). The total population in these households was 54,220, of which 20,904 were of age 3–20 years. Information on the schooling of all of them was collected. The size of the student sample for the literacy test was 4,689. A total of 398 headteachers were interviewed. Of them, 118 were from the government primary schools, 79 from the newly nationalised primary schools, 128 from the non-government secondary schools, and 73 from the madrasas.

FIELDWORK

The initial plan was to capture the scenario of the first year of school closure starting from mid-March 2020 to Mid-March 2021. But this was hampered due to several country-wide and district/upazila-level lockdowns. Fifty field Research Assistants were trained during 18–27 March 2021. The study team members conducted the training sessions. The sessions included classroom discussions, role-plays, and field practicum.

	Geography		Total
	Rural	Urban	
Upazila/thanas	61	39	100
Village/mahallah	122	78	200
Household	7,319	4,680	11,999
Total member	33,392	20,828	54,220
Member of age 3–20 years	12,993	7,911	20,904
Students for literacy test	2,901	1,788	4,689
Student interview	2,894	1,775	4,669
Headteachers (primary)	122	75	197
Headteachers (secondary)	122	79	201

Table 2.2. Study sample at a glance

The fieldwork was started on 29 March 2021 but could not go beyond 3 April 2021 due to a countrywide lockdown. It started again on 12 June 2021 and continued until 26 June 2021. Then there was another interruption for two months due to the same reason. The fieldwork restarted on 24 August 2021 and continued up to 7 October 2021. Refresher training was arranged before each restart. The duration of each refresher training was three days – two days online and one-day face-to-face. As the schools reopened on 12 September 2021, information on classroom attendance of students was collected over cellphones after completion of the scheduled fieldwork. This took an additional five days from 8–12 October 2021.

The household survey, literacy test, and student interviews were executed by visiting the households. The head of the households or their spouses responded to the household survey. In some cases, other adult persons provided the information in the absence of the above. The sampled students were brought under a literacy test, and they also faced an interview to provide information on their studies at home during school closure. The students' information was also verified with the parents. The headteachers were interviewed at their residences or in their offices. All these interviews were face-to-face. Only the classroom attendance data were collected remotely by calling the parents/guardians of the students. This was possible as the research assistants collected their phone numbers while interviewing face-to-face.

The research team members and a team of five Senior Research Assistants inspected the fieldwork throughout the period. This was done mainly by visiting the Research Assistants, checking the already completed questionnaires, and verifying information by revisiting the respondents. Several remote meetings were held with all Research Assistants and Senior Research Assistants to share field experiences, discuss common issues, and track the progress in fieldwork.

RELIABILITY AND CALCULATION OF LITERACY RATE

As mentioned already, the literacy test has four components: reading skills, writing skills, numeracy skills, and application of these three skills. The students' performances in each component were scored out of 25. Following the Education Watch studies, students achieving at least 12.5 were considered as having an initial level of skills in each of the components. Finally, a student having an initial level of skills in each of the four components was considered literate.

The reliability of the literacy test was ensured at its development stage. Parts of the national datasets of 2002 and 2016 were used in this study, and a new set of data was generated in 2021. The reliability coefficients of each were calculated through the Spearman-Brown formula. The reliability coefficients are 0.89 for 2002 and 0.88 for 2016 and 2021. This means that the literacy data used in this study were highly reliable.

An exponential growth rate model was used in calculating the projected literacy rate for the year 2021 using the literacy rates of 2002 and 2016. The formulas were as follows:

$$r = e^{\frac{\ln \frac{Y_t}{Y_0}}{t}} - 1 \quad \dots\dots\dots (1)$$

$$Y_t = Y_0(1 + r)^t \quad \dots\dots\dots (2)$$

Where Y_t is the later year literacy rate estimated from 2016 data, Y_0 is the base year literacy rate estimated from 2002 data, r is the growth rate to be calculated during 2002–16, and t is the duration in years (here 14). Formula 1 was used to calculate the growth rate r . This calculated growth rate r was used in formula 2 to project the literacy rate for 2021 using the estimated literacy rate of 2016 as the base year figure. In this case, the duration in years (t) is 5 (from 2016 to 2021).

STRENGTHS AND WEAKNESSES

Like any other sample survey, this study bears some strengths and limitations. The following are the strengths and weaknesses of the study.

Strengths

- This is the first comprehensive study in Bangladesh capturing school students' education during a pandemic. Although a few other initiatives portray the school education scenario during the COVID-19 pandemic, the issues covered in this study are more elaborated than those. The topics covered in this study are enrolment, attendance, dropout, various learning initiatives at home, including those initiated by the schools and the ministries, and learning losses.
- This study uniquely captured the whole duration of school closure (18 months) from mid-March 2020 to mid-September 2021 and one month after the reopening of schools.
- This study is mainly based on primary data collected through nationally representative large-sample surveys of households and students. This allowed statistically sound estimates by area of residence, gender, and students' grades. Interviews with a section of headteachers helped analyse some issues in detail. Using the Directorate of Primary Education (DPE) and Bangladesh Bureau of Educational

Information and Statistics (BANBEIS) estimates on the dropout, and two national literacy test datasets helped produce some estimates and strengthened analysis.

- Face-to-face interviews and one-to-one literacy tests were the methods of collecting data. Interviews were carried out, and the tests were administered at the respondents' places. Although the data were collected during the pandemic, such an attempt helped collect more information than a telephone survey.
- The statistical technique applied to find the projected literacy rate of students using two previous but similar datasets is a new addition to educational research in Bangladesh. This technique helped measure the learning losses of students.

Weaknesses

- Using a literacy test instead of a standardised test based on learning objectives or competencies can be considered a limitation of this study. Grade-specific learning achievement tests were best suited to measure learning losses. This could not be done because no such test instruments or previous data were available; therefore, there was no way to create a baseline. The nature of the literacy test instrument and the two previous national datasets helped create a baseline for comparison and conduct of one-to-one tests during school closure.
- The literacy rate for 2021 was projected, assuming that the growth rate in literacy skills from 2016 to 2021 would be the same as from 2002 to 2016. If there is any reason not to believe this assumption, the measurement of learning losses may be incorrect, and therefore, misleading.
- The literacy test used as a proxy for learning achievement could not measure the literacy skills of most primary and all pre-primary education students. Therefore, the learning losses of students below grade 5 could not be addressed.



CHAPTER

3

Background Characteristics of Study
Subjects: Households and Students

This chapter provides the background characteristics of the subjects of this study, viz., sampled households, and students under the literacy test. These include demography, education, income sources, household economy, etc.

THE SAMPLED HOUSEHOLDS

A total of 11,999 households were surveyed, of which 7,319 (61%) were in rural areas and 4,680 (39%) in urban areas. Overall, 2.5% lived in slums, 69.4% were unitary households, 10.9% were female-headed, and 99.3% had electricity facilities at home (Table 3.1). The proportions of households living in slums and unitary households were more in urban areas than in rural areas. The religious beliefs of the household heads also varied with nine out of 10 belonging to the Muslim faith. The remaining were Hindus (8.7%), Buddhists (1.1%) and Christians (0.1%). Overall, 98.7% of the households hold Bengali identity, and the remaining 1.3% belong to various small ethnic groups.

Characteristics	Geography		Both
	Rural	Urban	
Slum-dwellers (%)	1.7	3.6	2.5
Unitary household (%)	67.7	72.1	69.4
Female-headed (%)	10.8	11.2	10.9
Electricity at home (%)	99.0	99.7	99.3
Religion of HH head (%)			
Muslim	88.4	92.8	90.1
Hinduism	9.7	7.1	8.7
Buddhism	1.7	0.0	1.1
Christianity	0.1	0.1	0.1
Small ethnic minority (%)	1.9	0.3	1.3

Table 3.1. Percentage of households by various characteristics and geography

The average household size was 4.5; 4.6 in rural areas and 4.4 in urban areas. The distribution of households by size is provided in Annex 3.1. Females constituted 50.8% of the total members. Therefore, the sex ratio (the number of females per 100 males) was 103.2. Of the household members, 7.9% were under five, 32.6% were aged 10–24 years, and 8.1% were 60 years or more. More information on age distribution by gender and geography is provided in Annex 3.2.

For education, years of schooling completed by the parents of the children aged 3–20 were collected. More mothers than fathers had schooling of various lengths (81.3% versus 73.8%) (Table 3.2). The mothers were also ahead of the fathers in completing primary education – 64.8% of the mothers and 55.9% of the fathers had such a level of education. An inverse situation was observed in completing secondary education – 14.7% of the mothers and 18.1% of the fathers had this level of education. Both parents of urban areas were more educated than their respective rural counterparts in all aspects – ever schooling and completing primary or secondary education.

The primary sources of income of households were business (22.4%), agriculture (17.8%), day labour (17.6%) or salaried job (13.3%) (Table 3.3). Proportionately more households in rural areas lived on agriculture or day labour than those in urban areas. On the other hand, more urban households had business or salaried jobs as the primary sources of income. Self-employment was reported as the fifth primary source of household income – 7.3% in technical activities and 5.2% in non-technical activities

Level of education	Fathers' education			Mothers' education		
	Rural	Urban	Both	Rural	Urban	Both
Nil	29.2	21.2	26.2	20.2	16.2	18.7
Grades 1–4	19.9	14.6	17.9	18.0	14.0	16.5
Grades 5–9	37.1	38.9	37.8	50.7	49.1	50.1
Grades 9+	13.8	25.3	18.1	11.1	20.7	14.7
Total	100.0	100.0	100.0	100.0	100.0	100.0

Table 3.2. Percentage distribution of household members of age 3–20y by parental education and geography

such as rickshaw, and van or boat riding. The other primary sources of household income included remittance (6.5%), driving (3.9%), relatives' help (2.1%), and others (3.9%).

At least one member of 52% of the households lost work/job during the pandemic. This was 47.5% in rural and 59% in urban areas. Of those who lost their job/work, 27.2% had no work/job for three months, 19.3% had no work/job for two months, and 6.4% for one month (Annex 3.3). This was four months for 16.9% them, five months for 9.3% of them, six months for 11.4% of them, and seven or more months for 9.5%. These persons, on average, were workless/jobless for four months, with a tiny

Income sources	Geography		Both
	Rural	Urban	
Agriculture	25.6	5.6	17.8
Day labour	19.5	14.7	17.6
Salaried job	8.7	20.5	13.3
Business	17.5	30.1	22.4
Driving	2.9	5.5	3.9
Self-employed (non-technical)	4.9	5.6	5.2
Self-employed (technical)	6.8	8.0	7.3
Remittance	7.7	4.6	6.5
Relatives' help (homeland)	2.5	1.4	2.1
Others	3.9	4.0	3.9
Total	100.0	100.0	100.0

Table 3.3. Percentage distribution of households by primary source of income and geography

difference between rural and urban areas (3.9 versus 4.1). As reported, 4.3% of them were still unemployed at the time of fieldwork for this study.

The respondents were asked to compare their household income and expenditure during the pandemic with the pre-pandemic period. Over four-fifths of them reported a decrease in household income, less than 1% reported an increase, and 18.4% reported no change (Annex 3.4). Conversely, 28.1% of the respondents reported a decrease in household expenditure, 34% reported an increase, and 37.9% reported no change. The difference observed between rural and urban areas was marginal.

The respondents were also asked to rate their households on a four-point scale considering the past year's overall income and expenditure. The points on the scale are *always in deficit*, *sometimes in*

deficit, breakeven, and surplus. The respondents did this separately for two time periods – during and before the pandemic. A substantial variation was observed between these two ratings. For the pandemic year, 11.1% of households reported always in deficit, 55.7% reported sometimes in deficit, 28.2% reported breakeven, and 5% reported surplus (Table 3.4). The corresponding figures for the pre-pandemic year were 1.9%, 11%, 49.1% and 38%, respectively. Comparing these two states of the household economy, it can be said that only 0.5% of the households reported an increase in economic status during the pandemic, and 24.2% reported no change between the years (Table 3.5). Fifty-five per cent of the households reported a one-step decrease in household financial situation, and 20.3% reported a 2–3 steps decrease during the pandemic. Therefore, it is clear from the household survey that the overall financial situation has substantially declined during the pandemic. More decline was reported in urban areas.

Economic status	During the pandemic			Pre-pandemic year		
	Rural	Urban	Both	Rural	Urban	Both
Always in deficit	12.2	9.4	11.1	2.3	9.4	1.9
Sometimes in deficit	56.2	55.0	55.7	13.5	55.0	11.0
Breakeven	27.6	29.3	28.2	48.7	29.3	49.1
Surplus	4.1	6.4	5.0	35.5	6.4	38.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Table 3.4. Distribution of households by yearly economic status, period and geography

Change	Area		Both
	Rural	Urban	
Increased	0.7	0.3	0.5
Stable	25.5	21.1	24.2
One step decrease	54.1	56.5	55.0
2–3 steps decreased	19.8	21.1	20.3
Total	100.0	100.0	100.0

Table 3.5. Percentage distribution of households by the change in yearly economic status from pre-pandemic to pandemic period and geography

STUDENTS UNDER LITERACY TEST

The students under the literacy test came from various educational institutions. Over three-fifths of students in grade 5 (61.5%) came from government primary schools (Table 3.6). They were followed by those in the kindergartens (10.3%) and newly nationalised schools (10.2%). The madrasas constituted 7.6% of the students of grade 5 – 2.1% in the ebte dayee madrasas and 5.5% in the ebte dayee section of the high madrasas such as dakhil, alim, fazil or kamil. Among others, 4.2% were from the primary section of the secondary schools and another 4.2% were from the non-formal schools of the NGOs. The proportions of rural students studying in the government and newly nationalised primary schools were higher than those in similar institutions in urban areas. Whereas about 80% of rural fifth-graders were from these two types of institutions, it was 57.5% among those in urban areas. Opposite to this, the proportions of urban students studying in kindergartens, madrasas and non-formal schools were higher than their rural counterparts.

The majority of the secondary school students, irrespective of grade, came from the non-government category (Annex 3.5). They comprised 71.8% of all secondary students (Table 3.6). They were followed by those admitted in the madrasas (dakhil or dakhil section of alim, fazil or kamil madrasas) (12.2%) and the government secondary schools (9.3%). Among others, 3.8% were from kindergartens, 1.4% from technical/vocational schools, and 1.3% from government primary schools (up to grade 8). Proportions of rural secondary school students studying in non-government schools and madrasas were higher than the respective proportions in urban areas. On the other hand, a reverse situation was observed in the case of those attending the kindergartens.

The age of students varied from 11–18 years. Of them, the fifth graders were from 11–14 years, the sixth graders were from 11–15 years, the seventh graders were from 11–16 years, the eighth-graders were from 12–17 years, the ninth graders were from 13–18 years, and the tenth graders were from 14–18 years. The mean age of the students of grade 5 was 11.6 years; it was 12.2 years for grade 6,

School Type	Grade 5			Grades 6–10		
	Rural	Urban	All	Rural	Urban	All
Government primary ¹	65.3	55.0	61.5	1.7	0.6	1.3
Newly nationalised primary	14.6	2.5	10.2	-	-	-
Non-government primary	0.8	2.1	1.3	-	-	-
Non-formal primary	3.6	5.4	4.2	-	-	-
Ebtedayee madrasa	1.7	2.9	2.1	-	-	-
Kindergarten	7.9	14.3	10.3	3.4	4.4	3.8
Government secondary	-	1.1	0.4	4.2	17.6	9.3
Non-government secondary ²	0.2	10.0	3.8	75.1	66.2	71.8
High madrasa ³	5.0	6.4	5.5	14.2	8.9	12.2
Technical/Vocational school	-	-	-	1.0	2.0	1.4
Qawmi/hafizia/nurani	0.8	0.4	0.6	0.3	0.3	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

¹Including government schools up to Grade 8; ²Including junior secondary schools; ³Includes *dakhil, alim, fazil or kamil*

Table 3.6. Percentage distribution of students under literacy test by school type, grade and geography

13.1 years for grade 7, 14.1 years for grade 8, 15 years for grade 9, and 15.8 years for grade 10 students. Students' age distribution by grade and geography are provided in Annexes 3.6 and 3.7. The analyses of other background characteristics of students' households are provided in Annexes 3.8 to 3.20.





CHAPTER

4

Enrolment, Attendance
and Dropout

Information on enrolment, attendance, and dropout was collected from schools and households. These include enrolment in school in 2020 and 2021, attendance after the reopening of schools, and dropout throughout the school closure period.

ENROLMENT IN 2020 AND 2021: ANALYSIS OF SCHOOL RECORDS

The headteachers provided a grade-wise number of students admitted in 2020 and 2021 from school records. It shows that between 2020 and 2021, the number of students increased or remained the same in about 60% of schools but decreased in the remaining (40.5%). The number of students decreased in a third of the primary schools. This was 60.9% in the case of pre-primary and 27.9% in the case of primary level (Table 4.1). Over 48% of the secondary schools also experienced the same. Although more government primary schools than newly nationalised primary schools experienced a decrease in the number of students at the pre-primary level (63.6% versus 57%), an opposite scenario was observed at the primary level (25.4% versus 31.6%). This was more in non-government schools than in the madrasas (51.6% versus 42.5%) at the secondary level. Area analysis shows no difference at the pre-primary level but a significant difference in the remaining two levels. At the primary level, proportionately more rural schools experienced a decrease in the number of students than their urban counterparts; an opposite scenario was observed at the secondary level.

Geography/school type	Level of education			Total
	Pre-primary	Primary	secondary	
Geography				
Rural	60.7	33.6	45.1	42.6
Urban	61.7	18.7	53.2	37.0
School type				
Government primary	63.6	25.4	-	32.2
Newly nationalised primary	57.0	31.6	-	32.9
Non-government secondary	-	-	51.6	51.6
Madrasas	-	-	42.5	42.5
All	60.9	27.9	48.3	40.5

Table 4.1. Percentage of schools with decreasing number of students between 2020 and 2021

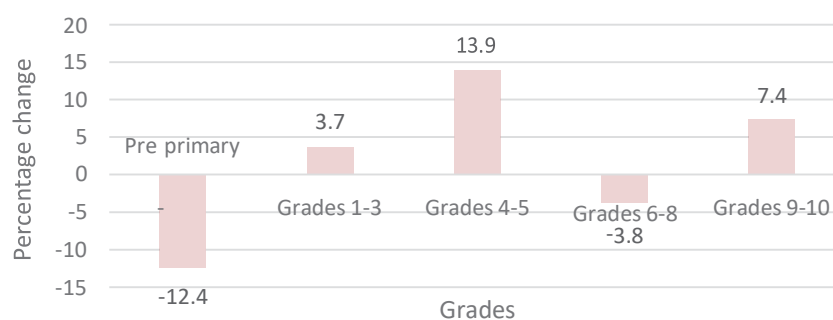
The number of students decreased by 12.4% at the pre-primary level, increased by 7.7% at the primary level, and no change was observed at the secondary level (Table 4.2). School type-wise, pre-primary students decreased by 14.2% in the government schools and 8.8% in the newly nationalised schools. On the other hand, an 8.5% increase was noticed at the primary level in the newly nationalised schools and 7.4% in the government schools. The rate of decrease at the pre-primary level and the rate of increase at the primary level were higher in the primary schools of urban areas than those in rural areas.

A considerable variation was observed when the above data were analysed by grade, although no general trend was noticed. Broadly, the number of students decreased by 12.4% at the pre-primary level and 3.8% in grades 6–8. On the other hand, it increased by 3.7% in grades 1–3, 13.9% in grades 4–5 and 7.4% in grades 9–10 (Figure 4.1). The highest increase was recorded in 5th grade (15.6%), followed by 4th (12.4%) and 9th (11.1%) grades, respectively.

Geography/school type	Level of education			Total
	Pre-primary	Primary	secondary	
Geography				
Rural	-9.4	4.4	0.0	
Urban	-15.7	10.9	0.0	
School type				
Government primary	-14.2	7.4	-	
Newly nationalised primary	-8.8	8.5	-	
Non-government secondary			-0.01	
Madrasas			2.7	
All	-12.4	7.7	0.0	

Table 4.2. Percentage change in the number of students from 2020 to 2021

Figure 4.1 Percentage change in the number of students from 2020 to 2021 by Grades



A separate analysis of school records data by gender and area is provided in Annex 4.1. The decrease in the number of boys was more than that of girls at the pre-primary level, but an opposite scenario was observed in grades 6–8. Although the number of boys and girls increased in the remaining three grade groups, the increase was more among boys than girls. However, the number of pre-primary students decreased more in urban areas than in rural areas. It was almost equal in grades 6–8. The rate of increase was more in urban areas in grades 1–3 and 4–5, but it was in rural areas in grades 9–10.

DROPOUT IN 2021: HEADTEACHERS' ESTIMATION

The heads of the educational institutions were asked to estimate the number of students who may drop out of education in 2021 due to the prolonged closure of schools. They did so based on their understanding of students who were admitted to their schools in early 2021. Based on the heads' reports, a probable dropout rate was estimated at 3.9% at the pre-primary level, 4.2% at the primary level, and 8.6% at the secondary level – averaging 7.2% for the school cycles. This was 8.1% in rural and 5.9% in urban schools (Table 4.3). School-type-wise, it was 3.4% in government primary schools, 5.8% in newly nationalised schools, 8.3% in non-government secondary schools, and 10% for the madrasas.

Geography/school type	Level of education			Total
	Pre-primary	Primary	secondary	
Geography				
Rural	4.2	4.8	9.7	8.1
Urban	3.6	3.7	7.3	5.9
School type				
Government primary	2.9	3.5	-	3.4
Newly nationalised primary	5.8	5.8	-	5.8
Non-government secondary	-	-	8.3	8.3
Madrasas	-	-	10.0	10.0
All	3.9	4.2	8.6	7.2

Table 4.3. Percentage of students who may dropout in 2021 as estimated by the headteachers

From the school-level actual data on the number of students admitted in 2020 and 2021 and the forecast of the school heads, a further estimate was made on overall dropout from the beginning of school closure to the date of interviewing the heads. The estimation shows a 16% decrease in pre-primary students, a 3.2% increase in primary-level students, and an 8.6% decrease in secondary-level students (Table 4.4). The total dropout rate combining the three levels of education stood at 7.2%.

Level of education	Various time points			Deviation from March 2020 to August 2021
	March 2020	March 2021	August 2021	
Pre-primary	100.0	87.4	84.0	-16.0
Primary	100.0	107.7	103.2	3.2
Secondary	100.0	100.0	91.4	-8.6
All	100.0	100.0	92.8	-7.2

Table 4.4. Changes in enrolment rate at various time points from school records and headteachers' estimation and overall dropout rate by level of education

NET AND GROSS ENROLMENT

Net and gross enrolment ratios for pre-primary, primary and secondary levels are calculated for 2020 and 2021 from household survey data. Following are the definitions used:

- Pre-primary net enrolment rate: Number of 5-year-old children admitted in any grade for every 100 children of age 5.
- Pre-primary gross enrolment ratio: Number of pre-primary students of any age for every 100 children age 5.
- Primary net enrolment rate: Number of 6–10-year old children admitted in any grade for every 100 children of age 6–10.

- Primary gross enrolment ratio: Number of primary education students (grades 1–5) of any age for every 100 children aged 6–10.
- Secondary net enrolment rate: Number of 11–15-year old children admitted in secondary grades (6–10) for every 100 children of age 11–15.
- Secondary gross enrolment ratio: Number of secondary education students (grades 6–10) of any age for every 100 children aged 11–15.

For 2020, ‘admitted’ means attending school with admission in respective grades during the first two-and a half months of the academic year prior to school closure. As auto-promotion took place and there was no classroom teaching in early 2021, registration in the following grades and receipt of textbooks from schools were considered as ‘admitted’ in 2021. The numbers of children gathered from the household survey for each eligible age group by geography, gender and year are provided in Annex 4.2.

In 2020, the net enrolment rate was 62.7% at the pre-primary level, 96.2% at the primary level, and 62.1% at the secondary level (Figure 4.2). These figures came down to 49.6%, 93.6% and 61.3%, respectively, in 2021. The rate decreased at each level, but with various degrees – 13.1 percentage points at the pre-primary level, 2.6 percentage points at the primary level, and 0.8 percentage points at the secondary level. Whereas the decreases in the net enrolment rates at pre-primary and primary levels were statistically significant at $p < 0.001$, no significant difference was observed in secondary net enrolment rates. Like the net enrolment rate, the gross enrolment ratio at the pre-primary level has substantially decreased – from 134.3 in 2020 to 82.6 in 2021 (Figure 4.3). On the contrary, the gross enrolment ratio has increased in the other two levels of education. For instance, the gross ratio for primary education increased from 105.1 in 2020 to 106.2 in 2021 and for secondary education from 75.8 in 2020 to 77 in 2021.

Figure 4.2 Net enrolment rate by level of education and year

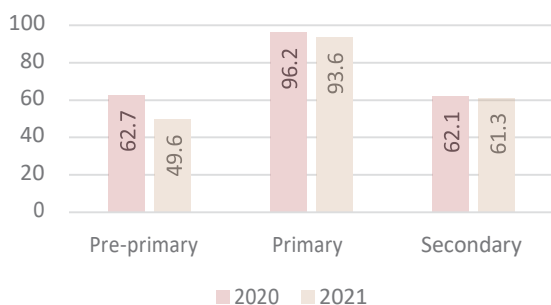
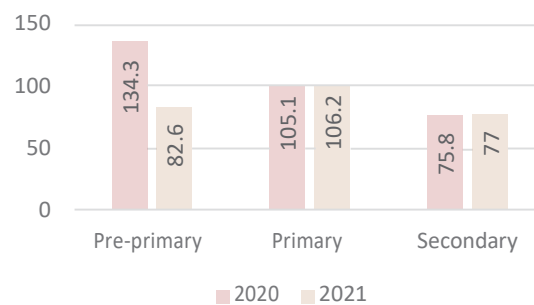


Figure 4.3. Gross enrolment ratio by level of education and year



Pre-primary enrolment

The pre-primary net enrolment rate decreased from 58.1% in 2020 to 48.9% in 2021 among boys ($p < 0.01$) and from 67.4% in 2020 to 50.3% in 2021 among girls ($p < 0.001$) (Table 4.5). This was from 61.6% in 2020 to 52.8% in 2021 in rural areas ($p < 0.01$) and from 64.5% in 2020 to 45% in 2021 in urban areas ($p < 0.001$). Therefore, the pre-primary net enrolment rate decreased by 9.2 percentage points among boys and 17.1 percentage points among girls, and 8.8 percentage points in rural areas and 19.5 percentage points in urban areas. Whereas girls were significantly ahead of boys, and there was no difference by area before the school closure in 2020, the gender difference in pre-primary net enrolment rate disappeared, and rural children surpassed their urban counterparts in 2021. Gender difference persisted in 2020 in rural areas disfavoured boys, which also disappeared in 2021. The highest decrease in the pre-primary net enrolment rate was recorded for urban girls (21.7 percentage points) and the lowest for rural boys (3.7 percentage points).

Although the decrease in the pre-primary gross enrolment ratio was 51.7 percentage points, it was 55.1 percentage points among boys and 48.2 percentage points among girls, and 54.9 percentage points in urban and 49.3 percentage points in rural areas (Annex 4 .3). This was close to the other three groups of children – rural boys and the children of both genders in urban areas (54.3– 55.8 percentage points), but far lower among rural girls (42.8 percentage points).

Gender/Geography	Year		Level of significance	Change from 2020 to 2021
	2020	2021		
All boys	58.1	48.9	p<0.01	-9.2
All girls	67.4	50.3	p<0.001	-17.1
Level of significance	p<0.01	ns		
Rural areas	61.6	52.8	p<0.01	-8.8
Urban areas	64.5	45.0	p<0.001	-19.5
Level of significance	ns	p<0.05		
Rural boys	55.7	52.0	ns	-3.7
Rural girls	67.4	53.7	p<0.001	-13.7
Level of significance	p<0.01	ns		
Urban boys	61.5	44.4	p<0.001	-17.1
Urban girls	67.3	45.6	p<0.001	-21.7
Level of significance	ns	ns		

Note: ns = not significant at p=0.05

Table 4.5. Pre-primary net enrolment rate by gender, geography and year

More than four-fifths of the pre-primary students were admitted to three types of schools (Table 4.6). Among the pre-primary students of 2020, 40% were admitted to government schools, 32% to kindergartens and 10.6% to non-formal schools. Whereas the proportions for the government schools and the kindergartens decreased to 36.1% and 29.5%, respectively, in 2021, it increased to 14.5% for the non-formal schools. An increase in the share of students was also observed in the mosque/temple-based pre-primary schools and the madrasas. Whereas 5.8% of students of 2020 were admitted to these two types of religious institutions, it was 9.7% in 2021. Proportionately more rural students than their urban counterparts were admitted to the government, newly nationalised, and non-formal schools. An opposite scenario was observed in the case of kindergartens, madrasas, and secondary attached schools.

Pre-primary type	2020			2021		
	Rural	Urban	Both	Rural	Urban	Both
Non-formal	14.2	5.3	10.6	18.3	8.3	14.5
Mosque/Temple based	2.5	1.8	2.2	4.7	4.5	4.6
Government primary	42.4	36.3	40.0	41.4	27.4	36.1
Newly nationalised primary	12.1	1.0	7.7	9.5	2.9	7.0
Madrasa	2.6	5.1	3.6	3.7	7.3	5.1
Kindergarten	24.3	43.4	32.0	21.0	43.3	29.5
Secondary attached	1.8	7.2	4.0	1.4	6.4	3.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

Table 4.6. Percentage distribution of pre-primary students by school type, geography and year

Primary enrolment

A statistically significant decrease in the primary net enrolment rate from 2020 to 2021 was observed among boys and girls (Table 4.7). Overall, girls staying ahead of boys in NER also continued in 2021 because the rates decreased equally. On the other hand, a higher rate of decrease in NER among urban children than their rural counterparts resulted in a statistically significant variation between them in 2021, which was not the case in 2020. In 2020, the gender difference in enrolment favouring girls existed only in rural areas, which disappeared in 2021. It appeared in urban areas in the same direction as in rural areas in 2020 because of a more significant decrease in NER among urban boys.

Gender/Geography	Year		Level of significance	Change from 2020 to 2021
	2020	2021		
All boys	95.7	92.8	p<0.001	-2.9
All girls	96.8	94.5	p<0.001	-2.3
Level of significance	p<0.05	p<0.01		
Rural areas	96.5	94.9	p<0.001	-1.6
Urban areas	95.7	91.6	p<0.001	-4.1
Level of significance	ns	p<0.001		
Rural boys	95.8	94.3	p<0.05	-1.5
Rural girls	97.2	95.4	p<0.01	-1.8
Level of significance	p<0.05	ns		
Urban boys	95.5	90.4	p<0.001	-5.1
Urban girls	96.0	93.0	p<0.01	-3.0
Level of significance	ns	p<0.05		

Note: ns = not significant at p=0.05

Table 4.7. Primary net enrolment rate by gender, geography and year

The primary gross enrolment rate increased by 1.1 percentage points. This was 2.2 percentage points among girls and 0.2 percentage points among boys, and 1.1 percentage points in rural and 1.3 percentage points in urban areas (Annex 4.4). The increase was highest among urban girls (2.4 percentage points), followed by rural girls (2.2 percentage points), rural boys (0.4 percentage points) and urban boys (0.2 percentage points), respectively.

Not much variation was observed between 2020 and 2021 in the distribution of primary students by school type. More than three-fifths of the primary students were admitted to the government schools, over 12% to the kindergartens, and nearly 10% to the newly nationalised schools (Table 4.8). The proportion of students admitted to these three types of institutions was 83.8% in 2020 and 85.1% in 2021. More rural students were predominantly admitted to the government and newly nationalised schools than their urban counterparts. It was the other way around in the case of kindergartens, madrasas, and secondary attached schools.

Primary type	2020			2021		
	Rural	Urban	Both	Rural	Urban	Both
Government primary	65.0	55.2	61.4	66.1	57.8	63.0
Newly nationalised primary	14.2	2.1	9.7	14.3	2.1	9.7
Non-formal	4.3	4.9	4.5	3.4	3.9	3.6
Madrasa	6.8	8.9	7.6	6.7	8.8	7.5
Kindergarten	8.6	19.8	12.7	8.7	18.6	12.4
Secondary attached	1.1	9.1	4.0	0.8	8.9	3.8
Total	100.0	100.0	100.0	100.0	100.0	100.0

Table 4.8. Percentage distribution of primary school students by school type, geography and year

Secondary enrolment

Likely to the aggregated level, the secondary net enrolment rate did not decrease significantly in any subgroups of children by gender or area (Table 4.9). Of the four groups of children by gender and area of residence, the highest decrease was observed among urban girls (2.4 percentage points). Gender difference favouring girls was observed in 2020 at the aggregated level and separately in rural and urban areas, which continued in 2021 with the same level of significance. Although no significant difference in secondary NER was observed between rural and urban areas in 2020, rural children surpassed their urban counterparts in 2021 with a statistically significant margin ($p < 0.05$).

Gender/Geography	Year		Level of significance	Change from 2020 to 2021
	2020	2021		
All boys	55.8	55.4	ns	-0.4
All girls	67.8	66.6	ns	-1.2
Level of significance	$p < 0.001$	$p < 0.001$		
Rural areas	62.5	62.2	ns	-0.3
Urban areas	61.5	59.8	ns	-1.7
Level of significance	ns	$p < 0.05$		
Rural boys	55.9	55.8	ns	-0.1
Rural girls	68.4	67.8	ns	-0.6
Level of significance	$p < 0.001$	$p < 0.001$		
Urban boys	55.5	54.8	ns	-0.7
Urban girls	66.8	64.4	ns	-2.4
Level of significance	$p < 0.001$	$p < 0.001$		

Note: ns = not significant at $p = 0.05$

Table 4.9. Secondary net enrolment rate by gender, geography and year

The secondary gross enrolment ratio increased by 1.2 percentage points. This was 1.3 percentage points among girls and one percentage point among boys, and 1.6 percentage points in rural and 0.4 percentage points in urban areas (Annex 4.5). The increase was highest among rural girls (1.7 percentage points), followed by rural boys (1.5 percentage points), urban girls (0.8 percentage points), and urban boys (0.1 percentage points), respectively.

More than 95% of the secondary students were admitted to three types of schools (Table 4.10). The non-government secondary schools were at the top, followed by the madrasas and the government secondary schools, respectively (Table 4.10). Whereas more rural students than their urban counterparts were admitted to the non-government schools and the madrasas, it was the other way around in the case of government schools. Likely to primary, not much variation was observed between the years in the distribution of secondary students by school type.

Secondary school type	2020			2021		
	Rural	Urban	Both	Rural	Urban	Both
Non-government	75.1	65.3	71.5	74.4	64.4	70.7
Government	6.4	19.1	11.0	6.1	18.8	10.7
Madrasa	14.9	9.7	13.0	15.7	10.6	13.8
Kindergarten	2.7	4.6	3.4	3.2	4.4	3.6
Others	0.9	1.3	1.0	0.8	1.8	1.2
Total	100.0	100.0	100.0	100.0	100.0	100.0

Table 4.10. Percentage distribution of secondary school students by school type, geography and year

Enrolment in *qawmi/hafizia/nurani madrasas*

The above definitions of the net and gross enrolment ratios for pre-primary and primary levels also included children admitted to the *qawmi*, *hafizia* or *nurani madrasas*. This was not noticed in the past because only a small proportion of the children (less than 4%) were admitted to these specific Islamic education systems (Annex 4.6). This study observed that the figure is much higher than earlier; therefore, a separate section is dedicated here.

In 2020, 7.7% of the children aged 5–15 years were enrolled in the *qawmi*, *hafizia* or *nurani madrasas*, which increased to 9.5% in 2021 (Table 4.11). The figure rose from 8.5% in 2020 to 9.5% in 2021 among 5-year-old children, from 11% in 2020 to 14.1% in 2021 among those aged 6–10 years, and from 5% in 2020 to 6.3% in 2021 among those aged 11–15 years. Considering all age groups, the rate

Year/Age group	Gender		Geography		All
	Boys	Girls	Rural	Urban	
2020					
5-year	9.7	7.3	5.3	13.0	8.5
6–10 years	14.7	7.1	10.4	11.9	11.0
11–15 years	6.8	3.3	5.1	4.7	5.0
Total	10.4	5.1	7.3	8.3	7.7
2021					
5-year	10.7	8.2	9.5	9.4	9.5
6–10 years	18.0	10.0	13.6	14.9	14.1
11–15 years	8.6	4.2	6.8	5.4	6.3
Total	12.5	6.6	9.5	9.5	9.5

Table 4.11. Percentage of children enrolled in *qawmi*, *hafizia* or *nurani madrasas* by age group, year, gender and geography

was observed 10.4% for boys and 5.1% for girls in 2020. These figures increased to 12.5% and 6.6%, respectively, in 2021. In 2020, 7.3% of rural and 8.3% of urban children were admitted to *qawmi*, *hafizia* or *nurani madrasas*; each figure increased to 9.5% in 2021.

During school closure in 2020, 2.1% of pre-primary or primary grade students moved from the secular schools to *qawmi*, *hafizia* or *nurani madrasas*. They were 2.5% of pre-primary and 2.1% of primary-level students.

REASONS OF DROPOUT

Analysis of household survey data showed that despite auto-promotion, 2.7% of the students of 2020 did not approach schools to admit to the following grade or collect textbooks for the new grade in January 2021 (Table 4.12). They were 4.2% of the pre-primary students, 2.5% of students of primary grades, and 2.6% of the students of secondary grades. This rate was 3.3% among boys and 2.2% among girls, and 2.4% among rural and 3.3% among urban residents.

Level of education	Gender		Geography		All
	Boys	Girls	Rural	Urban	
Pre-primary	5.1	3.3	3.4	5.5	4.2
Primary	3.4	1.7	2.0	3.3	2.5
Secondary	2.6	2.6	2.6	2.6	2.6
All	3.3	2.2	2.4	3.3	2.7

Table 4.12. Percentage of students dropped out in 2020 by level of education, geography and gender

The parents of these students were asked to identify the main reason for dropout. They cited several reasons. The highest proportion of the parents (31.6%) said that schools were closed in January 2021 or did not reopen like the pre-pandemic period; therefore, they did not admit their children nor did they go to their school to collect textbooks (Tables 4.13 and 4.14). This figure varied in terms of gender, geography and level of education of students. For instance, parents of 34% of boys and 28.6% of girls, and 26.5% of rural and 38.3% of urban students said this as a reason (Table 4.13). The parents cited this for 68.5% of pre-primary, 33.1% of primary, and 16.1% of secondary level students (Table 4.14). Among other reasons, 17.4% of the parents did not admit their children to school due to the deterioration of the household economy during the pandemic. This reason mainly was cited for students of primary and secondary levels. No gender or area-wise difference was observed in this.

While mentioning the reason, 15.1% of the parents highlighted the loss of their children's interest in education. Another 2.6% reported students' fearing and inability to fill up learning gaps due to school closure. They together stand at 17.7%. This reason was cited more for boys than girls (21.9% versus 12.3%) and for more students from rural areas than their urban counterparts (18.8% versus 16.2%). This was highest for students of primary level (25.7%), followed by students of secondary (14%) and pre-primary (5.6%) levels, respectively.

Another 14.2% of the parents reported that they had already arranged their children's marriage or are looking for a suitable groom. The matrimonial reason was reported mainly for girls, most of whom were students of secondary level. As estimated, 30.5% of girls who had dropped out and 31.5% of the secondary level students who dropped out, fall in this group. Less than 3% of the primary-level students who dropped out also belong to this group. This was reported for the dropouts of 17.3% in rural and 10.1% in urban areas.

Reasons for not admitting to school in 2021	Gender		Geography		All
	Boys	Girls	Rural	Urban	
School closure/not yet open like as before	34.0	28.6	26.5	38.3	31.6
Household economy deteriorated	17.3	17.5	16.8	18.1	17.4
Loss of interest in education	18.8	10.4	16.8	12.8	15.1
Fear of not filling up the gap	3.1	1.9	2.0	3.4	2.6
Got married	0.0	29.2	16.3	10.1	13.6
Searching for a suitable bridegroom	0.0	1.3	1.0	0.0	0.6
Joined in work	14.7	0.6	8.2	8.7	8.4
Searching for a suitable work	1.6	1.3	1.5	1.3	1.4
Difficulty obeying health norms in public places	1.6	2.6	1.5	2.7	2.0
Considering admitting to qawmi/hafizia/nurani madrasas	3.7	4.5	5.1	2.7	4.1
Others	4.2	1.9	4.1	2.0	3.2

Note: Multiple responses counted

Table 4.13. Percentage of students who did not admit in 2021 by the reasons, gender and geography

As reported by the parents, 9.8% of the students who dropped out either joined work or were searching for a suitable job. This was 16.3% among boys and 1.9% among girls, consisting of 3.8% of pre-primary, 6.8% of primary and 15.4% of secondary level students. Almost an equal proportion was observed among rural and urban students.

Reasons for not admitting to school in 2021	Level of education			All
	Pre-primary	Primary	Secondary	
School closure/not yet open like as before	68.5	33.1	16.1	31.6
Household economy deteriorated	3.7	18.9	21.0	17.4
Loss of interest in education	1.9	22.3	12.6	15.1
Fear of not filling up the gap	3.7	3.4	1.4	2.6
Got married	0.0	2.0	30.8	13.6
Searching for a suitable bridegroom	0.0	0.7	0.7	0.6
Joined in work	1.9	6.1	13.3	8.4
Searching for a suitable work	1.9	0.7	2.1	1.4
Difficulty obeying health norms in public places	5.6	2.0	0.7	2.0
Considering admitting to qawmi/hafizia/nurani madrasas	7.4	6.8	0.0	4.1
Others	5.6	4.1	1.4	3.2

Note: Multiple responses counted

Table 4.14. Percentage of students who did not admit in 2021 by the reasons and level of education

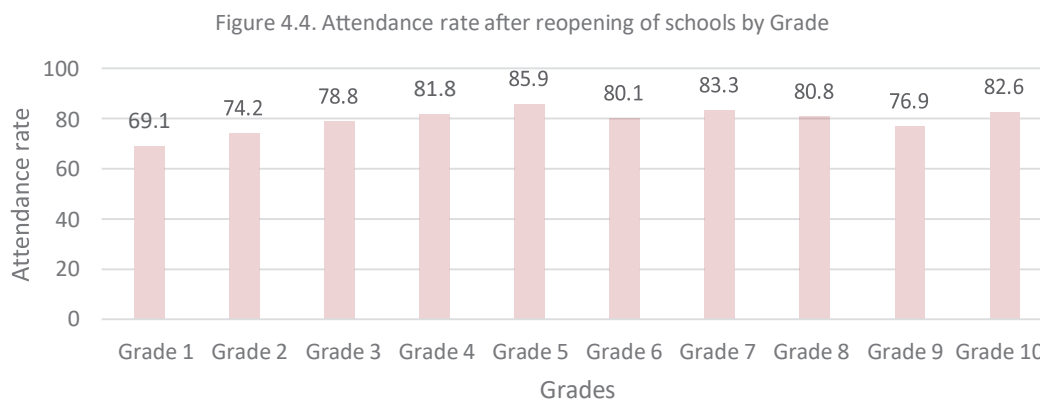
A section of the parents did not admit their children as they thought it was difficult to obey the health-norms related to coronavirus in public places on the way or inside the school. Another section of the parents decided on admitting their children in qawmi, hafizia or nurani madrasas, taking them away from secular institutions.

RETURN TO SCHOOLS

Attendance after reopening

After about 18 months of closure the schools reopened on 12 September 2021. The arrangement in schools was different from the pre-pandemic period. Teaching-learning activities were not held each day for students of most grades. For instance, students of grades 1–4 and 6–9 were asked to attend the classroom activities once a week and those of grades 5 and 10 attended each day. The pre-primary students stayed at home. This study collected information on students' (of grades 1–10 in 2021) attendance during the first four weeks of reopening through a phone call with their parents. Therefore, students attending classroom activities at least once a week during the first four weeks of reopening were considered 'school attendance' after reopening schools.

The attendance rate varied by grade (Figure 4.4). Although a steadily increasing progression was observed among the primary-grade students, no such trend was observed among those in secondary grades. The attendance rate was highest among students in grade 5 and lowest among those in grade 1. Analysis by area and gender shows that boys lagged behind girls and rural students surpassed their urban counterparts in each grade.



On average, 79.7% of students of all grades were present in school after reopening – 78.6% in primary and 80.6% in secondary level (Table 4.15). The attendance rate was 77.1% among boys and 81.8% among girls ($p < 0.001$). After reopening, the girls of each educational level were ahead of the respective boys in attending schools. For instance, the attendance rate was 76% among boys and 80.9% among girls at the primary level ($p < 0.001$). This was 78.2% among boys and 82.6% among girls at the secondary level ($p < 0.001$). The urban students lagged behind their rural counterparts in attending schools – 77.5% versus 80.9% ($p < 0.001$). Such a deviation between urban and rural areas was observed only among the primary level students (74.9% versus 80.9%; $p < 0.001$). The secondary level students of both the areas attended school equally.

Level of education	Gender			Geography			All
	Boys	Girls	Level of significance	Rural	Urban	Level of significance	
Primary (1–5)	76.0	80.9	$p < 0.001$	80.9	74.9	$p < 0.001$	78.6
Secondary (6–10)	78.2	82.6	$p < 0.001$	81.0	80.1	$p < 0.001$	80.6
Total	77.1	81.8	$p < 0.001$	80.9	77.5	$p < 0.001$	79.7

Table 4.15. Attendance rate of students after reopening schools by the level of education, gender and geography

After the reopening of schools, a statistically significant gender gap in return-to-school rate persisted in the same direction irrespective of students' educational level and area of residence. This was highest among rural girls and lowest among urban boys at each level of education. Overall, the attendance rate was 83.1% among rural girls and 75.1% among urban boys (Table 4.16). Therefore, the gap between the highest and the lowest rates was eight percentage points.

Level of education	Gender			Geography		
	Boys	Girls	Level of significance	Rural	Urban	Level of significance
Primary (1–5)	78.1	83.5	p<0.001	72.8	76.8	p<0.05
Secondary (6–10)	78.6	82.8	p<0.01	77.5	82.2	p<0.01
Total	78.3	83.1	p<0.001	75.1	79.7	p<0.001

Table 4.16. Gender difference in attendance rate by level of education, geography and gender

Students at risk of dropout

An attempt was made to follow up students who were found currently enrolled in pre-primary to grade 9 in early 2020 up to the end of one month after reopening schools. This allowed exploring the continuation of education of a cohort of students over 18 months of school closure. Household survey data were used for this. The number of students under this follow-up exercise was 12,092 – half belonging to pre-primary to grade 4 and the remaining half belonging to grades 5–9. Such grouping is because as auto-promotion took place in January 2021, the first group of students were supposed to continue their education in grades 1–5 in the same primary schools and the second group in grades 6–10 in the secondary schools.

Of the total students under analysis, 97.3% were admitted to the following grades and received textbooks in January 2021. Of those admitted to the school and who received textbooks in January 2021, 79.7% of them returned to school in September 2021. Therefore, after 18 months of school closure, students who remained in schools stood at $(97.3 \times 0.797 =) 77.5\%$. The remaining students $(100 - 77.5 = 22.5\%)$ were likely to have dropped out if they did not join their classes after one month of reopening. They are defined as at risk of dropout in this study. The rate of students at risk of dropout was 23.2% at the primary level and 21.9% at the secondary level (Table 4.17). This rate was higher for boys than girls (25.5% versus 19.8%) and higher for urban students than their rural counterparts (25% versus 20.9%). The gender and area-wise differences were in the same direction irrespective of education level. The highest rate accounted for urban boys and the lowest rate for rural girls.

Parental education was observed to be positively associated with the rate at which students remained in school. Therefore, the proportion of students at risk of dropout decreased with the increase in parental education. For instance, the rate was 27.2% if the mothers had no schooling, 24.5% if the mothers were admitted to schools but dropped out before completing primary education, 20.5% if they completed primary education but left school keeping secondary education incomplete, and 18% if they completed secondary education or studied more (Table 4.18). These rates against similar levels of fathers' education were 25.5%, 23.5%, 21.9% and 17.8%, respectively. Analysis of data disaggregated by students' level of education also shows a similar trend.

A question may be asked whether the entire dropouts happened was due to the school closure during the pandemic. The simple answer is 'no' because of the secular dropout that happens in the system anyways. DPE (2021) and BANBEIS (2021) estimated cohort dropout rates – 17.2% for primary and 35.8% for secondary. The yearly dropout rates are thus 3.4% and 7.2%, respectively. For 18 months,

Level of education/ Geography	Gender		
	Boys	Girls	Both
Primary			
Rural	24.0	16.9	20.3
Urban	30.3	24.9	27.6
Both	26.4	20.0	23.2
Secondary			
Rural	24.2	19.4	21.5
Urban	24.9	20.3	22.5
Both	24.6	19.7	21.9
All			
Rural	24.1	18.2	20.9
Urban	27.8	22.4	25.0
Both	25.5	19.8	22.5

Table 4.17. Percentage of students who did not appear in the classrooms after reopening of schools by level of education, geography and gender

the rate the rate may be somewhat higher to 5.2% for primary and 10.7% for secondary education. Therefore, a relatively better estimate of students at risk of dropout due to school closure during the pandemic is 18% (23.2% - 5.2%) at the primary level and 11.2% (21.9% - 10.7%) at the secondary level. In other words, school closure of 18 months increased the dropout rate at least four-fold at the primary level and two-fold at the secondary level.

Parental education	Students' level of education		All
	Primary	Secondary	
Mothers' education			
Nil	28.1	26.9	27.2
Grades 1–4	24.6	24.4	24.5
Grades 5–9	20.9	20.0	20.5
Grades 10+	20.2	17.8	18.0
Fathers' education			
Nil	25.2	25.9	25.5
Grades 1–4	22.6	24.5	23.5
Grades 5–9	23.5	20.5	21.9
Grades 10+	20.5	15.6	17.8

Table 4.18. Percentage of students who did not appear in the classrooms after reopening of schools by parental education and students' level of education

Number of students at risk of dropout

The Directorate of Primary Education and Bangladesh Bureau of Educational Information and Statistics publish annual census-based data on all types of educational institutions in Bangladesh. The number of students admitted in the academic year of 2020 and the cohort dropout rates were taken from DPE (2021) and BANBEIS (2021). The cohort dropout rates were divided by five to determine the yearly dropout rates. As the schools were closed for 18 months, the multiplication of the annual dropout rates by 1.5 produced the natural dropout rates for this period. The calculated natural dropout rates were then subtracted from the rates of students who did not appear in the classrooms after reopening (Table 4.17) to get the actual rate of students at risk of dropout during this period. The next step was multiplying the two rates (not appearing in classrooms and natural dropout) by the number of students and dividing the figures by 100. This gave the estimated total number of students who did not appear in the classrooms after reopening and the number of students who might drop out during a regular period. Subtracting the latter number from the former produced the number of students at risk of dropping out due to school closure. DPE and BANBEIS provide only gender-segregated dropout rates at the national level; therefore, this exercise was not possible by the area of residence of students.

Of the registered students of 2020, 7,163,002 did not appear in the classrooms after reopening of schools in mid-September 2021. Of these, 2,314,649 may have naturally dropped out and an additional 4,848,353 may be called at risk of dropout due to school closure (Table 4.19). The number of students at risk of dropout was more than double the number of students who naturally drop out. In other words, the total number of students who did not appear in the classrooms after reopening was three-fold the number of students who naturally dropped out of the system. The total number of students who did not appear in primary classrooms was 4,287,979 and from secondary classrooms was 2,975,023. Of them, the natural dropout was accounted for 961,099 and 1,453,550, respectively.

Education level/gender	Number of students in 2020 ¹	Estimated rate			Estimated number of students*		
		Total (not in school) ²	Natural dropout ³	Additional	Total (not in school) ²	Natural dropout ³	Additional
	a	b	c	d = b - c	e = (a x b)/100	f = (a x c)/100	g = e - f
Primary							
Boys	91,20,223	26.4	5.7	20.7	24,07,739	5,19,853	18,87,886
Girls	93,62,444	20.0	4.7	15.3	18,72,489	4,40,035	14,32,454
Both	1,84,82,667	23.2	5.2	18.0	42,87,979	9,61,099	33,26,880
Secondary							
Boys	61,70,929	24.6	11.0	13.6	15,18,049	6,78,803	8,39,246
Girls	74,13,650	19.7	10.5	9.2	14,60,489	7,78,433	6,82,056
Both	1,35,84,579	21.9	10.7	11.2	29,75,023	14,53,550	15,21,473
All							
Boys	1,52,91,152	25.5	-	-	39,25,788	11,98,656	27,27,132
Girls	1,67,76,094	19.8	-	-	33,32,978	12,18,468	21,14,510
Both	3,20,67,246	22.5	-	-	71,63,002	23,14,649	48,48,353

¹Sources: DPE (2021) for primary and BANBEIS (2021) for Secondary

²Estimated from the household survey findings as shown in Table 4.17

³Divided the cohort dropout rates (DPE, 2021; BANBEIS, 2021) by 5 and then multiplied by 1.5

* Sum of the boys and the girls may vary slightly due to rounding in dropout rates after decimal

Table 4.19. Estimated number of students at risk of dropout by level of education and gender

Therefore, the number of students at risk of dropout was 3,326,880 for primary and 1,521,473 for secondary. This means that the number of students who were unaccounted for becomes 4.5-fold at the primary level and more than two-fold at the secondary level. Boys were more in number than girls in terms of being at risk of dropout. A larger number of girls than boys were anticipated to drop out naturally, but school closure due to the pandemic affected boys more than girls. Therefore, the number of boys who did not appear in the classrooms was 3.3 times the number of boys who naturally drop out and it was 2.7 times for girls.

SCHOOL-LEVEL ATTEMPTS AND HEAD TEACHERS' OPINIONS REGARDING DROPOUT

As most of the fieldwork for this study was carried out before the schools reopened, headteachers were asked to identify the student groups who were more vulnerable to dropping out of the education system due to school closure for a prolonged period. The headteachers replied to this question from various angles, such as gender, area/location, economy, and education (Annex 4.7). The highest proportion of the headteachers said that students of low-income families are the most vulnerable (88.2%), followed by those whose parents are not as conscious about the benefits of education (63.1%). The others were those who had no one to help in studies at home (21.1%), those who were already lagging behind in learning before school closure (19.6%), and those who became addicted to cell phones during school closure (13.1%). The heads also pointed out more on the girls' rate dropout than that of boys, and students of rural areas than those in urban areas. Some differences by school type are also noticed.

The headteachers were asked to talk about the activities they were planning to reduce student dropout after the reopening (Annex 4.8). The two primary activities, as they said, were awareness building of the parents (84.2%) and motivating students through home visits (59.7%). The other planned activities at the school level were an arrangement of parent-teacher meetings (33.1%), ensuring regular attendance of students (21.4%), financial help to students needing the support (19.7%), waiver of tuition fees for students from families with low income (16.7%), and attempt to increase student-teacher relationship (10.6%).

The headteachers were also asked to make suggestions to the government to prevent student dropout. Here again, the headteachers made several suggestions (Annex 4.9). The three main recommendations that the headteachers made were related to financial support for students. These include monetary help to students of families with low income (48.3%), provision of upabritti to all students (45.4%), and an increase in the monetary value of upabritti (41.8%). The other suggestions of the headteachers were the provision of mid-day meals for every student in all schools (35.5%), strong surveillance to prevent early marriage (31.1%), and child labour (19.6%).



CHAPTER

5

Studies at Home during
School Closure



This chapter presents information on learning initiatives at home during school closures. The headteachers provided information on school-level initiatives, their effectiveness, and their challenges in executing those initiatives. They also offered suggestions for further improvement of actions already taken. Students provided information on the availability of selected ICT devices in their homes and their access to those for academic purposes. They also described the academic activities they carried out through various modes during school closure. Both the headteachers and students provided their views about the academic programmes aired on television.

INITIATIVES, CHALLENGES AND EFFECTIVENESS

School-level initiatives

The headteachers provided information on school-level activities during the closures separately for 2020 and 2021. Although the top seven activities of the schools were similar in both years, a difference was observed in terms of their emphasis (Table 5.1). For instance, connecting students and parents over cell phones got the top priority in 2020, followed by home visits and asking them to do school assignments. On the other hand, asking students to do school assignments came up at the top in 2021, followed by connecting students and parents over cell phones and offering online classes, respectively. Home visits came down from the second position in 2020 to the fourth in 2021. The schools' other activities emphasised asking students to study at home, watch academic programmes on TV, and provide feedback on assignments. As reported by the headteachers, the schools' increased their emphasis from 2020 to 2021 on asking students to do school assignments, offering online classes, and providing feedback on the school assignments. On the other hand, the schools reduced their emphases from 2020 to 2021 on calling students over the phone, home visits, asking students to study at home, and watching academic programmes on TV. A small proportion of the headteachers also mentioned the following activities: providing homework through website/phone/Facebook, asking students to watch academic content on the Internet, asking students to take private tuition, offering face-to-face classes, arranging face-to-face and online examinations (Annexes 5.1 and 5.2).

Although variations in the chronology of emphasis on activities were observed between primary and secondary schools and between rural and urban areas in 2020, it was almost similar in 2021 (Annexes 5.1 to 5.4). For instance, in 2020, calling students and parents over cell phones was the top activity irrespective of the level of education and area; student home visits were the second most important

Schools activities	Year	
	2020	2021
Connected students/parents over the phone	84.8	77.4
Students' home visited	63.9	56.0
Asked students to submit school assignments	52.3	85.7
Offered online classes	49.7	67.9
Asked students to study at home	44.7	38.1
Asked students to watch BTV/Sangsad TV	36.9	30.6
Provided feedback on assignments	11.4	26.6

Note: Multiple responses counted

Table 5.1. Percentage of schools by major activities carried out during school closure and year

activity at the primary level, followed by asking students to study at home. Asking students to submit school assignments and offering online classes were the main activities at the secondary level. A similar type of variation was also observed between rural and urban schools.

Challenges faced by the schools

The headteachers identified several challenges in carrying out the above activities. The major challenge as mentioned by 72% of headteachers was unavailable cellphones in students' homes (Table 5.2). A related issue was the access for students. If there was only one cellphone in a household, it belonged to the household heads – primarily the males - who stayed outside the home most of the time. Teachers were unable to reach students by calling these parents; A third of the headteachers raised this issue. Poor Internet or mobile connectivity was also a challenge mentioned by a third of the headteachers. Over a quarter of the head teachers talked about the students' and the parents' lack of interest in remaining connected with schools. The other challenges included not having students' phone numbers, students' disinterest in doing assignments, the inability of parents to bear mobile data costs, students' disinterest in online classes, teachers not having smartphones, parents annoyed at phone calls from schools, lack of ICT skills of students, and lack of interest of teachers to call students. A small proportion of the headteachers also mentioned the following challenges: students' engagement in income-generating activities, teachers' lack of IT skills and being busy in non-academic activities, and difficulty in uploading large videos of online classes on Facebook pages. More analysis by school type and area is available in Annexes 5.5 and 5.6.

Challenges faced	School type		All
	Primary	Secondary	
Not having phones in students' homes	71.6	69.8	70.7
Absent of phone owner fathers' at home	41.4	25.3	33.0
Poor internet/mobile connectivity	27.2	37.9	32.8
Students/parents' disinterest in keeping in contact	27.8	25.3	26.5
Not having students' phone numbers to school	22.5	14.8	18.5
Students' disinterest in doing assignments	11.2	23.6	17.7
Parents unable to bear mobile data cost	14.8	20.3	17.7
Students' disinterest in online classes	11.2	22.5	17.1
Not having smartphones for teachers	11.8	20.9	16.5
Parents sometimes annoyed at phone calls	14.8	9.3	12.0
Lack of ICT skills of students	9.5	13.2	11.4

Note: Multiple responses counted

Table 5.2. Percentage of schools by major challenges they have faced in carrying out various activities during school closure and school type

Effectiveness of school-level initiatives that the schools could do more

When asked about the effectiveness of the activities they have carried out during school closure, the heads expressed their opinion on a five-point scale. The points on the scale were very effective (75% or more), effective (50–74%), moderate (25–49%), less effective (1–24%), and ineffective (0%). Table 5.3 shows that 15.7% of the headteachers said their activities in 2020 were very effective, 37.6% identified them as effective, 28.3% moderate, 16.9% less effective, and the remaining as ineffective. The figures corresponding to very effective and effective categories increased to 23.8% and 45.2%, respectively, in 2021. Whereas a small section of the headteachers reported that their activities in 2020 were ineffective, no such opinion was made on 2021 activities. Separate analysis for primary and secondary schools also indicates increased effectiveness of school activities for both. A similar finding can be observed separately for rural and urban schools and four categories of schools under study (Annexes 5.7 and 5.8).

Further analysis of data shows that as per the headteachers, the effectiveness of their activities increased in 36.6% of the cases; it remained the same in 55.4% of the cases and decreased in 8% of the cases (Annex 5.9).

Effectiveness	2020			2021		
	Primary	Secondary	All	Primary	Secondary	All
Very effective	20.9	10.5	15.7	32.5	15.1	23.8
Effective	40.8	34.5	37.6	42.9	47.6	45.2
Moderately effective	24.0	32.5	28.3	16.7	28.6	22.6
Less effective	12.2	21.5	16.9	7.9	8.7	8.3
Ineffective	2.0	1.0	1.5	-	-	-
Total	100.0	100.0	100.0	100.0	100.0	100.0

Table 5.3. Percentage distribution of headteachers' by their opinion on the effectiveness of their activities during school closure by school type and year

The headteachers were also asked whether they could identify any activity they did not do much of but could do for the betterment of students. Keeping the pandemic in mind, 47.5% of the respondents said that they could arrange face-to-face classes on a limited scale for students of all grades, 14.1% said that they could do the same only for students of grades 5, 8 and 10, and 19.7% said that they could arrange face-to-face examination on a limited scale (Table 5.4). Over a quarter of the headteachers reported that they asked students to study at home while visiting them but did not monitor whether they followed the instruction. Therefore, they said they could inspect students' home studies to make their visits and calls more effective. Nearly a fifth of the headteachers said they could offer online classes, and 14.8% said they could be more active in providing the assignments at the doorsteps of the students. It was noticed that proportionately more headteachers of secondary schools raised the issues of face-to-face activities (classes or exams) than those of primary schools. The same was done more by the heads of rural schools than their urban counterparts. Although a small proportion, the headteachers spoke on the following: asking students to watch academic programmes on TV, being active in reaching the assignments to students and providing them feedback, contacting students over the phone, and orienting teachers about the assignments for students and uploading homework on the schools' Facebook/web page (Annexes 5.10 and 5.11).

Activities could be done	School type		All
	Primary	Secondary	
Take face-to-face classes at a limited scale	43.0	52.1	47.5
Home visit of students to see whether they study at home	26.1	25.4	25.7
Offer online classes to students	21.1	18.3	19.7
Arrange face-to-face examination at a limited scale	17.6	21.8	19.7
Take assignments to students' homes	14.8	14.8	14.8
Arrange face-to-face classes daily for terminal examinees	12.7	15.5	14.1

Note: Multiple responses counted

Table 5.4. Percentage of headteachers by their opinion on the activities they could do but did not do due to various limitations

EDUCATION THROUGH TELEVISION: HEADTEACHERS' OBSERVATIONS

Telecasting academic programmes through Bangladesh Television (BTV) and Sangsad Television (Sangsad TV) was one of the major initiatives by the government for students of all grades. The same programme was telecast through both channels regularly. The programme's name for the pre-primary and primary grades was Ghare Boshe Shikhi (Let's Learn at Home). It was Amar Ghare Amar School/Madrassa (My School/Madrassa at My Home) for students of secondary grades. The headteachers and students reported on the students' access to these academic programmes.

The headteachers were asked whether they had watched these academic programmes on television. A fifth of them said they 'often' watched these programmes, three-fifths of them reported 'sometimes', 14.6% reported 'not that much', and 4.3% reported 'never' (Table 5.5). About watching TV programmes 'often', the heads of the primary schools were ahead of those of the secondary schools, and the heads of the urban schools were ahead of their rural counterparts. When the headteachers who watched the programmes 'sometimes' were added to those who watched these 'often', the difference between the headteachers of primary and secondary schools decreased (81.8% and 80.6%). However, it increased between rural and urban schools (79.1% and 84.4%, respectively). The heads of the newly nationalised primary schools were slightly ahead of the heads of the government primary schools in watching academic programmes on television (Annex 5.12). However, the madrasa superintendents were much behind the heads of the non-government secondary schools in this regard.

Frequency of watching	School type		Geography		All
	Primary	Secondary	Rural	Urban	
Often	24.4	17.9	20.5	22.1	21.1
Sometimes	57.4	62.7	58.6	62.3	60.1
Not that much	15.2	13.9	15.2	13.6	14.6
Never	3.0	5.5	5.7	1.9	4.3
Total	100.0	100.0	100.0	100.0	100.0

Table 5.5. Percentage distribution of headteachers by frequency of watching the academic programmes on TV

The headteachers assessed these programmes in the context of the continuation of education of students during the pandemic. They did it on a five-point scale. The points on the scale were very *effective* (75% or more), *effective* (50–74%), *moderate* (25–49%), *less effective* (1–24%), and *ineffective* (0%). This question was asked only of those who did watch the academic programmes on television. Of the teachers, 14.2% assessed it as very *effective*, 35.7% as *effective*, 25.7% as *moderate*, 21.3% as *less effective*, and 3.1% as *ineffective* (Table 5.6). Although not much variation was observed in the assessment of primary and secondary school headteachers, a more positive assessment was found from the headteachers of urban schools than those in rural schools. Whereas 52.7% of the headteachers of government primary schools assessed the TV programmes as effective or very effective, it was 45.5% in newly nationalised schools (Annex 5.13). This was 52.4% in non-government secondary schools and 45.3% in the madrasas.

The headteachers made several suggestions to make the TV academic programmes more effective. They emphasised the motivation of students and their parents to take advantage of these opportunities. Over a third of the headteachers highlighted parental motivation so that they could ask students to watch TV programmes, and 45.5% of them suggested encouraging students directly (Table 5.7). The other suggestions of the headteachers were to use joyful teaching methods (29.4%), to keep a provision of asking questions by students (22.8%), to expand the duration of class time (22%), not to air the same programme several times (12.1%), to keep a provision of homework (11.9%), to present every-

thing in Bangla (8.3%), and to upload TV classes in YouTube and other online media (7.1%). It was surprising that none of the interviewed head teachers spoke about how they or the other teachers could be a part of these programmes or how these programmes could be integrated with the schools' activities. More analysis is provided in Annex 5.14.

The headteachers who did not categorise the televised programmes as 'very effective' were asked to identify the reasons for their response. They identified four primary reasons. Nearly 69% of the respondents observed that many students, in general, do not watch the two channels through which the programmes were telecast, 48.6% observed that many students did not have appropriate technology (Dish line) at home, 31.1% of the heads identified that many students did not know about the Sangsad TV, and 18.2% of the heads identified that students did not know about this programme (Annexes 5.15 and 5.16).

Effectiveness	School type		Geography		All
	Primary	Secondary	Rural	Urban	
Very effective	15.7	12.6	12.2	17.2	14.2
Effective	34.0	37.4	34.8	37.1	35.7
Moderate	28.3	23.2	28.7	21.2	25.7
Less effective	17.8	24.7	20.4	22.5	21.3
Ineffective	4.2	2.1	3.9	2.0	3.1
Total	100.0	100.0	100.0	100.0	100.0

Table 5.6. Percentage distribution of headteachers by assessment categories on the effectiveness of the academic programmes on television

On the question to estimate the proportion of their students they thought followed the TV academic programmes, over 31% of the headteachers said it to be 10% or less, a fifth of them estimated it to be 11–20%, another fifth estimated it to be 21–40%, and 13.1% estimated it to be 41–50% (Annex 5.17). The remaining 14.7% estimated the figure to be more than 50%. The head teachers' responses were then corresponded with the number of students in the respective schools to calculate the proportion of students who could follow the above television programmes. Based on this exercise, it was observed that a majority of students from pre-primary to grade 10 could not take advantage of the academic programmes telecast through BTV and Sangsad TV.

Suggestions	School type		Geography		All
	Primary	Secondary	Rural	Urban	
Motivate students to watch classes on TV	42.5	48.2	43.7	48.1	45.5
Motivate parents to ask students to watch TV	34.1	34.1	35.4	32.1	34.1
Use more joyful teaching methods	33.5	25.3	33.0	23.7	29.4
Provision of asking questions by students	18.6	27.1	22.3	23.7	22.8
Expand duration of class time	26.9	17.1	23.3	19.8	22.0
Not to air the same programme several times	12.6	11.8	13.1	10.7	12.2
Keep a provision of homework	11.4	12.4	12.6	10.7	11.9
Present everything in Bangla	10.2	6.5	7.3	9.0	8.3
Upload TV classes on YouTube/online media	4.2	10.0	5.3	9.9	7.1

Note: Multiple responses counted

Table 5.7. Percentage of head teachers by their suggestions on improving the effectiveness of the academic programmes on television

As observed from the above exercise with the headteachers, 43.6% of all students from pre-primary to grade 10 followed the TV academic programmes (Table 5.8). This was 52.9% among pre-primary, 52% among primary, and 39.1% among secondary-level students. The figure was higher for the newly nationalised schools than government primary schools at both pre-primary and primary levels. Although 59.1% of the madrasa students followed the TV programmes at the secondary level, only 34.2% of the non-government school students followed this. Overall, 41.7% of rural and 45.9% of urban students followed the academic programmes. A higher rate of urban students than their rural counterparts was observed among primary and secondary levels, but an opposite scenario was observed at the pre-primary level.

School type/area	Level of education			All
	Pre-primary	Primary	Secondary	
School type				
Government	52.4	51.4	-	51.5
Newly nationalised	54.0	53.4	-	53.5
Non-government	-	-	34.2	34.2
Madrasa	-	-	59.1	59.1
Geography				
Rural	54.2	51.6	36.9	41.7
Urban	51.5	52.5	42.0	45.9
All	52.9	52.0	39.1	43.6

Table 5.8. Headteachers' estimation of the percentage of students who followed the TV academic programmes

STUDENTS' ACCESS TO INFORMATION AND COMMUNICATION TECHNOLOGIES

Availability of ICT devices at home and students' access to those are essential during the pandemic because most communications between students and teachers had to be ICT-based. First, let's look at the availability of selected ICT devices in students' homes. As reported, 92.4% of the households had at least one basic/feature phone in 2020, and 59.1% had at least one smartphone (Table 5.9). The proportion of households with a smartphone significantly increased to 66.2% in 2021, but slightly decreased to 91.9% in the case of basic/feature phones. A tiny proportion of the households had a desktop or laptop computer or a radio set. Over 57% of the households had a television set in 2020 which remained the same in 2021. The Internet was available in 53.4% of households in 2020 and 63% of those in 2021 ($p < 0.001$). A statistically significant increase in having smartphones and the Internet at home was observed with the increase in students' grades in both years (Annex 5.18). No such relationship was noticed in the cases of basic/feature phones or television sets.

Regarding the Internet, 6% of the households had broadband, 44.8% used mobile data packs, and 2.5% used both in 2020 (Annex 5.19). These figures increased to 8.2%, 52.1% and 2.7%, respectively, in 2021. Students' grade-wise increase in the availability of mobile data packs at home was also noticed in both years. Therefore, the primary ICT devices available at home were basic/feature phones or smartphones, television sets, and the Internet. A statistically significant increase in the availability of these from 2020 to 2021 was observed in the cases of smartphones and the Internet. It should be noted that 4.6% of the households bought a smartphone and 9.9% got an Internet connection in 2020 to facilitate children's education. These figures were 8.2% and 15%, respectively, in 2021.

ICT devices	Year		Level of significance
	2020	2021	
Basic/feature phone	92.4	91.9	ns
Smartphone	59.1	66.2	p<0.001
Desktop computer	1.6	1.5	ns
Laptop computer	2.3	2.2	ns
Radio set	0.3	0.1	ns
Television set	57.1	56.2	ns
Internet	53.4	63.0	p<0.001

Notes: Multiple responses counted, ns = not significant at p = 0.05

Table 5.9. Percentage of households with selected ICT gadgets at home by type and year

No urban-rural variation was observed in having basic/feature phones at homes in any year (Table 5.10). Urban households were significantly ahead of rural households in having smartphones, television sets, and the Internet with a highly statistically significant margin ($p<0.001$). An increase in the proportion of households with a smartphone or the Internet was observed in rural and urban areas separately ($p<0.001$). Alternately, the proportion of households with a television set had no change in rural areas; it significantly decreased in urban areas ($p<0.05$).

ICT devices			Level of significance
	2020	2021	
Basic/feature phone			
Rural	92.1	92.0	ns
Urban	93.0	91.7	ns
Level of significance	ns	ns	
Smartphone			
Rural	53.1	59.8	p<0.001
Urban	68.8	75.1	p<0.001
Level of significance	p<0.001	p<0.001	
Television set			
Rural	46.8	46.4	ns
Urban	73.9	70.0	p<0.05
Level of significance	p<0.001	p<0.001	
Internet			
Rural	46.8	55.8	p<0.001
Urban	64.1	73.2	p<0.001
Level of significance	p<0.001	p<0.001	

Notes: Multiple responses counted, ns = not significant at p = 0.05

Table 5.10. Percentage of students' households with selected ICT gadgets at home by type, geography and year

Most of the ICT devices were common properties of the households or belonged to the senior members such as the parents but not the students. In 2020, only 4.5% of students had a basic/feature phone to which they had full access, 8% had a smartphone, 0.9% had a television set, and 7.8% had

the Internet (Table 5.11). These figures were 4%, 11.4%, 0.4% and 10.9%, respectively, in 2021. A statistically significant increase in this was observed in the cases of smartphones ($p < 0.001$) and the Internet ($p < 0.05$). Overall, at least any ICT devices belonged to 14% of the students in 2020 and 16.4% in 2021 ($p < 0.001$). Therefore, it is understood that the majority of students had to depend on the senior members of the households, especially the parents, to use these devices. especially the parents, to use these gadgets.

ICT devices	Year		Level of significance
	2020	2021	
Basic/feature phone	4.5	4.0	ns
Smartphone	8.0	11.4	$p < 0.001$
Desktop computer	0.3	0.2	ns
Laptop computer	0.4	0.3	ns
Radio set	0.0	0.0	na
Television set	0.9	0.4	ns
Internet	7.8	10.9	$p < 0.05$
Any of the above	14.0	16.4	$p < 0.001$

Notes: ns = not significant at $p = 0.05$; na = not applicable

Table 5.11. Percentage of students having ICT gadgets of their own by type and year

The next question asked how many students had access to the ICT devices for academic purposes during school closure. As reported by students, 46.8% of them used any ICT devices at home in 2020 for academic purposes, which increased to 51.2% in 2021 ($p < 0.001$) (Table 5.12). Device-wise, in 2020, 12.6% of students used basic/feature phones, 29.3% used smartphones, 21.1% used television, and 28.1% used the Internet. These figures were 10.8%, 41.2%, 10.8% and 40.5%, respectively, in 2021. A statistically significant increase in using basic/feature phones, smartphones and the Internet for academic purposes is noticed. A decreasing use of television was also observed during the same period. Students reported that they could not always use the ICT devices as required because the other members of their households also need these simultaneously. This certainly hampered their education. As observed, in the case of each of the devices, a fourth of students were able to use the ICT devices most of the time they required, and three-fourths of them used these sometimes. A further estimate shows that 11% of students used ICT devices most of the time as required in 2020, which increased to 13.5% in 2021 ($p < 0.01$).

ICT devices	Year		Level of significance
	2020	2021	
Basic/feature phone	12.6	10.8	$p < 0.05$
Smartphone	29.3	41.2	$p < 0.001$
Desktop computer	0.5	0.5	ns
Laptop computer	0.7	0.9	ns
Radio set	0.1	0.0	ns
Television set	21.1	10.8	$p < 0.001$
Internet	28.1	40.5	$p < 0.001$
Any of the above	46.8	51.2	$p < 0.001$

Note: ns = not significant at $p = 0.05$

Table 5.12. Percentage of students using ICT gadgets for academic purposes by type and year

A sharp increase in the percentage of students using ICT devices for academic purposes was observed ($p < 0.001$). For instance, a quarter of grade 4 students in 2020 used any ICT devices, which increased to 51.1% among grade 6 and 60.8% among grade 9 (Annex 5.20). The corresponding figures for the same groups of students were 27.9%, 52.1% and 68.1%, respectively, in 2021, although the students were auto-promoted to the immediate next grades. A short form of this is presented in Table 5.13. This table shows that proportionately more boys used ICT devices than girls in both years – 50% versus 44.2% in 2020 ($p < 0.001$) and 54.6% versus 48.7% in 2021 ($p < 0.01$). A statistically significant variation by area of residence of students was also observed, where rural students were lagging behind their urban counterparts. In 2020, 40.7% of rural and 56.6% of urban students used ICT devices ($p < 0.001$), the figures were 46.4% and 58%, respectively, in 2021 ($p < 0.001$). Students' grade-wise analysis of different ICT device uses is also provided in Annex 5.20. Use of each significantly increased with the increase of grade.

Grade/gender/area	Year		Level of significance
	2020	2021	
Grade in 2020			
4–5	29.1	34.4	$p < 0.01$
6–7	51.2	53.9	ns
8–9	60.0	65.5	$p < 0.01$
Level of significance	$p < 0.001$	$p < 0.001$	
Gender			
Boys	50.0	54.6	$p < 0.05$
Girls	44.2	48.7	$p < 0.01$
Level of significance	$p < 0.001$	$p < 0.01$	
Geography			
Rural	40.7	46.4	$p < 0.001$
Urban	56.6	58.0	ns
Level of significance	$p < 0.001$	$p < 0.001$	
All	46.8	51.2	$p < 0.001$

Note: ns = not significant at $p = 0.05$

Table 5.13. Percentage of students using any ICT gadgets for academic purposes by grade, gender, geography and year

ACADEMIC ACTIVITIES AT HOME: STUDENTS' VERSION

Students were asked to report on their academic activities during the school closure, dividing the whole duration into five time periods. The periods were mid-March–May 2020, June–August 2020, September–December 2020, March–May 2021, and June–August 2021. No information was collected for January–February 2021 because students generally do not study much at the beginning of a new academic year; registration for new grades, textbook distribution, and annual sports are the main school activities at the beginning of the academic year. Students reported that they engaged in self-studies at home during school closure with support from family members and private tutors. In addition, they attended online classes and completed school assignments, watched academic programmes aired through Bangladesh Television (BTV) and Sangsad Television (Sangsad TV), and browsed Internet content. Listening to radio (Bangladesh Betar) programmes was sporadic.

Students reported their engagement in each activity on a three-point scale separately for the five-time periods mentioned above. The points on the scale were often, sometimes and never. The proportions of students reporting 'often' or 'sometimes' were consolidated and presented in Table 5.14 separately for each activity by periods mentioned above.

Student answers were primarily analysed by period, grade, area and gender for each activity. Secondly, their answers were scored in the following way: often = 2, sometimes = 1, and never = 0. The addition of the scores of five different periods separately made a total score for each activity ranging from 0–10. This was then categorised in the following way: Never (0), Rarely (1–2), Sometimes (3–4), Often (5–6), Usually (7–9), and Always (10). This represents the level of engagement of students in each activity. The distribution of students by this category was explored.

Activities	Period				
	Mar.–May 2020	June–Aug. 2020	Sept.–Dec. 2020	Mar.–May 2021	June–Aug. 2021
Self-study	93.4	91.9	91.8	92.9	94.8
Household members' tutoring ¹	37.3	38.0	38.0	37.2	37.6
Private tutoring at home ²	7.5	8.5	8.4	6.8	7.3
Private tutoring outside ²	38.0	36.1	38.5	38.8	39.6
Online private tutoring ²	0.6	0.8	0.9	0.7	0.7
Accessed contents on the Internet	5.5	10.7	12.7	15.3	16.2
School assignments	4.0	22.1	66.9	71.4	84.0
Online classes	1.5	4.2	5.9	6.4	6.8
Academic programmes on television	10.6	16.9	17.1	7.6	7.1
Academic programmes on radio	0.3	0.4	0.6	0.0	0.0

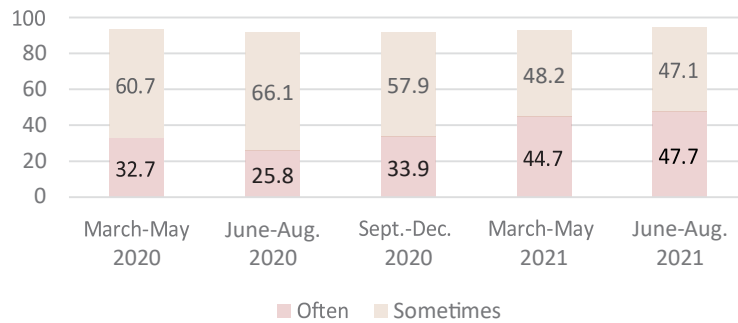
Notes: Figures are constituted by adding those who participated often and sometimes; ¹Free; ²On payment

Table 5.14. Percentage of students of Grades 4–9 in 2020 participated in various activities to carry out studies during school closure by activities and period

Self-studies at home

Over 90% of students, irrespective of grade, area, and gender reported being engaged in self-studies in each period during school closure. On average, 93.4% of students studied at home during March–May 2020, which gradually decreased to 91.8% by December 2020 and again increased to 92.9% in March 2021 after getting textbooks of new grades and reached 94.8% by August 2021. Two things can be observed in Figure 5.1. Firstly, the proportion of students studied often decreased from the first to the second of the five periods; it gradually increased afterwards. Secondly, the ratio between studying 'often' and 'sometimes' also changed over time. For instance, of students who reported that they studied, 34.6% often during March–May 2020, which decreased to 28.1% during June–August 2020 and then increased to 37.3% during September–December 2020. An increase in studying often continued to the following year. It reached 48.1% during March–May 2021 and 50.4% during June–August 2021.

Figure 5.1. Percentage of students engaged in self-studies at home during school closure by periods



The above analysis was carried out separately by grade, gender and area of residence of students. Not much variation or a trend was observed concerning students' grades. The proportion of girls engaged in self-studies was 2–3 percentage points higher than boys in each period (Table 5.15). The gender gap slightly increased in terms of studying often. The urban-rural gap in self-studies, in general, persisted throughout 2020, lagging rural students behind, which disappeared in 2021. This existed throughout the school closure concerning studying often. The urban-rural gap was higher than the gender gap in each period when studying often was concerned. Of the four groups of students in terms of gender and residence, the urban girls were at the top in self-studies during school closure, followed by urban boys and rural girls. Rural boys placed them at the bottom in this regard.

Area/ gender	Period				
	March–May 2020	June–Aug. 2020	Sept.–Dec. 2020	March–May 2021	June–Aug. 2021
Rural					
Boys	28.5	19.2	27.2	37.8	41.6
Girls	31.6	24.6	33.4	44.1	46.3
Urban					
Boys	34.8	31.0	37.7	48.2	51.6
Girls	38.0	31.8	39.9	50.1	53.1

Table 5.15. Percentage of students who 'often' engaged in self-studies during school closure by period, area and gender

Of students, 1.2% never engaged in self-studies, 2.2% engaged rarely, 8.7% sometimes, 40% often, 26.8% usually, and the remaining 21.1% always (Table 5.16). The percentage of students who studied never or rarely gradually decreased by grade (Annex 5.21). This was higher for boys than girls and among rural students than their urban counterparts. On the other hand, the percentage of students who always studied had an increasing trend from grade 4 to 6 which dropped at grade 7 but increased slowly afterwards. This analysis also shows that girls were ahead of boys in self-studies during school closure, and the urban students surpassed rural students. Urban girls were at the top, followed by urban boys and rural girls. Rural boys were at the bottom in self-studies during school closure.

Tutoring by household members

Household members tutored a good proportion of students during school closure – 40.3% in 2020 and 38.3% in 2021 (Annex 5.22). Together, 43.9% of students received this help in any of the years, and 35.9% received it in both years. A large majority of students who received this support received it sometimes; around 20% of the total recipients in each period in 2020 and nearly 28% in 2021.

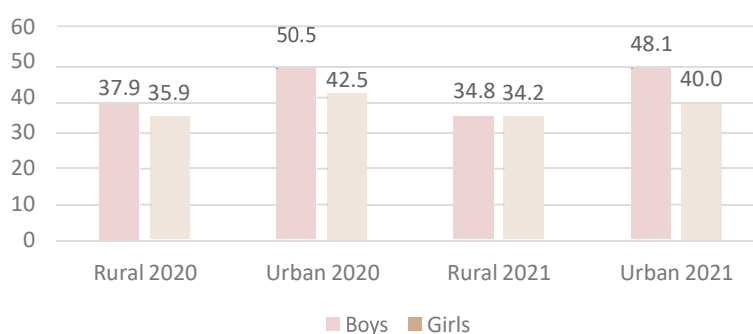
Level of engagement in self-studies	Rural		Urban		All
	Boys	Girls	Boys	Girls	
Never	1.1	1.1	1.3	1.2	1.2
Rarely	3.4	1.6	2.8	1.5	2.2
Sometimes	10.7	8.6	7.8	7.6	8.7
Often	44.9	40.5	37.0	36.4	40.0
Usually	24.7	29.8	24.4	26.3	26.8
Always	15.2	18.4	26.8	26.9	21.1
Total	100.0	100.0	100.0	100.0	100.0

Table 5.16. Percentage distribution of students by level of engagement in self-studies, geography and gender

Grade-wise, analysis shows that household members' tutoring significantly decreased with the increase in students' grades ($p < 0.001$). Whereas nearly three-fifths of students in grade 4 received household members' help, which gradually decreased to about two-fifths in grade 6 and a fifth in grade 9 (Annex 5.22).

The household members tutored boys more than girls with a statistically significant margin – 42.9% of boys and 38.3% of girls in 2020 ($p < 0.01$) and 40.6% of boys and 36.5% of girls in 2021 ($p < 0.05$) (Annex 5.22). Urban students were more prone than rural students to receive such tutoring. In 2020, 36.7% of rural and 46.1% of urban students ($p < 0.001$), and in 2021, 34.5% of rural and 43.7% of urban students ($p < 0.001$) got this support (Annex 5.22). Figure 5.2 shows that gender differences persisted only in urban areas. The boys from urban areas were at the top in getting this help, followed by girls from the same areas. Students of both genders were much behind the above two groups with no difference between them. The period-wise analysis also shows the same (Annex 5.23).

Figure 5.2. Percentage of students tutored by household members' during school closure by area, year and gender



Overall, 56.1% of students did not receive any tutoring support from their household members, 3.8% had it rarely, 7% sometimes, 22.3% often, 6.1% usually, and 4.7% always (Table 5.17). Most of the findings of this analysis by grade, area and gender are similar to the previous results (Annex 5.24).

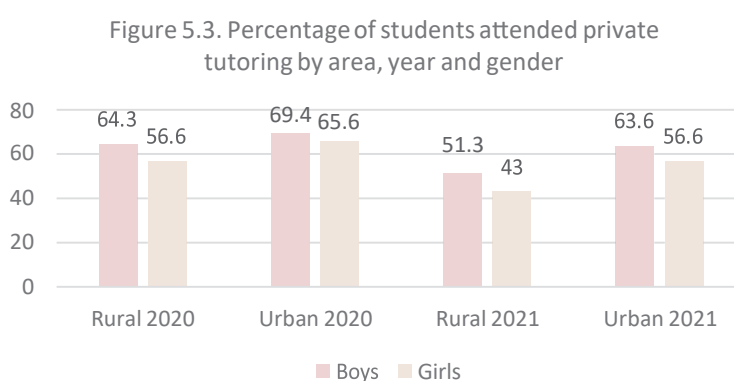
Level of tutoring from HH members	Rural		Urban		All
	Boys	Girls	Boys	Girls	
Never	59.2	61.2	45.8	53.4	56.1
Rarely	4.4	3.4	3.5	3.8	3.8
Sometimes	8.2	5.5	8.1	7.2	7.0
Often	20.0	20.8	27.0	23.3	22.3
Usually	5.4	6.1	7.9	5.5	6.1
Always	2.8	3.0	7.6	6.8	4.7
Total	100.0	100.0	100.0	100.0	100.0

Table 5.17. Percentage distribution of students by level of tutoring received from household members, area and gender

Private tutoring

Private tutoring was observed in three forms during school closure. The most popular one was private tutoring outside students' homes—at providers' homes or coaching centres—followed by private tutoring at students' homes, and online private tutoring. In 2020, 54.5% of students received private tutoring outside their homes, 10.7% received it at their own homes, and 1.2% received it online. These figures were 46.1%, 7.8% and 0.8%, respectively, in 2021. Overall, the proportion of students receiving any form of private tutoring was 62.7% in 2020 and 52.1% in 2021 ($p < 0.001$) (Annex 5.25). Not much variation was observed in this over the period. For instance, 42.2% of students received private tutoring during March–May 2020, 43.5% received it in June–August 2020, 45.5% in September–December 2020, 44.3% in March–May 2021, and 45.3% in June–August 2021 (Annex 5.26).

A statistically significant decrease in the proportion of privately tutored students was observed between 2020 and 2021, irrespective of grade, gender and geography (Annex 5.25). The boys received more tutoring than girls in both years – 66.3% of boys and 59.9% of girls in 2020 ($p < 0.001$), which reduced



to 56.7% and 48.5% respectively in 2021 ($p < 0.001$). Urban students were also ahead of their rural counterparts in both years. In 2020, 59.8% of rural and 67.3% of urban students received private tutoring ($p < 0.001$), and in 2021, 46.5% of rural and 59.8% of urban students received private tutoring ($p < 0.001$). Gender differences existed only in rural areas in 2020 and in both areas in 2021 (Figure 5.3). Of the four groups of students, urban boys were at the top in receiving private tutoring, followed by urban girls, rural boys, and rural girls, respectively.

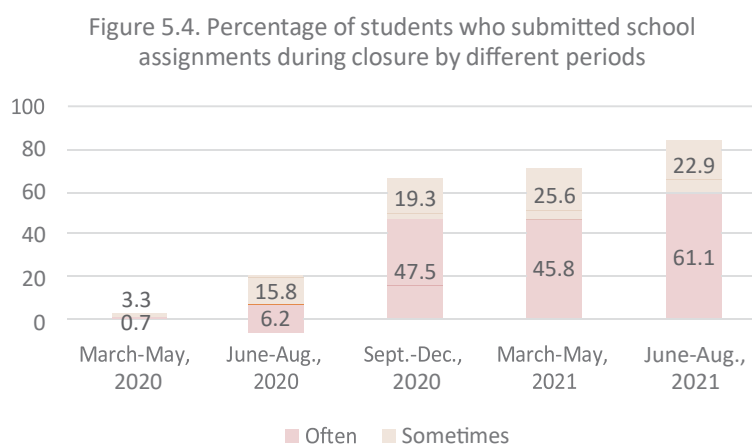
Overall, 29.4% of students did not have any private tutoring during school closure, 17.7% had it rarely, 15.7% sometimes, 13.1% often, 14.3% usually, and 9.9% always (Table 5.18). Grade-wise analysis shows students of grades 5 and 8 had a greater tendency to avail private tutoring than those of other grades (Annex 5.27).

Level of private tutoring	Rural		Urban		All
	Boys	Girls	Boys	Girls	
Never	28.2	36.2	22.4	26.2	29.4
Rarely	18.1	18.7	16.1	17.2	17.7
Sometimes	15.8	14.4	15.0	18.1	15.7
Often	14.7	11.3	14.6	12.9	13.1
Usually	13.7	12.8	16.1	15.7	14.3
Always	9.6	6.7	15.9	9.9	9.9
Total	100.0	100.0	100.0	100.0	100.0

Table 5.18. Percentage distribution of students by level of private tutoring, area and gender

School assignments

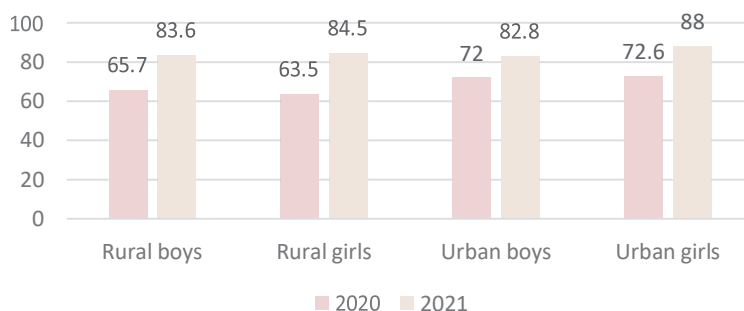
The proportion of students carrying out the school assignments during the closure significantly increased between the two years. For instance, only 4% of students submitted school assignments during March–May 2020, which increased to 22% in June–August 2020, 66.8% in September–December 2020, 71.4% in March–May 2021, and 84% in June–Aug 2021 (Figure 5.4). Contrasting with the other means of studies during school closure, it was observed that the majority of students submitted their assignments. Such a tendency of students increased over time. Period-wise analysis of submitting assignments by area and gender shows that students submitted the assignments equally, irrespective of gender and area (Annex 5.28).



Although two-thirds of students claimed to submit school assignments in 2020, it was 84.8% in 2021 ($p < 0.001$) (Annex 5.29). No statistically significant difference was observed in this by gender in any year. Although the urban students were ahead of their rural counterparts in 2020, no difference was observed in 2021. Of the four groups of students in 2020, both genders were close to each other in each area, but urban students were further ahead of rural students in submitting assignments (Figure 5.5). On the other hand, rural students of both genders and urban boys were close, keeping them behind urban girls.

Grade-wise analysis shows a statistically significant increase in the proportion of students submitting school assignments with the increase in students' grades in both years (Annex 5.29). In 2020, 20.4% of Grade 4 and 27.7% of Grade 5 students submitted school assignments; the figures significantly

Figure 5.5. Percentage of students submitting school assignments by geography, gender and year



increased to 74.6% and 84.8%, respectively, in 2021. However, they were already promoted to the following years in January 2021 ($p < 0.001$). On the other hand, 88.7% of the 6th graders of 2020 submitted school assignments which decreased to 84.2% in 2021 when they were in grade 7 ($p < 0.05$). No significant difference was observed among the students of the remaining three grades.

Overall, 7.3% of the students never submitted school assignments, 18.5% submitted them rarely, 33.7% sometimes, 31.3% often, 8.8% usually, and 0.4% always (Table 5.19). The secondary-level students were more likely to do the assignments than the primary level (Annex 5.30). Boys and rural students, in general, were more likely to do none or a few of the assignments than girls and urban students, respectively. Gender-wise, such a tendency was observed in both rural and urban areas.

Level of submitting assignments	Rural		Urban		All
	Boys	Girls	Boys	Girls	
Never	7.9	7.2	7.8	6.5	7.3
Rarely	21.2	19.8	17.0	14.9	18.5
Sometimes	34.6	35.5	29.8	33.5	33.7
Often	29.5	31.4	31.8	32.6	31.3
Usually	6.8	6.0	13.5	11.6	8.8
Always	0.1	0.1	0.2	0.9	0.4
Total	100.0	100.0	100.0	100.0	100.0

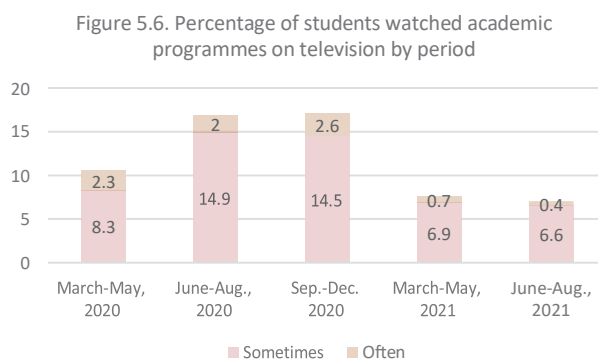
Table 5.19. Percentage distribution of students by level of submitting school assignments, geography and gender

In response to another question, students reported that they, on average, received 14 assignments from schools in 2020, of which they submitted 13.8, but received feedback only on 3.9. In other words, students claimed to have submitted 98.6% of the given assignments but received feedback only on 28.3% of them. The provision of feedback on students' assignments decreased over the period. For instance, students reported completing 13.5 of the 14.6 assignments in 2021; they received feedback on 1.1. Therefore, although students submitted 92.5% of the assignments, they received teachers' feedback on 8.1% of them.

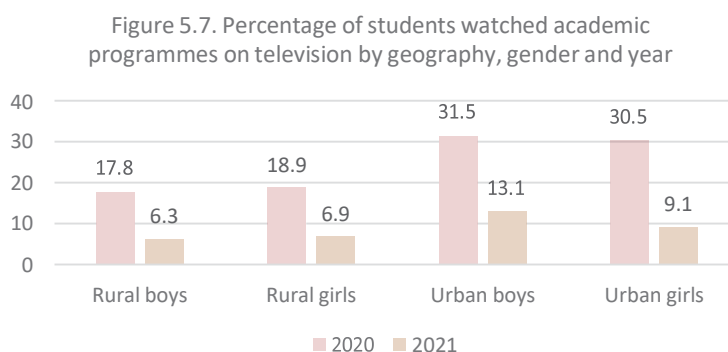
As reported by students, the schools offered a smaller number of assignments to the primary level students than the secondary level. The latter was almost double the former. Although no difference was observed in submitting assignments to schools concerning grade, gender, or area of residence, variation existed in providing feedback on the students' works. A gradual increase in giving feedback was noticed with the increase in students' grades. Urban schools were ahead of rural schools in this regard.

Academic programmes on television

Although the headteachers reported that 52% of primary and 39.1% of secondary students followed the academic programmes on television in 2020, their reports were far from reality. When asked, 23.2% of students in grades 4–9 in 2020 reported that they watched such programmes at least once on television. The figure significantly decreased to 8.4% in 2021 (Annex 5.31). A statistically significant decrease in this from 2020 to 2021 was observed irrespective of grade, gender and area. Of the five periods, 10.6% of students watched it during March–May 2020, 16.9% during June–August 2020, 17.1% during September–December 2020, 7.6% during March–May 2021, and 7% during June–August 2021 (Figure 5.6). As reported by the students, a small proportion watched these often, and the large majority did so sometimes.



Grade-wise analysis shows that in 2020, whereas 12.8% of students in grade 4 watched academic programmes on television, the figure gradually increased to over 25% in grades 6 and 7 and 32.5% in grade 8 and then decreased to 28.3% in grade 10 ($p < 0.001$) (Annex 5.31). None of these figures crossed 11% in 2021. No gender difference was observed in this category in any of the years, but more urban students watched the programmes on television than rural students in both years. A decrease in the proportion of students watching academic programmes on television from 2020 to 2021 is also presented in Figure 5.7.



Overall, 76.2% of students did not watch any academic programme on television, 13.4% watched rarely, 7.3% sometimes, 2.5% often, 0.6% usually, and 0.1% always (Table 5.20). The proportion of students watching academic programmes on television was slightly higher for those in grade 5 than those in grade 4. Of the four secondary education grades, it was highest among students in grade 8. The other observations by gender and area are similar to that mentioned above. Also, see Annex 5.33.

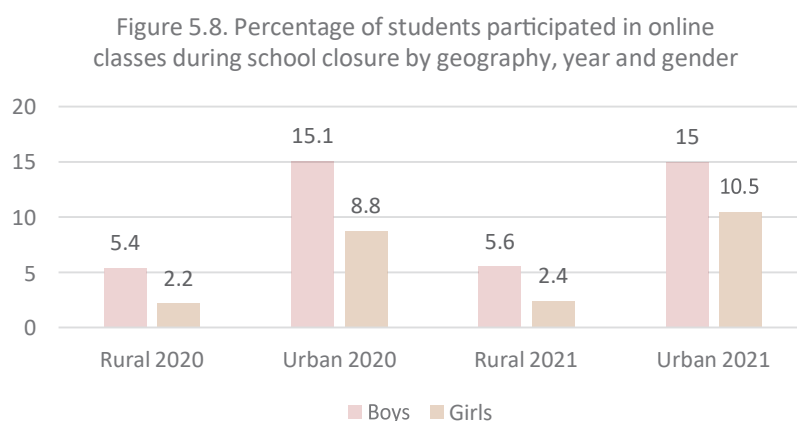
Frequency of watching TV	Rural		Urban		All
	Boys	Girls	Boys	Girls	
Never	81.5	80.5	68.2	70.6	76.2
Rarely	11.4	11.7	17.2	15.1	13.4
Sometimes	4.8	5.7	9.4	10.5	7.3
Often	2.3	2.1	3.1	2.6	2.5
Usually	0.0	0.0	1.8	1.1	0.6
Always	0.0	0.0	0.2	0.2	0.1
Total	100.0	100.0	100.0	100.0	100.0

Table 5.20. Percentage distribution of students by level of watching academic programmes on television, geography and gender

Participation in online classes

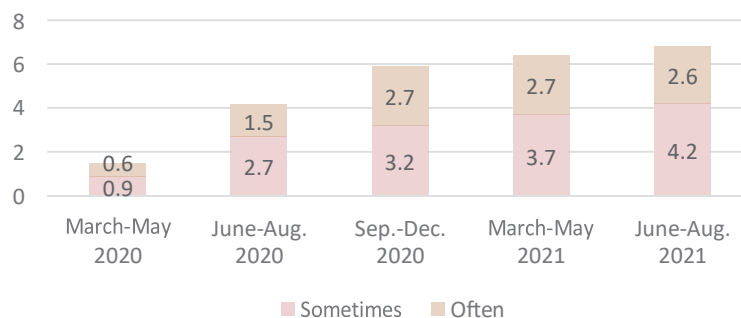
On average, 6.6% of students in 2020 and 7.4% in 2021 participated in online classes with no statistically significant difference (Annex 5.34). The participation rate gradually increased from 2.4% in grade 4 to 14% in grade 9 in 2020 ($p < 0.001$), and it was from 6.1% to 11.3% in 2021 ($p < 0.001$). The rate was below 10% for students in grades 4–8 in both years. A statistically significant increase was noticed only among those in grade 4 in 2020. Whereas in 2020, 2.4% of grade 4 and 3% of grade 5 students participated in online classes, 6.1% of grade 5 students in 2021 participated.

The online class participation rate was significantly higher among boys than girls: 9.2% of boys and 4.6% of girls in 2020 ($p < 0.001$), and 9.7% of boys 5.7% of girls in 2021 ($p < 0.001$). The rate was much higher among urban students than their rural counterparts: 3.6% of rural and 11.7% of urban students participated in online classes in 2020 ($p < 0.001$), and 3.8% of rural and 12.5% of urban students did the same in 2021 ($p < 0.001$). A statistically significant gender difference was noticed in each area in both years (Figure 5.8).



Students' participation in online classes increased over time. It was 1.5% in March–May 2020, 4.2% in June–August 2020, 5.9% in September–December 2020, 6.4% in March–May 2021, and 6.8% in June–August 2021 (Figure 5.9). An increasing trend in online class participation is observed for each grade and by area and gender (Annexes 5.35 and 5.36). The share of students participating 'some times' was larger than participating 'often' in each period.

Figure 5.9. Percentage of students participated in online classes by period



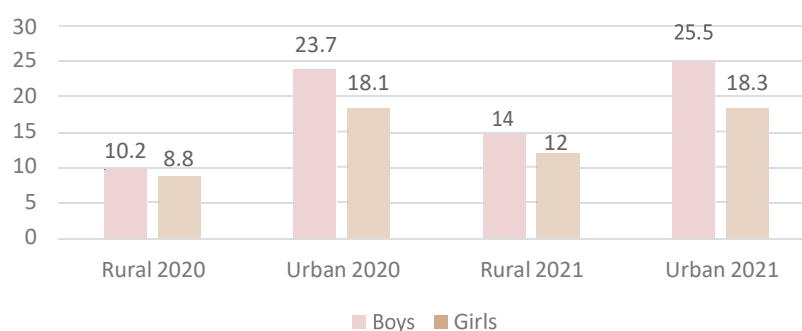
Of all students, 89.5% never participated in online classes during school closure, 5.5% participated rarely, 2.7% sometimes, 1% often, 1.1% usually, and 0.2% always (Annex 5.37). Very few students participated in online classes often, usually or always, irrespective of grade, area, or gender (Annexes 5.37 and 5.38).

Access to Internet content

In 2020, 13.7% of students accessed the Internet to support their studies at home, which increased to 16.4% in 2021 ($p < 0.01$) (Annex 5.39). A statistically significant increase was observed with the increase in students' grades in both years ($p < 0.001$). For instance, in 2020, the rate increased from below 5% among the 4th graders to around 22% among the 8–9 graders. This was 5.7% among the 5th graders in 2021 to about 25% among the 10th graders.

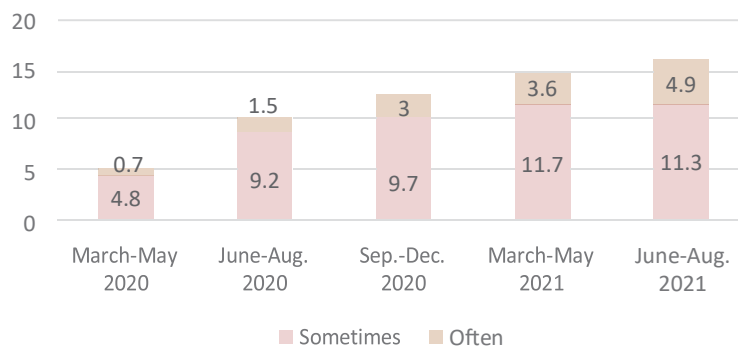
More boys than girls accessed Internet content in both years: 15.5% of boys and 12.2% of girls in 2020 ($p < 0.01$) and 19% of boys and 14.5% of girls in 2021 ($p < 0.01$). Urban students surpassed rural students in accessing Internet content: 20.7% of urban and 9.4% of rural students in 2020 ($p < 0.001$), and 21.5% of urban and 12.8% of rural students in 2021 ($p < 0.001$). A statistically significant increase from 2020 to 2021 in access to Internet content was observed separately among boys and girls and rural students but not urban students. Girls lagging behind boys is reflected in Figure 5.10.

Figure 5.10. Percentage of students accessed Internet content during school closure by geography, year and gender



Student access to Internet content increased over time. It was 5.5% in March–May 2020, 10.7% in June–August 2020, 12.7% in September–December 2020, 15.3% in March–May 2021, and 16.2% in June–August 2021 (Figure 5.11). Such an increasing trend was observed irrespective of grade, area, and gender (Annexes 5.40 and 5.41). The share of participating sometimes was much larger than often in each period.

Figure 5.11. Percentage of students accessed Internet content by period



Over four-fifths of students did not browse the Internet to facilitate their studies during school closure, 6.8% browsed rarely, 6.8% sometimes, 4.4% often, 1.4% usually, and 0.5% always (Annex 5.42). The percentage of students browsing the Internet often, usually or always was too small regardless of grade, area, or gender (Annexes 5.42 and 5.43).

Correlations among various activities of the students were assessed. Self-studies at home during school closure was moderately correlated with private tutoring ($r = 0.42$), household members tutoring ($r = 0.34$) and submitting school assignments ($r = 0.31$); a low correlation was observed with watching academic programmes on television ($r = 0.23$), participation in online classes ($r = 0.16$) and browsing the Internet for academic purpose ($r = 0.16$). The analysis also shows a lower level but positive relationship between students watching academic programmes on television and submitting school assignments with household members' tutoring ($r = 0.14$ and 0.06 , respectively) and private tutoring ($r = 0.22$ for each). Higher correlation coefficients were noticed with private tutoring than with household members' tutoring.. The proportion of students executing each of them significantly increased with the increase of household members' support and private tutoring. Student participation in online classes and browsing content on the Internet were also moderately correlated ($r = 0.35$). Each of the above modes of studying at home was low but positively correlated to the parental education of students.

	Self- studies	HH members tutoring	Private tutoring	Television	Assignment	Online classes	Internet browsing
Self-studies	1.00	0.34	0.42	0.23	0.31	0.16	0.16
HH members tutoring		1.00	0.22	0.14	0.06	0.14	0.13
Private tutoring			1.00	0.23	0.22	0.22	0.17
Television				1.00	0.18	0.18	0.26
Assignment					1.00	0.16	0.20
Online classes						1.00	0.35
Internet browsing							1.00

Note: All the coefficients are statistically significant at $p < 0.001$

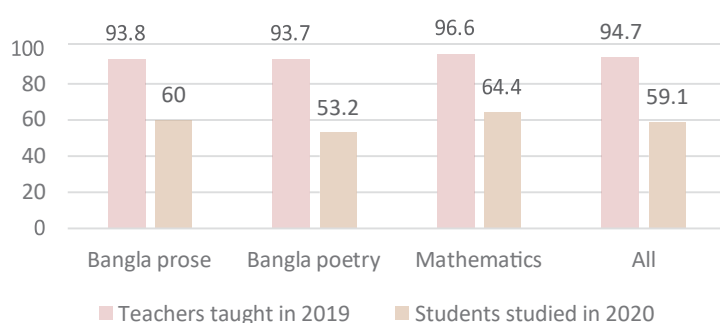
Table 5.21. Correlation coefficients among the scores in different modes of studies during school closure

Studying textbooks: Bangla and mathematics

An attempt was made to know the proportion of textbooks students read during the school closure compared to the previous year. This exercise considered the prose and poetry items of Bangla and the mathematics chapters. Information was collected from three sources: The number of items/chapters was taken from the textbooks, headteachers helped collect the number of items/chapters taught in schools the previous year (in 2019) from the respective teachers, and students provided the number of items/chapters they studied in 2020. As students were in grades 4–9 in 2020, this exercise was confined to these grades only

On average, the Bangla textbooks contained 13 prose and 11 poetry items, and the mathematics textbooks have 12 chapters. In 2019, teachers reported teaching 12.2 prose and 10.4 poetry items and 11.4 chapters in mathematics. In contrast, students reported studying 7.8 prose items, 5.9 poetry items, and 7.6 chapters in mathematics in 2020. Therefore, although teachers reported teaching 93.8% of prose and 93.7% of poetry items and 96.6% of mathematics chapters in 2020, students reported studying 60%, 53.2% and 64.4%, respectively, in 2019 (Figure 5.12). Totalling all three issues, there were 36 items or chapters in the two textbooks for grades 4–9; teachers taught 94.7% of them in 2019, but students studied 59.1% in 2020. The reliability of the teachers' and students' reports is unknown.

Figure 5.12. Comparison between percentage of items/chapters taught by teachers in 2019 and that studied by students in 2020



The distribution of students by the percentage of items/chapters they read in each of the subjects is presented in Table 5.22. Combining the three issues, 4.5% of students read less than a fifth of the items/contents, 17.6% of students read 20–39%, 29.3% of students read 40–59%, 25.4% of students read 60–79%, 17.2% of students read 80–99%, and 6% of students read the whole textbooks. Subject-wise, 14.5% of students read all the prose items, 14.7% read all the poetry items, and 16.6% read

Percentage of items/chapters	Subjects			All three
	Prose	Poetry	Mathematics	
0–19	4.3	10.9	4.7	4.5
20–39	17.7	24.0	16.4	17.6
40–59	26.0	20.4	19.7	29.3
60–79	23.4	21.2	26.1	25.4
80–99	14.1	8.8	16.5	17.2
100	14.5	14.7	16.6	6.0
Total	100.0	100.0	100.0	100.0

Table 5.22. Percentage distribution of students by the percentage of Bangla and mathematics items/chapters they studied in 2020

all the mathematics chapters. A moderate correlation was observed in this among the three subjects. For instance, the correlation coefficient of studying prose contents with poetry and mathematics was 0.66 each, and the correlation coefficient between poetry and mathematics was 0.56. Each was highly correlated to the total – 0.90 with prose, 0.86 with poetry, and 0.84 with mathematics. Each coefficient was statistically significant at a $p < 0.001$ level.

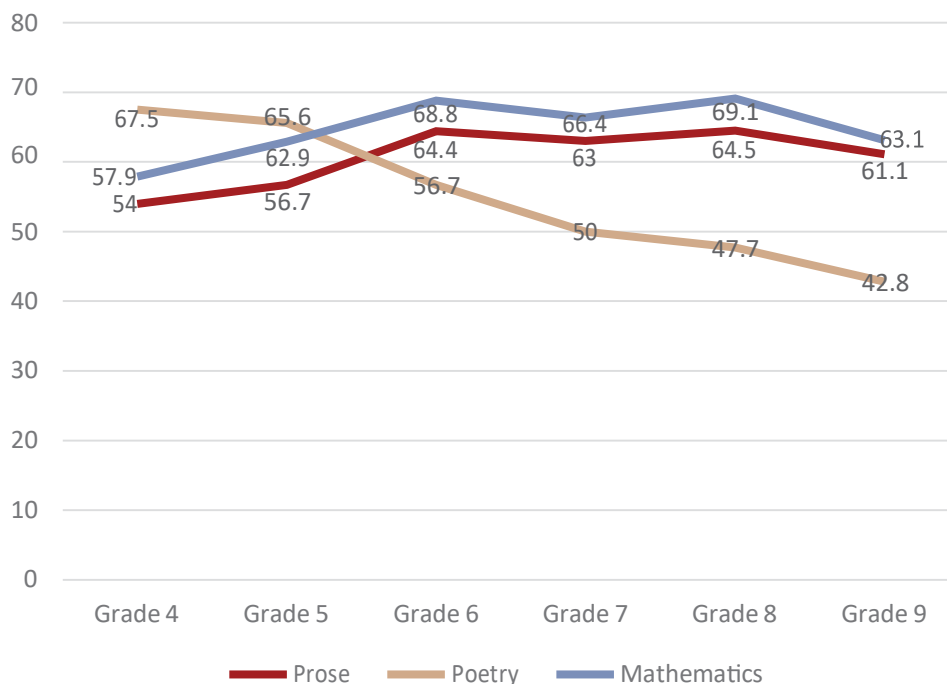
Overall, girls studied more items than boys in both prose and poetry texts, although no gender difference was observed in mathematics (Table 5.23). Combining all three subjects (prose, poetry and maths), boys lagged behind girls. On the other hand, urban students studied more items/chapters in each of the three subjects than rural students. A gender difference was noticed in each area. In rural areas, girls studied 57.7% of the chapters/items and boys 55%. These rates in urban areas were 64.3% and 62.2%, respectively.

Gender/ geography	Subjects			All
	Prose	Poetry	Mathematics	
Boys	58.0	50.9	63.9	57.9
Girls	61.2	55.0	63.6	60.1
Rural	57.7	50.5	61.0	56.5
Urban	63.8	56.3	69.5	63.3

Table 5.23. Percentage of chapters/items studied by the students in Bangla and mathematics during school closure in 2020 by gender and geography

A grade-wise analysis is provided in Figure 5.13. This shows that studying prose and mathematics had a similar trend by grade, although students were more likely to do mathematics than read prose. The percentage of items/contents studied in these two areas gradually increased from grade 4–6 and then had a down-up-down move. The students' tendency to study poetry gradually decreased with the increase in their grades. Interestingly, the tendency to study poetry was more than the remaining two in grades 4 and 5; it was the other way around in the case of the remaining grades.

Figure 5.13. Percentage of items/chapters studied by the students by subjects and Grades



The percentage of items/chapters studied at home during school closure significantly increased with the intensity of engagement in studies at home. The students who never or rarely engaged in studies at home studied, on average, 35.6% of the items/chapters, which increased to 41.9% among those who studied sometimes, 57.6% among those who studied often, 62.1% among those who had studied usually, and 70.2% among those who always studied at home (Table 5.24). The subject-wise analysis shows a similar trend.

Level of engagement	Subjects			All three
	Prose	Poetry	Mathematics	
Never or rarely*	37.8	29.1	39.0	35.6
Sometimes	42.2	35.2	47.6	41.9
Often	59.0	51.2	61.8	57.6
Usually	61.8	56.5	67.4	62.1
Always	71.6	64.5	74.0	70.2

Note: *Grouped due to small sample size

Table 5.24. Percentage of items/chapters studied by students in Bangla and mathematics by the level of engagement in self-studies at home

A similar analysis is carried out concerning the levels of students' engagement in household members' tutoring, private tutoring, academic programmes on television, and school assignments. The results are provided in Annexes 5.44–5.47. The percentage of items/chapters read by students in each of the prose, poetry and mathematics, as well as combined in all three, increased with the increase in their level of engagement with private tutoring and submission of school assignments. The students who rarely received household members' tutoring support read less content than those who received no help. The other categories of household members' support recipients (sometimes, often, usually and always) read more content than them. A gradual increase was observed among the top five categories of students. The proportion of content read by students gradually increased with the increase in the level of watching academic programmes on television from never to sometimes then decreased for the remaining.



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CHAPTER

6

Understanding Learning Losses

Estimating the learning loss due to school closure during the pandemic was attempted in this study. This was done from two sources. Firstly, the headteachers were asked to provide their own perceptions. Secondly, an assessment of learning loss was attempted by administering a literacy test on students of grades 4–9 in 2020, who were auto-promoted to grades 5–10 the following year.

HEADTEACHERS' OBSERVATIONS

The heads of the educational institutions under study were asked whether students of 2020 learned as much as they were supposed to in a regular year before the pandemic. Every headteacher reported that they did not find any student who had not suffered a negative impact due to school closure. Of the school heads, 44.2% reported that most of their students learned less in 2020 than the previous year, 40.7% said the majority of their students had less learning, 10.8% of them reported a half of their students learned less, and 4.3% reported a small portion of their students learned less (Table 6.1). More headteachers of secondary schools than primary schools reported a higher proportion of students facing learning loss in 2020. This was more among rural school heads than their urban counterparts. More headteachers of the newly nationalised schools than the government schools and more in the madrasas than the non-government secondary schools reported the same (Annex 6.1).

At the request of the research team, the headteachers participated in an exercise where they divided their students into five groups in terms of various degrees of learning loss that their students experienced in 2020. The categories in terms of loss were 75% or more, 50% to less than 75%, 25% to less

Category of students facing learning loss	School type		Geography		All
	Primary	Secondary	Rural	Urban	
Most	41.1	47.3	45.5	42.2	44.2
Majority	39.1	42.3	42.6	37.7	40.7
About half	14.2	7.5	9.0	13.6	10.8
Some	5.6	3.0	2.9	6.5	4.3
None	-	-	-	-	-
Total	100.0	100.0	100.0	100.0	100.0

Table 6.1. Percentage distribution of headteachers by their opinion on students facing learning loss in 2020, school type and geography

than 50%, less than 25%, and no loss. As the headteachers perceived, 35.4% of students from pre-primary to grade 10 experienced 75% or more learning loss, 22.4% experienced 50% to less than 75% learning loss, 20.2% experienced 25% to less than 50% learning loss, 18.3% experienced less than 25% learning loss, and 3.7% experienced no loss (Table 6.2). A similar trend was observed in each of the three levels of education, viz., pre-primary, primary and secondary. In the cases of pre-primary and primary education, more loss was perceived for students of newly nationalised schools than those of government primary schools and in rural schools than their urban counterparts (Annexes 6.2 and 6.3). In contrast, little variation was observed between rural and urban secondary schools (Annex 6.4). However, the madrasa superintendents perceived more loss than the non-government school headteachers.

The headteachers were asked to identify the characteristics of students who were more vulnerable to learning losses as they observed. More than 85% of the respondents said that students from low-income families were the most vulnerable, followed by those belonging to parents who are less conscious about the importance of education (61.6%). Of the remaining, 14–29% of the headteachers mentioned six features, and less than 10% of them said another six. The former features include students living in rural areas, having none at home to help in education matters, already lagging academically, addicted to cell phones, girls and boys. And the latter six include students living in

Categories of loss	Level of education			All
	Pre-primary	Primary	Secondary	
75% or more	33.2	32.5	36.8	35.4
50–<75%	23.2	22.5	22.3	22.4
25–<50%	19.8	19.3	20.7	20.2
<25%	18.3	19.6	17.7	18.3
No loss	5.5	6.1	2.5	3.7
Total	100.0	100.0	100.0	100.0

Table 6.2. Percentage distribution of students of 2020 by categories of learning loss as perceived by the headteachers and level of education

marginal areas such as hills, haor and char, students of lower grades, having no cellphone at home, students in upper grades, grades 5, 8 and 10, children with special needs, and students living in urban areas. Detailed analysis is provided in Annexes 6.5 and 6.6.

LEARNING LOSSES OF STUDENTS

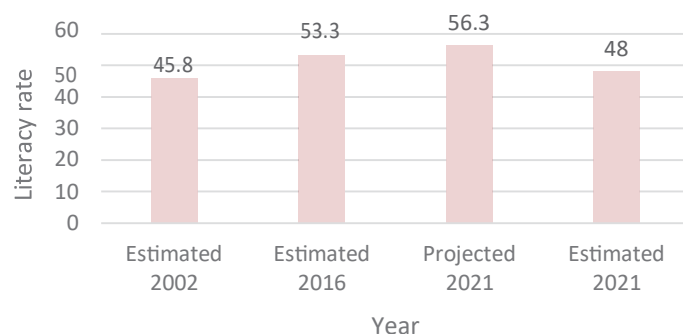
The literacy skills

This section presents the state of literacy of students of grades 4–9 in 2020 who were auto-promoted to grades 5–10 the following year. As mentioned in the methodology chapter, the literacy status of these students was compared with a projected literacy rate of 2021, which was calculated through extrapolation from two similar literacy tests conducted in 2002 and 2016. The overall literacy comprised four components: reading, writing, numeracy, and application of these three skills. Students achieving at least an initial level of skills (50% score out of 25 as defined in Education Watch studies) in each of the four components were considered literate.

In 2002, 45.8% of grades 5–10 had literacy skills, which increased to 53.3% in 2016 and then decreased to 48% in 2021 (Figure 6.1). If the growth rate from 2002 to 2016 continued, it was projected (using the formula provided in Chapter 2) that the literacy rate was supposed to be 56.3% in 2021. The projected figure seems to be higher than the estimated figure in 2021. Therefore, the loss in literacy skills due to school closure during the pandemic was $(56.3 - 48.0 =) 8.3$ percentage points. Note that in 2021, the estimated literacy rate came down $(53.3 - 48.0 =) 5.3$ percentage points below that of 2016.

A separate analysis was conducted for each of the four literacy components. In 2002, 92.5% of students had an initial level of reading skills, 75.4% had writing skills, 73.3% had numeracy skills, and 55.8% had application skills (Table 6.3). These figures increased to 96.6%, 85.2%, 78.2% and 60%, respectively in 2016. Based on these, the projected figures for 2021 were 98.1% in reading, 89% in writing, 80% in numeracy, and 61.6% in application. On the other hand, based on the test, the estimated figures were 96.5% in reading, 79.3% in writing, 77.2% in numeracy, and 55.9% in application. Therefore, the gap between projected and estimated rates was 1.6 percentage points in reading, 9.7 percentage points in writing, 2.8 percentage points in numeracy, and 5.7 percentage points in application. The highest learning loss was accounted in writing skills (9.7%), followed by application skills (5.7%) and the lowest in reading skills (1.6%). Similar to the literacy rate, the 2021 estimated rates for writing, numeracy, and application fell below the respective rates of 2016. This was mostly unchanged in the case of reading skills.

Figure 6.1. Percentage of literate students of Grades 5-10 by year



Researchers conducted an item-wise analysis to understand the areas in which the losses were more. It is already mentioned that the amount of loss was least in the area of reading. As before, almost every student on the test could read the two words given in the test. Little deterioration was observed in reading comprehension, although challenges prevailed in reading sentences. In 2021, 87.6% of students could read both the sentences given in the test, which was 90.8% in 2002 and 94.7% in 2016.

Literacy components	Estimated, 2002	Estimated, 2016	Projected, 2021	Estimated, 2021	Deviation of 4 from 5
1	2	3	4	5	6
Reading	92.5	96.6	98.1	96.5	-1.6
Writing	75.4	85.2	89.0	79.3	-9.7
Numeracy	73.3	78.2	80.0	77.2	-2.8
Application	55.8	60.0	61.6	55.9	-5.7

Table 6.3. Percentage of students achieving various components of literacy by year

The writing part of the test was challenging for students in 2021. This part contains writing two given words and two sentences and writing a 5-sentence paragraph on a given topic. In 2002, 44.9% of students correctly wrote both words, which increased to 58.8% in 2016 and then decreased to 53% in 2021 (Annex 6.7). A similar scenario was observed in the case of writing sentences. Of the two sentences given, 44.2% of students could correctly write both in 2002, which increased to 58.6% in 2016 and then decreased to 52.1% in 2021. Writing a paragraph was the most challenging item. In 2002, 28.4% of students did not do any in this item, which decreased to 16.1% in 2016, but increased to 22.5% in 2021. Similarly, the proportion of students scoring three or below (out of 10) in writing a paragraph also increased from 2016 to 2021 and scoring at least five decreased during the same period. Whereas 29.9% of students achieved three or below in 2016 and 58.1% scored five or more, these figures were 37.1% and 52.6%, respectively, in 2021.

In the case of numeracy, not much deterioration was observed in counting numbers, filling in the number blank, or simple subtraction or multiplication. However, it was severe in the case of two-step problem-solving. In 2002, nearly 51% of students correctly solved the problem needing skills in subtraction and division, which increased to 54.5% in 2016 but decreased to 41.7% in 2021 (Annex 6.8). In another two-step problem solving, which required skills in multiplication and division, 36.1% of students solved this problem in 2002, which increased to 45.5% in 2016 but decreased to 34.1% in 2021.

The application part had six items. A slight deterioration from 2016 to 2021 was observed in recognising a person's right and left hand in a photo, identifying the east/west side of a map, and understanding messages from a billboard. On the other hand, much deterioration was observed in recognising the time indicated on a clock, writing own address, and preparing a balance sheet. Nearly 69% of students correctly identified the time shown on a clock in 2002, which increased to 73.3% in 2016 but decreased to 64.3% in 2021 (Annex 6.9). While writing their address, most of the students wrote their names each year, but deterioration was observed in writing village/mahallah name, post office, upazila/thana and district. Therefore, two-thirds of students correctly wrote their full address in 2002 and 2016, which decreased to 48.6% in 2021. In 2002, 31.5% of students rightly prepared the balance sheet, which increased to 34.4% in 2016 but decreased to 24.7% in 2021.

There was a statistically significant increase in the literacy rate that aligned with the increase in students' grades in each of the years under test and the projected one. Loss in literacy skills was accounted for in each grade but with various degrees. For instance, it was 7.3 percentage points for the students of grade 5 and 8.3 percentage points for those of grade 6 (Table 6.4). This was 10 percentage points for students of grades 8 and 10, but slightly higher for the remaining two grades.

A decline in the literacy rate was observed more among boys than girls (Figure 6.2). For instance, 54.2% of boys were literate in 2002, which increased to 58.8% in 2016; therefore, the projected literacy rate for boys stood at 60.5% in 2021. This was 9.7 percentage points more than the estimated rate of 50.8% observed in the test (Annex 6.10). On the other hand, 39% of girls were literate in 2002, which increased to 48.3% in 2016. The projected literacy rate was 52.1%, while the actual rate was 45.9%. The loss for girls was therefore 6.2 percentage points. The gender gap in literacy skills gradually decreased over time – from 15.2 percentage points in 2002 to 10.5 percentage points in 2016 and 4.9 percentage points in 2021.

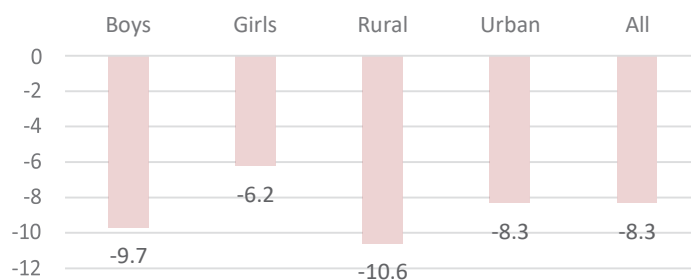
Grades	Estimated, 2002	Estimated, 2016	Projected, 2021	Estimated, 2021	Deviation of 4 from 5
1	2	3	4	5	6
5	24.2	31.4	34.5	27.2	-7.3
6	31.7	41.1	45.1	36.8	-8.3
7	35.0	52.6	60.8	50.8	-10.0
8	54.3	59.4	61.3	50.7	-10.6
9	59.7	64.3	66.0	55.8	-10.2
10	73.0	75.9	77.0	67.0	-10.0

Table 6.4. Percentage of students achieving literacy skills by Grade and year

The loss in literacy skills was more among rural students than their urban counterparts – 10.6 percentage points versus 8.3 percentage points (Figure 6.2 and Annex 6.10). The urban-rural gap was 11.7 percentage points in 2002, 10 percentage points in 2016 and 13 percentage points in 2021. Whereas the loss in literacy skills was more among boys in rural schools than girls, an opposite scenario was observed in urban areas (Table 6.5). Therefore, it was highest among rural boys and lowest among urban boys. Loss in literacy skills was 12.7 percentage points among rural boys, nine percentage points among urban girls, 7.9 percentage points among rural girls, and 6.9 percentage points among urban boys.

The relationship between parental education and the loss of student literacy skills was explored. A similar association was observed with both fathers' and mothers' education. The loss increased slightly for students whose parents had incomplete primary education than those who had parents with no school-

Figure 6.2. Loss in literacy skills (in percentage points) of the students by gender and geography



ing, which gradually decreased with the increase in parental education. For instance, the loss of students whose fathers had no schooling was 14.4 percentage points; it was 15.7 percentage points for those whose fathers had 1–4 years of schooling, 11.2 percentage points for those who had fathers with 5–9 years of schooling, and seven percentage points for those whose fathers had 10 or more years of schooling (Table 6.6). Similarly, the loss accounted for 13.4 percentage points if the mothers had no schooling, 14.5 percentage points if their mothers had 1–4 years of schooling, and 10.8 percentage points if their mothers had 5–9 years of schooling. The only different case was those students whose mothers had 10 or more years of schooling. Their literacy skills were not lost; instead, their literacy rate increased by two percentage points during the pandemic.

Geography and gender	Estimated, 2002	Estimated, 2016	Projected, 2021	Estimated, 2021	Deviation of 4 from 5
1	2	3	4	5	6
Rural					
Boys	53.7	57.6	59.1	46.4	-12.7
Girls	37.4	45.3	48.5	40.6	-7.9
All	44.8	51.2	53.7	43.1	-10.6
Urban					
Boys	60.4	63.2	64.2	57.3	-6.9
Girls	54.1	61.3	64.1	55.1	-9.0
All	56.5	61.2	64.4	56.1	-8.3

Table 6.5. Percentage of students achieving literacy skills by area and gender

Studies at home and literacy

The previous chapter explores students' levels of engagement in studies at home with tutoring from household members, private tutors, watching academic programmes on television, submitting school assignments, participation in online classes, and browsing the Internet for educational content. Here, we cross-tabulate student literacy skills with various levels of studies at home with multiple modes. This analysis cannot directly measure the learning loss (here literacy) regarding different levels of engagement in studies because data are not available for 2002 or 2016. Indeed, it helps understand the contribution of students' engagement in various activities in lessening learning losses.

Parental education	Estimated, 2002	Estimated, 2016	Projected, 2021	Estimated, 2021	Deviation of 4 from 5
1	2	3	4	5	6
Fathers' education					
Nil	32.3	44.0	49.1	34.7	-14.4
Grades 1–4	40.0	51.7	56.7	41.0	-15.7
Grades 5–9	54.3	58.0	59.4	48.2	-11.2
Grades 10+	59.9	73.7	79.4	72.4	-7.0
Mothers' education					
Nil	33.8	44.7	49.4	36.0	-13.4
Grades 1–4	48.3	50.6	51.4	36.9	-14.5
Grades 5–9	58.1	58.4	58.4	47.7	-10.8
Grades 10+	72.1	73.9	74.6	76.6	+2.0

Table 6.6. Percentage of students achieving literacy skills by parental education

The literacy rate of the students significantly increased with the increase in their engagement in studies at home. Following are the findings.

1. The literacy rate was around 26% among students who never, rarely or sometimes engaged in self-studies. This rate increased to 45.8% among those who studied often, 55.8% among those who studied usually and 67.8% among those who studied always. ($p < 0.001$)

2. The literacy rate was 47.2% among those students who were never tutored by household members, 49.5% among those who were tutored rarely, around 52% among those who were tutored sometimes or often, 62.7% among those who were tutored usually, and 72.1% among those who were always tutored ($p < 0.001$).

3. The literacy rate was 38.2% among those students who never received private tutoring, 45.1% among those who availed it rarely, 52.5% among those who availed it sometimes, 57.5% among those who availed it often, 60.5% among those who availed it usually, and 72.3% among those who always availed private tutoring ($p < 0.001$).

4. The literacy rate was 36% among those students who never submitted school assignments, 40.6% among those who rarely submitted them, 48.3% among those who did them sometimes, 60.8% among those who often submitted assignments, and 62.3% among those who submitted assignments usually or always ($p < 0.001$).

5. The literacy rate was 46.6% among those students who never watched any academic programme on television. This rate went up to 59.7% among those who watched them rarely, 69% among those who watched them sometimes, and 71.1% among those who at least often watched them. ($p < 0.001$)

6. The literacy rate was 47.7% among those who never participated in online classes during school closure. It was over 73% among those who did so rarely or sometimes and 86.4% with higher levels of online-class participation ($p < 0.001$).

7. The literacy rate was 47.6% among those who never browsed the Internet for educational content, 55.6% among those who browsed rarely, 66.8% among those who browsed sometimes, and 68.5% among those who had higher levels of browsing tendency ($p < 0.001$).

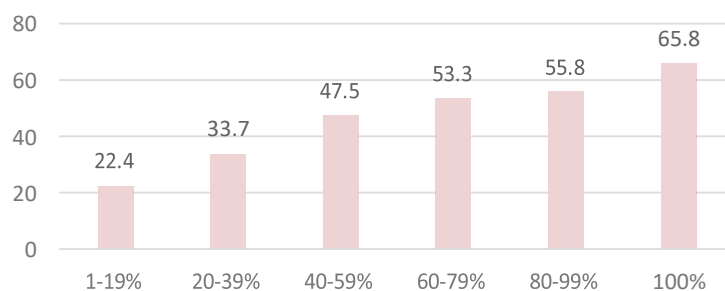
The following remarks compare the above results with the projected and estimated literacy rates for 2021.

1. The students who sometimes received tutoring support from the household members could cross the estimated literacy rate—crossing the projected figure required such tutoring.
2. The students who sometimes received private tutoring reached the estimated average, and those who received it often surpassed the projected literacy rate.
3. To cross the estimated average literacy rate, the students had to submit school assignments; however, those who submitted them often surpassed the projected literacy rate.
4. Participation in online classes, internet browsing, and rarely watching academic programmes on television helped students surpass the estimated and projected literacy rates. This finding may be taken cautiously because having a TV set at home is highly correlated to parental education and the household economy.

Overall, those who never engaged in self-studies at home during school closure or were engaged in it rarely or sometimes could not reach the estimated literacy rate in 2021. Those who often engaged in it also showed the same performance. To get the estimated average literacy rate, students had to engage in studies more than often and cross the projected literacy rate; they at least had to study usually.

The literacy rate of students significantly increased with the increase in the percentage of contents (items/chapters) they studied in Bangla and mathematics in 2020. The literacy rate was 22.4% among those who studied less than a fifth of the content; it was 33.7% among those who studied 20–39%, 47.5% among those who studied 40–59%, 53.3% among those who studied 60–79%, 55.8% among those who studied 80–99%, and 65.6% among those who studied the full content (Figure 6.3). The other issue is that students who read below 60% of the content (items/chapters) could not reach the average estimated literacy rate of 48%. Those who read 80% or more content scored close to the projected literacy rate.

Figure 6.3. Literacy rate by percentage of contents studied in Bangla and Mathematics



Regression analysis predicting literacy

A multivariate regression analysis was carried out to examine whether the initiatives taken to provide education at home during school closure have any role in predicting the students' literacy skills. As literacy was dichotomously assessed, a logistic regression analysis was thought to be the most suitable method. Two sets of explanatory variables were considered: students' background and activities to carry out education at home. The background variables include gender, area, grade, and parental education. The activities to carry out education at home include self-studies, household members tutoring, private tutoring, participation in television classes, submitting school assignments, participation in online classes, browsing Internet content for academic purposes, and reading textbook content. Measurement of the variables is provided in Annex 6.11. Correlation coefficients provided in the previ-

ous sections and the earlier chapter confirmed the absence of multicollinearity among the variables. Statistical Package for Social Sciences version 21 (SPSS 21) was used for analysing data. As the aim was to explore the predicting capability of the second set of variables controlling the effects of the first, the first set of variables was put in Block 1 and the second set in Block 2.

Table 6.7 presents the results from the regression analysis. Two models are presented. The first model contains only the background variables, and the second model both sets of variables. The findings reveal that, except for gender, the remaining four variables significantly predicted students' literacy skills. Of the second set of variables, self-studies at home, private tutoring, participation in online classes and reading of the textbooks during school closure played a significant positive role in predicting students' literacy skills. Therefore, no contribution of household members' tutoring, television classes, school assignments, and browsing of Internet content was observed in predicting literacy skills. Of the background characteristics, the students' grades contributed the most to predicting literacy, followed by fathers' education, mothers' education, and area of residence. The chronology of fathers' and mothers' education changed when the second set of variables entered the model. Of the second set of variables, the contribution of self-studies at home was at the top, followed by students' reading of Bangla and mathematics textbooks, private tutoring, and participation in online classes. Note that the contribution of parental education and area of residence has lessened at the entry of second set of variables. The role of parental education became lesser than self-studies, and the role of reading textbooks (Bangla and mathematics) became higher than the area.

Table 6.7 also shows that the students' backgrounds collectively explained 19% of the total variation in students' literacy achievement, which increased to 25% when the activities carried out to continue education at home were added to the model. Therefore, the second set of variables' net contribution

Explanatory variables	Model 1			Model 2		
	Regression coefficient	Wald statistic	Odds ratio	Regression coefficient	Wald statistic	Odds ratio
Gender	0.12	1.96	1.12	0.15	3.14	1.14
Geography	0.39***	21.82	1.48	0.29***	10.62	1.37
Grade	0.32***	164.28	1.37	0.33***	132.40	1.41
Fathers' education	0.08***	43.96	1.08	0.06***	21.20	1.06
Mothers' education	0.09***	38.39	1.09	0.07***	24.66	1.08
Self-studies				0.13***	35.57	1.15
HH members tutoring				0.03	3.52	1.04
Private tutoring				0.04**	8.37	1.05
Television classes				0.02	0.31	1.03
School assignments				-0.01	0.01	1.00
Online classes				0.10*	4.53	1.12
Internet content				-0.02	0.33	0.99
Textbook content				0.02***	14.61	1.02
Constant	-3.17***	274.01		-4.52***	317.25	
-2 Log-likelihood	3518.25			3370.24		
Cox & Snell R ²	0.14			0.19		
Nagelkerke R ²	0.19			0.25		

Notes: *p<0.05, **p<0.01, ***p<0.001

Table 6.7. Logistic regression models predicting students' literacy skills

was (25 – 19 =) 6%. The interpretation of this is that the activities students carried out to continue their education during the school closure were less contributory than their background characteristics in predicting their literacy skills.

Similar analyses separately for rural and urban students and boys and girls were carried out, and the results are presented in Annexes 6.12 to 6.15. Some similarities and dissimilarities were observed in the results. In each case, the contribution of various modes of studies during school closure was less than that of background characteristics where the student's grade was the most contributory. Among various activities during school closure, self-studies and reading textbooks (Bangla and mathematics) came out as common contributory factors in each model. Private tutoring came out as a predictor of literacy achievement of rural students and boys; it was watching academic programmes on television for urban students. Gender came out as a significant predictor for rural students and the area of residence for girls.

RECOVERY STRATEGY: HEADTEACHERS' OPINION

The heads of the educational institutions were asked two questions regarding the recovery strategy for the perceived learning losses. The first question related to the initiatives they were thinking of starting after the reopening of schools. The second question related to what they were expecting from the government. In reply, the headteachers highlighted several activities. Regarding the activities at the school level, nearly three-fifths of respondents were considering an increased daily contact hours, two-fifths were thinking to provide relatively more emphasis on English and mathematics teaching, and more than a third of the heads were considering increasing student home visits (Table 6.8). Another one-third thought of revisiting the previous grade's lessons before starting the current grade's lessons. Some other issues headteachers were possibly introducing include the rearrangement of classroom seating by mixing students who excelled and those who struggled with their academics, provision of regular classes and special coaching for the terminal examinees, additional emphasis on class tests, etc. A separate analysis by school type and location is also carried out. This shows a slight deviation in the percentage of teachers of various backgrounds but no change in terms of the emphasis they have provided to the activities (Table 6.8 and Annex 6.16).

Activities	School type		All
	Primary	Secondary	
Increase daily contact hours	55.4	63.0	59.3
Emphasis more on English and mathematics	41.9	40.1	41.0
Increase home visits of the students	41.9	30.7	36.2
Revisit previous Grade lessons before starting current lessons	36.0	32.8	34.4
Seating arrangement mixing advanced and weak students	21.0	16.7	18.8
Provision of everyday classes for examinees	17.7	17.2	17.5
Arrange special coaching for terminal examinees	13.4	17.7	15.6
Provide additional emphasis on class-tests	12.4	16.7	14.6
Arrange general coaching in school	9.7	13.5	11.6
Provision of student counselling	5.4	12.5	9.0
Increase co-curricular activities	8.6	6.3	7.4

Note: Multiple responses considered

Table 6.8. Percentage of headteachers by activities they were considering after reopening the schools and school type

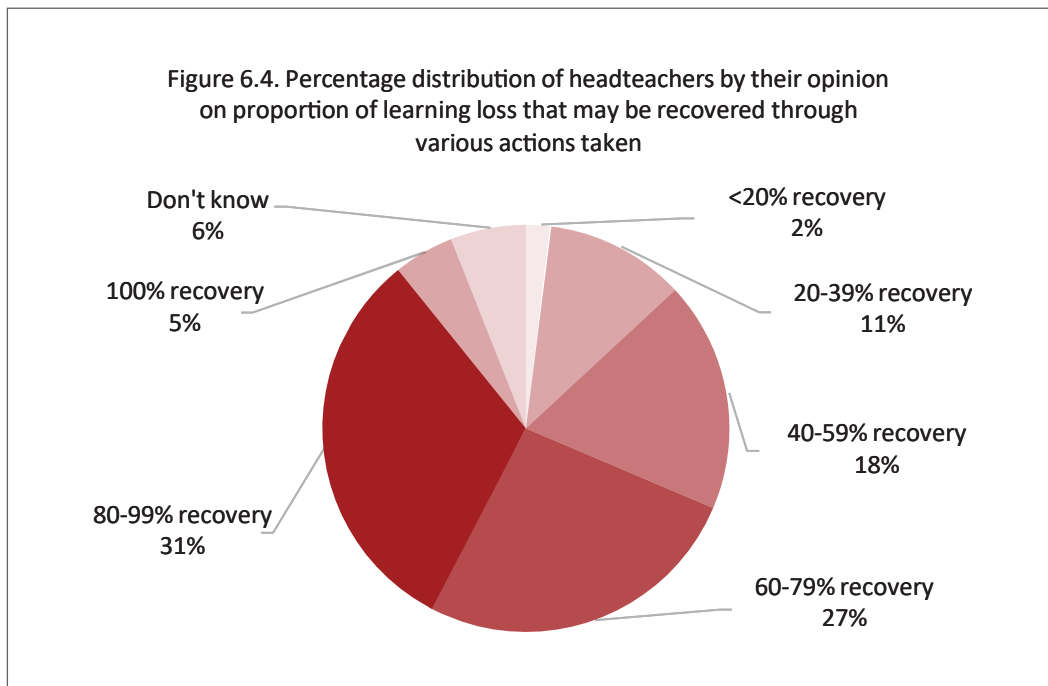
When asked to provide suggestions that the government can consider for the country, the headteachers provided 11 suggestions. The highest proportion suggested shunning long vacations (40.8%), followed by the following: an increase in daily contact hours (38.4%), increased emphasis on school monitoring (33.1%), the inclusion of previous grade lessons in the syllabus (29.6%), special training/workshops for teachers (28%), a national guideline for all schools (23.7%), and provision of whole-day school on Thursdays (14.7%). The other suggestions of the headteachers include teachers' training, the appointment of mentors/counsellors in schools, a continuation of academic programmes on television and arrangement of online classes centrally, and the use of mass media to highlight the importance of education. A separate analysis by school type and location is also carried out and provided in Table 6.9 and Annex 6.17. This shows a slight deviation in the percentage of teachers' responses but no change in terms of the emphasis they have provided to the activities.

Steps that the ministry should consider	School type		All
	Primary	Secondary	
Avoid long vacation	38.8	42.7	40.8
Increase daily school contact hours	34.4	42.2	38.4
Increased emphasis on school monitoring	29.5	36.5	33.1
Include previous Grade lessons in the syllabus	36.6	22.9	29.6
Special training/workshop for teachers	23.5	32.3	28.0
Provide national guidelines from the ministry	25.1	22.4	23.7
Provision of whole-day school on Thursdays	13.1	16.1	14.7
Arrange training for untrained teachers	9.8	12.5	11.2
Appoint mentors/counsellors in each school	5.5	9.4	7.5
Arrange online/TV classes centrally	3.8	5.7	4.8
State-level publicity on the importance of education	4.4	5.2	4.8

Note: Multiple responses considered

Table 6.9. Percentage of headteachers by the steps they thought the ministry should consider after reopening of schools and school type

The heads of the educational institutions were asked to estimate how much of the perceived learning losses could be recovered through various actions they and the government were planning. A considerable variation existed in the responses of the headteachers. Two per cent of the headteachers said that less than 20% of the losses could be recovered, 11.1% said 20–39%, 18.3% said 40–59%, 26.6% said 60–79%, 31.2% said 80–99%, and 4.8% said the full of losses could be recovered. In other words, 36% of the headteachers were hopeful of recovering at least 80% of losses, and 62.6% were optimistic about recovering at least 60% of losses (Figure 6.4). Note that 6% of the headteachers reported their inability to provide an answer. The headteachers of the government primary schools were more hopeful than others about recovering from learning losses. One in every 10 headteachers of these schools fell in this category:



3.8% in newly nationalised schools, 1.6% in non-government secondary schools, and 2.7% in the madrasas (Annex 6.18). This was 7.6% in two types of primary and 2% in two types of secondary educational institutions (Annex 6.19). More optimism was observed in urban schools than in rural schools (8.4% versus 2.5%). A similar difference in optimism was observed in the case of 80% or more recovery. A third of rural and 39.6% of urban schools and 42.7% of primary and 27.4% of secondary school headteachers were optimistic about recovering at least 80% of the learning losses.

LOSS OF TEACHERS' SKILLS

The interviewed head teachers talked about losses in teachers' skills during one-and-a-half years of school closure. They anticipate that as all the training institutions were closed during this period and teachers could not engage in classroom teaching – they might have lost their teaching and other essential skills. Of the interviewed heads, 69.6% apprehended the loss of teachers' skills (Table 6.10). They are 55.8% of government primary schools, 83.1% of newly nationalised primary schools, 73.4% of non-government secondary schools, and 63.6% of the madrasas ($p < 0.001$). Collectively, half of the primary and 64.6% of secondary school headteachers apprehended the loss of teachers' skills ($p < 0.001$). More headteachers of urban schools anticipated this than their rural counterparts ($p < 0.05$). The headteachers also reported on the estimated number of teachers they thought might have lost the skills. The headteachers anticipated a loss of 51.1% of all teachers. School type and area analysis are provided in Table 6.10.

School type	Percentage of headteachers reported loss	% of teachers with loss	
		All schools	Loss reporting schools
School type			
Government primary	55.8	35.9	77.8
Newly nationalised primary	83.1	51.2	80.0
Non-government secondary	73.4	51.6	63.2
Madrasa	63.6	62.5	72.1
Education level			
Primary	50.0	40.2	78.6
Secondary	64.6	55.9	66.8
Geography			
Rural	81.3	55.9	72.4
Urban	86.3	45.8	65.6
All	69.6	51.1	69.3

Table 6.10. Percentage of headteachers apprehended loss in teachers' skills and percentage of teachers at risk of loss



CHAPTER

7

Discussion, Conclusions and
Recommendations

DISCUSSION AND CONCLUSIONS

Bangladesh achieved commendable success in increasing children's school enrolment at all levels of education. This was a long journey starting after its independence in 1971. The journey gained momentum after the Jomtien conference in 1990 when the global community came together to support countries in achieving 'basic education' and again through the EFA (Education for All) movement in the new millennium. In Bangladesh, the government's policy support for an inclusive system with affirmative actions through establishing new schools and reaching the unreached was instrumental to this effort. In 1990, the primary net enrolment rate was only about 60%, with girls lagging behind boys (BBS & UNICEF, 2000). Launching a universal pre-primary education through existing primary schools and the nationalisation of more than 25,000 registered and non-registered primary schools in 2013 were two other landmarks of this journey. The speedy increase in girls' and rural children's enrolment and achieving gender parity were two significant achievements. Bangladesh's success was marked by reducing students dropping out of school, resulting in an increase in the completed years of schooling by the young population. However, success regarding the quality of education was much lower than that in enrolment. Although student learning achievements increased over the period, they remained far behind the grade-specific expectations expressed in the national curriculum. In this milieu, we have the pandemic. The findings of this study reveal that the COVID-19 pandemic pushed Bangladesh at least a couple of years back in pre-primary and primary school enrolment, if not secondary education. School closure caused major impacts, pushing it further behind.

The school records, as presented in this report, show a considerable decrease in the number of pre-primary students from 2020 to 2021, an increase in the number of primary students, and no change at the secondary level. Many parents feared the risk of infection to their children by COVID-19, therefore, did not take their children for admission to pre-primary grades during the pandemic. On the other hand, those who were already admitted to pre-primary to grade 4 before the pandemic in 2020 were auto-promoted to the following grades in 2021. The school authorities did not remove any of those names from the registers. In addition, some out-of-school children who reached their primary school age were also admitted to primary grades during the pandemic. A contradiction arose when the parents were asked about admission to the new grade and the collection of textbooks during the pandemic. The reality is that although the school authorities auto-promoted all students and registered their names to the following grades, a section of students did not collect their textbooks and were therefore recorded as non-enrolled in the household survey for this study. Admission to new grades holding classroom teaching had no meaning to a substantial proportion of the parents. The primary net enrolment rate observed in this study was below the rate observed by DPE in 2009. The same for pre-primary was observed from the previous *Education Watch* datasets. Therefore, it can be said that the pre-primary and primary net enrolment rates went down to those back in 2009 – a gap of 12 years.

The pandemic also changed the role of gender and area of residence of the students in their school enrolment. At the pre-primary level, girls were ahead of boys in enrolment before the pandemic, a gap which disappeared during the pandemic. Conversely, although girls surpassed boys in the primary net enrolment rate during the pandemic, the gender gap increased due to a decrease in boys' enrolment rate. Although no area-wise difference was observed in the pre-pandemic period in any education level, it occurred during the pandemic in both periods because of a substantial decrease in enrolment in urban areas. The reasons behind not admitting to school during the pandemic were directly or indirectly related to the fear of COVID-19 or a consequence of the pandemic. Girl-child marriage, participation in child labour, and a decrease in household income were some of the consequences of the pandemic that hindered school enrolment. A high proportion of the parents avoided admission, disliking that it took place while classroom activities were kept closed. The other reasons include students losing interest in education and fear of filling the learning gap. No change in secondary enrolment means that those already in secondary grades before the pandemic received their textbooks in January 2021. Again, those who completed primary education during the pandemic also moved to secondary education.

Compared to the observations from the household surveys conducted under *Education Watch* in or before 2016, this study reported a massive increase in children's admission to *qawmi*, *hafizia* or *nurani madrasas*. Two issues are pertinent here. Firstly, enrolment of students in these *madrasas* doubled over five years from 2016 to 2020, indicating a fast spread of such institutions. The national political environment may have contributed to this. The non-formal schools of the NGOs also started to decrease in 2016 due to the shrinking of donations from overseas development partners. Secondly, at some point in time during the pandemic, such *madrasas* were in face-to-face operation while all other educational institutions were shut down. Some parents moved their children from the general stream to these *madrasas* in order to keep them engaged in an institutional setting rather than staying at home.

Similar to the enrolment scenario, girls and rural students were more likely to attend classrooms after reopening the schools in September 2021. The attendance rate was higher for secondary students than for primary students. As the parents were more fearful of their younger children's safety regarding classroom attendance, their attendance rate was lower than the elders. The extent of students dropping out was not possible to portray in this study. Firstly, because the classroom activities were closed during the pandemic, it was impossible to identify students who dropped out considering the duration of absenteeism. Secondly, after reopening the schools, students' attendance data were collected only for one month. It is highly possible that many students who were studying at home during the school closure did not present themselves in school due to safety reasons. Also, many students might have returned to classrooms after completion of the fieldwork of this study. Keeping these limitations in mind, the study estimated 4.8 million students at risk of dropping out of the system; 3.3 million at the primary level and 1.5 million at the secondary level. The figures would surely decrease with the increase in attendance of those students who restarted schooling after four weeks of reopening. Follow-up of the same sample is required to understand a precise scenario.

Like many other countries, ICT devices were the principal means for schools to keep in contact with students. These were used for general greetings with students, knowing about the wellness of their families at the beginning of the pandemic, and later for providing academic instructions and online classes. Student home visits were the other method of keeping in contact. The headteachers reported some challenges relating to ICT devices for both students and the teachers particularly in terms of the quality of ICT devices and Internet functionality. More primary than secondary headteachers expressed their satisfaction with the activities they undertook and how these went during school closure.

An improvement was observed during the pandemic in the availability of ICT devices at the students' homes, having students' personal devices, and getting the household members' devices for academic use. These can be marked as a direct consequence of the pandemic and school closure. As observed, feature phones, smartphones, television sets, and the Internet were the principal devices at home. Desktop or laptop computers were not in use as much. The issue of inequity needs to be discussed here. Except for feature phones, which were almost equally available, urban households were far more likely than rural households to have principal devices. Therefore, using them for academic purposes was less likely for students of rural schools than their urban counterparts. Although, in most cases, the ICT devices were common properties of the households or, in some cases, belonged to the elder members of the families, a section of students had them personally. Therefore, the majority of those who got the opportunity to use ICT devices for academic purposes had to depend on their parents or elder siblings. Whether it is the case of having personal devices or using devices for educational purposes, girls and rural students were significantly less likely to benefit from these due to lack of access. This is clearly a digital divide.

The findings reveal that most students engaged in self-studies at various levels; however, household members also tutored 44% of students, and 69.6% had private tutors. These are not new phenomena in the Bangladesh context. Many *Education Watch* studies reported the involvement of household members and private tutors in studying outside classrooms during the pre-pandemic period (Nath 2008, 2012, 2015; Nath et al., 2008, 2014). Although the schools were shut down to protect students from coronavirus infection, many students welcomed private tutors at home or visited them. The major-

ity of the private tutors were school teachers. The prevalence of private tutoring declined during the pandemic because those who used to receive private tutoring only before the examinations did not see any relevance as there were no examinations in schools. Engagement in private tutoring increased, and household members' support decreased with the increase in students' grades. The findings also reveal that girls and rural students were more active than their respective counterparts in self-studies. However, an opposite scenario was observed in tutoring. This is a deprivation to girls and rural students from their family's end. Over 54% of students were tutored privately outside the home, with 35% by school teachers challenging the school closure policy.

Under the auspices of the government, the schools provided assignments to students, and Bangladesh Television and Sangsad Television transmitted academic programmes to support students' home education. However, over three-fourths of students never watched academic programmes on television. Less than 10% of students submitted their given assignments regularly. The students complained that teachers did not provide feedback on the submitted assignments. Not having a television set at home may be a major reason for not taking advantage of such an initiative. Moreover, connecting to a cable network was required to watch any programme on Sangsad Television which demanded additional expenses. There is also a question about the quality of these programmes. A decreasing trend in students' access to these programmes and a highly significant urban-rural variation with rural students lagging much behind may be a reflection of the programmes. The other related issue concerning this is the absence of the school teacher's role in this programme with no link between the assignments and the programmes' telecast. The headteachers who were not regular watchers of these television programmes also raised questions about their effectiveness. A high disconnect was noted between the headteachers' conjecture about students watching these programmes on television and the reality reported by students. Observance of no gender difference in these activities is a good sign indeed.

A small section of the school students participated in online classes (10.5%) or browsed academic content on the Internet (19.8%). The majority of them did so rarely or sometimes. Such a low use of technologies might be related to the quality of ICT devices available to students and the usage cost. Uninterrupted Internet was required to get the maximum benefits of these. Whereas half of the headteachers in 2020 and two-thirds in 2021 reported that they arranged online classes, only one in 10 students was reported to participate in these. It is not clear where the discrepancy was. The heads of the institutions who mentioned this may have arranged online classes; students did not pay attention to them, or they could not participate in those for various practical reasons. There is also a possibility of over-reporting by the headteachers. However, it is known that teachers do not have the training to conduct online classes, and they also lack appropriate ICT devices. *BANBEIS (2021)* reports that 87.3% of secondary schools have computer facilities (42.3% with a full-fledged computer lab), 80.6% have dedicated ICT teachers, and 82.5% have Internet facilities. How much these were utilised during the pandemic may be a question for further investigation. It seems that most were underutilised. Why the system did not drive with these facilities is also a question. Both area and gender-wise variations were observed in each of the modes of education during school closure. Boys and urban students were significantly ahead of girls and rural students respectively.

This study measured learning loss using a simple literacy measurement tool and observed that students of grades 5–10 lagged 8.3 percentage points behind the expected literacy rate. This clearly shows learning loss due to school closure. The heads of the educational institutions also expressed their concern regarding learning loss. According to them, only 3.7% of students would not face any loss, but 35.4% would lose more than 75% of their achievements, and another 22.4% would lose 50–74%. This means that students would face various degrees of learning loss. Besides the headteachers' apprehension, this study did not keep a provision for measuring the degrees of losses among the students. Two reasons can be cited for this. Firstly, the same students were not tested to measure loss and secondly, literacy was measured dichotomously.

Interestingly, although girls faced various types of discrimination or got fewer resources for their studies at home than boys, learning loss was more among boys. Self-study at home was the only way to continue their education. It seems that boys did not have appropriate use of their resources to keep their achievements on track. On the other hand, although rural students also get fewer resources, they did not do well in the literacy test. Therefore, they faced more learning loss than the urban students. Learning loss gradually decreased with the increase in parental education. This may be because educated parents took better care of the children. Interestingly, if mothers completed secondary education, their children did not face any loss, instead gaining two percentage points. This finding is similar to the headteachers' observations where they anticipated no loss to a section of students.

This study also examined the relationship between various strategies taken by students to carry out studies at home with their literacy skills. The most crucial issue is that the student's background characteristics played a greater role than the activities related to studies in predicting literacy skills. This is not a new phenomenon in the school education system in Bangladesh. Nath (2012) observed a greater contribution of socioeconomic factors than school-related factors and additional educational inputs in predicting the learning achievement of fifth graders. Of the strategies taken, self-studies at home came out as the most important phenomenon in achieving literacy skills, followed by reading textbook content. Such a finding is significant in any context. If students can be inspired by self-studies by regularly reading textbooks for a substantial amount of time, a better result can be expected. The roles of private tutoring and online classes were also found significant. Private tutoring is an old and increasingly evident phenomenon throughout the school education system in Bangladesh; the contribution of private tutoring is also observed in different studies (Nath 2008, 2012, 2015; Nath et al., 2008, 2014). It can be argued that if the ICT resources of the schools could be utilised to a substantial extent and the students be motivated (which was a pre-pandemic task), learning loss could be lesser than what has occurred.

Academic programmes on television and remote home assignments are two first-time initiatives for school students in Bangladesh. Both were government-initiated centrally managed activities during the pandemic. These had no role in predicting students' literacy skills. Although a good proportion of students claimed to submit the assignments, watching the television programmes was rare. Some issues related to the constraints regarding students' access and benefitting from these initiatives are discussed in a previous paragraph. This is not enough. The potential of the initiatives cannot be ignored in enhanced learning if carried out appropriately. Undoubtedly, the infrastructural constraints need to be removed to make them accessible to students. It seems that there is a lack of connection between the three initiatives, viz., television programmes, assignments, and online classes. Teachers were not given the freedom to decide on the assignments. Moreover, Bangladesh Open University has been in operation since 1992 and offers distance education. What role this higher educational institution played during the pandemic for the school education system is a question. The capability of this institution needs to be explored and improved so that it can be a help to other institutions. An in-depth review of the initiatives in terms of content, preparation process, presentation, and the role of education officials and teachers in implementation must be done thoughtfully. New programmes need to be chalked out alongside face-to-face classroom activities using the experiences with the television programmes, assignments, and online classes during the pandemic. Teachers should be trained and engaged throughout the process.

Now the question comes where Bangladesh stands with the present level of literacy rate of students. A backward calculation shows that the current literacy level is equivalent to the literacy rate of 2007. In other words, Bangladesh accounts for a loss of 13 years in terms of the literacy levels of its students. Again, this is an average estimate, which may vary by grade, area, gender or school. Variation among students within a classroom also cannot be ignored. There are pertinent questions about how long it may take to recover the losses and catch up to the literacy level it was supposed to have if there was no pandemic or any incident of school closure.

RECOMMENDATIONS

Re-opening schools and doing business as usual may not be enough in the new normal to recover the losses due to school closure during the coronavirus pandemic. Some affirmative actions, both short and medium-term, specific to the problems identified may help recover the losses. The losses in terms of years estimated in this study may seem too difficult to recover and progress further, but the years required to achieve the pre-pandemic state may be much lower if the right strategies can be identified and implemented. Following are some recommendations.

1. There should be different strategies for students already in school from the pre-pandemic period and those newly admitted after schools reopened. This is because the two groups of students faced different experiences with education during the pandemic. The shock was much bigger for the former group of students.

2. A mass campaign should be organised to bring all children to school. A school catchment list of out-of-school children needs to be prepared – one for those still absent from schools and the other for those who became eligible to admit to school but failed to do so. A committee may be formed by the headteachers collectively with teachers, parents, and the local civil society organisations to prepare the list and do the campaign. Local volunteers can be utilised in this. In addition, the local public representatives can play a vital role through public meetings and *Uthan Baithak* (courtyard meetings). *Upazila* and district-level education offices can track each school's progress. NGOs such as BRAC may also be involved as previous experience shows their effectiveness in bringing children to schools.

3. A baseline assessment of all students should be in place to know their current competence level, categorise them, and fix the remedial measures and strategies. This should be done individually for each school and for all students engaging all teachers using a simple tool on basic mathematics and languages (basically Bangla but English as well for higher grades). Standard grade competencies or learning objectives set in the curriculum should be the basis of this assessment. The parents should be engaged in the recovery process to share a portion of the tasks. Peer support should be explored and utilised. Context and need-based specific care should be provided to students demonstrating a need for additional support. These should be backed by several follow-up assessments of the students to monitor progress and reset the strategies.

4. Results of school-level assessments of enrolment and dropout rates, as well as students' competence should be made public at all levels – *school, union, upazila, district* and *national*. This would help increase mass awareness about the losses, increase empathy for the student realities, and contribute to the remedial process with whatever scope and capabilities the people have. A mass media campaign with the facts, government strategies, and expectations from students, teachers, parents, and communities can be a helpful tool. Similar to the EFA movement, utilisation of the civil society organisations and the NGOs, both at national and local levels, should be a serious consideration.

5. Particular emphasis needs to be given to boys and rural students in the remedial strategies. In each case, context-specific solutions must be implemented. Further exploration is required to understand the case of boys who had higher learning losses despite getting more support from their families. Measures should be taken to address inequity in access to ICT resources in terms of gender and area of residence.

6. Experiments need to be initiated to improve the quality of online and television classes and the assignments and their management. The former two are potential areas which lend themselves the nation's goal of creating a 'Digital Bangladesh'. The ICT resources/Labs already exist in many secondary schools need to be fully utilised in the new normal, and new similar facilities must be provided in the remaining schools. Development of a successful model blending both face-to-face and remote needs to be emphasised.

7. Recovering the loss of teachers' skills should be a serious concern. Refresher training on traditional teaching methods and new training courses on remote teaching methods, along with how to combine them while implementing recovery strategies, are key areas to focus on teacher development. Teachers should be at the forefront of implementation.

8. Coming out of the historical tradition of low allocation to the education sector, the national budget should act as an instrument to make the recovery strategy a success. A 'mega project' of eight years from FY 2022–23 to 2030 should be formulated side by side with the national budget. The additional allocation under the project should be used in executing the above-mentioned assessments and experiments, teachers' capacity development, digitalisation of the schools, making ICT devices available to teachers and students, creating Internet facilities for all, and achieving the fourth SDG.

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ANNEXES

Annex 3.1. Percentage distribution of households by size and geography

Household size	Geography		Both
	Rural	Urban	
1–2	6.5	6.0	6.3
3	17.0	18.4	17.5
4	30.3	33.5	31.5
5	23.2	23.3	23.2
6	13.0	11.0	12.2
7–18	10.0	7.8	9.3
Total	100.0	100.0	100.0
Mean (SD)	4.6 (1.6)	4.4 (1.5)	4.5 (1.6)
Sex ratio*	103.4	102.7	103.2

* The number of females per 100 males

Annex 3.2. Age-distribution of household members by gender and geography

Age group (in years)	Gender		Geography		All
	Males	Females	Rural	Urban	
0–4	8.4	7.5	8.0	7.8	7.9
5–9	9.7	9.0	9.2	9.6	9.3
10–14	13.2	13.6	13.7	12.9	13.4
15–24	19.2	19.3	19.4	18.9	19.2
25–34	10.9	15.5	12.6	14.3	13.3
35–49	20.7	21.1	20.6	21.3	20.9
50–59	8.8	7.0	7.9	7.7	7.9
60+	9.2	7.1	8.6	7.4	8.1
Total	100.0	100.0	100.0	100.0	100.0

Annex 3.3. Percentage distribution of households with at least one member lost work/job during the pandemic by the number of months they were work/jobless

Number of months with work/joblessness	Geography		Both
	Rural	Urban	
1	7.1	5.7	6.4
2	19.5	19.0	19.3
3	27.4	27.0	27.2
4	18.0	15.4	16.9
5	9.0	9.6	9.3
6	9.4	13.9	11.4
7–18	9.6	9.4	9.5
Total	100.0	100.0	100.0
Mean	3.9	4.1	4.0

Annex 3.4. Percentage distribution of households by changes in income and expenditure during the pandemic

Changes in HH income and expenditure	Geography		Both
	Rural	Urban	
Income			
Decreased	80.8	81.2	80.9
Increased	0.7	0.6	0.7
Same as before	18.5	18.3	18.4
Expenditure			
Decreased	27.2	29.6	28.1
Increased	35.8	31.2	34.0
Same as before	37.0	39.2	37.9

Annex 3.5. Percentage distribution of students under literacy test by school type and grade in 2021

School type	Grade in 2021						All
	5	6	7	8	9	10	
Government primary ¹	61.5	2.3	2.4	1.7	-	-	11.2
Newly nationalised primary	10.2	-	-	-	-	-	1.7
Non-government primary	1.3	-	-	-	-	-	0.2
Non-formal primary	4.2	-	-	-	-	-	0.7
Ebtedayee madrasa	2.1	-	-	-	-	-	0.3
Kindergarten	10.3	5.4	5.6	5.0	1.4	1.6	4.9
Government secondary	0.4	7.5	7.9	9.4	11.2	10.6	7.8
Non-government secondary ²	3.8	70.7	70.6	71.1	72.0	73.8	60.5
High madrasa ³	5.5	12.5	13.3	12.5	12.3	10.3	11.1
Technical/Vocational school	-	-	-	-	2.8	3.6	1.1
Kaomi/hafizi/nurani	0.6	1.2	0.2	0.2	0.3	0.1	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

¹Including government schools up to Grade 8; ²Including junior secondary schools; ³dakhil, alim, fazil or kamil

Annex 3.6. Percentage distribution of students under literacy test by age and grade

Age (in years)	Grade in 2021						All
	5	6	7	8	9	10	
11	57.0	25.8	3.8	-	-	-	14.3
12	27.4	40.6	27.9	4.8	-	-	16.9
13	10.2	22.6	37.5	27.4	6.5	-	17.5
14	5.4	8.1	22.3	38.9	29.3	8.7	18.7
15	-	2.9	5.3	19.3	36.8	33.6	16.3
16	-	-	3.3	6.0	18.7	34.5	10.4
17	-	-	-	3.6	5.8	16.4	4.1
18	-	-	-	-	2.9	6.9	2.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Annex 3.7. Percentage distribution of students under literacy test by age and geography

Age (in years)	Geography		All
	Rural	Urban	
11	14.9	13.3	14.3
12	16.2	18.0	16.9
13	17.4	17.6	17.5
14	19.1	18.1	18.7
15	16.2	16.3	16.3
16	10.4	10.3	10.4
17	4.2	4.0	4.1
18	1.5	2.3	2.0
Total	100.0	100.0	100.0

Annex 3.8. Percentage of students under literacy test by various HH characteristics and their grades

Characteristics	Grades in 2021						All
	5	6	7	8	9	10	
Slum-dwellers (%)	3.3	2.4	1.8	2.1	1.9	3.0	2.4
Unitary household (%)	76.5	69.5	74.1	72.5	72.2	71.6	72.7
Female-headed HH (%)	10.6	11.2	12.8	11.2	11.5	11.9	11.6
Electricity at home (%)	99.2	99.6	99.5	99.7	99.9	99.5	99.6
Religion of HH head (%)							
Muslim	89.6	90.1	89.8	89.0	90.2	89.4	89.7
Hinduism	9.2	9.0	9.1	10.1	8.6	9.0	9.2
Buddhism	0.9	0.9	1.0	0.9	1.0	1.3	1.0
Christianity	0.3	0.0	0.1	0.0	0.1	0.3	0.1
Small ethnic minority (%)	1.2	0.9	1.1	1.2	1.4	1.7	1.2

Annex 3.9. Percentage of students under literacy test by various HH characteristics and geography

Characteristics	Geography		Both
	Rural	Urban	
Slum-dwellers (%)	1.9	3.2	2.4
Unitary household (%)	71.3	74.9	72.7
Female-headed HH (%)			
Electricity at home (%)	99.3	99.9	99.6
Religion of HH head (%)			
Muslim	87.6	93.1	89.7
Hinduism	10.7	6.8	9.2
Buddhism	1.6	0.0	1.0
Christianity	0.1	0.1	0.1
Small ethnic minority (%)	1.8	0.3	1.2

Annex 3.10. Percentage distribution of students under literacy test by parental education and geography

Level of education	Fathers' education			Mothers' education		
	Rural	Urban	Both	Rural	Urban	Both
None	28.1	17.9	24.2	19.6	13.7	17.4
Grades 1–4	19.3	13.7	17.2	18.1	12.6	16.0
Grades 5–9	38.7	41.3	39.7	52.8	51.3	52.2
Grades 9+	13.9	27.2	18.9	9.5	22.4	14.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

Annex 3.11. Percentage distribution of students under literacy test by fathers' education and grades

Fathers' education	Grade in 2021						All
	5	6	7	8	9	10	
None	25.4	21.8	22.7	25.6	24.6	25.4	24.2
Grades 1–4	20.3	17.7	16.0	17.7	14.5	17.0	17.2
Grades 5–9	37.5	42.5	43.7	37.9	40.1	36.0	39.7
Grades 9+	16.9	18.0	17.6	18.8	20.9	21.6	18.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 3.12. Percentage distribution of students under literacy test by mothers' education and grades

Mothers' education	Grade in 2021						All
	5	6	7	8	9	10	
None	15.5	16.3	18.1	17.5	16.5	20.3	17.4
Grades 1–4	19.3	15.2	14.1	16.0	16.4	15.1	16.0
Grades 5–9	52.0	54.1	53.5	52.6	51.3	49.7	52.2
Grades 9+	13.2	14.4	14.2	13.9	15.8	14.9	14.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Annex 3.13. Percentage distribution of students under literacy test by main source of HH income and grade

Main source of HH income	Grade in 2021						All
	5	6	7	8	9	10	
Agriculture	15.7	16.9	16.9	19.3	20.9	20.6	18.4
Day labour	19.7	19.6	16.9	17.4	15.3	13.8	17.1
Salaried job	11.2	12.4	12.3	11.9	11.9	14.0	12.3
Business	22.3	23.8	23.8	21.8	25.3	24.6	23.6
Driving	4.1	3.4	3.0	3.6	3.6	3.3	3.5
Self-employed (non-technical)	6.7	5.5	4.9	6.1	5.8	5.5	5.7
Self-employed (technical)	8.5	6.9	8.6	6.9	5.3	6.6	7.1
Remittance	7.2	7.0	7.3	7.8	7.3	6.4	7.2
Relatives' help (homeland)	0.9	1.1	2.4	1.7	2.1	1.2	1.6
Others	3.7	3.6	4.2	3.6	2.5	4.1	3.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Annex 3.14. Percentage distribution of students under literacy test by main source of HH income and geography

Main source of HH income	Geography		Both
	Rural	Urban	
Agriculture	26.7	4.9	18.4
Day labour	19.4	13.4	17.1
Salaried job	7.6	19.9	12.3
Business	18.3	32.2	23.6
Driving	2.4	5.3	3.5
Self-employed (non-technical)	5.3	6.4	5.7
Self-employed (technical)	6.8	7.7	7.1
Remittance	8.1	5.6	7.2
Relatives' help (homeland)	1.7	1.4	1.6
Others	3.7	3.5	3.5
Total	100.0	100.0	100.0

Annex 3.15. Percentage distribution of students' households by changes in income and expenditure during the pandemic and grade

Changes in HH income and expenditure	Grades in 2021						Both
	5	6	7	8	9	10	
Income							
Decreased	84.5	82.4	82.2	80.8	81.2	80.2	81.9
Increased	0.8	0.4	0.9	0.1	0.6	0.7	0.6
Same as before	14.7	17.3	16.9	19.1	18.2	19.1	17.5
Expenditure							
Decreased	27.3	29.3	29.3	25.2	27.1	25.7	27.3
Increased	36.7	32.9	33.0	34.2	35.1	35.8	34.6
Same as before	36.0	37.9	37.7	40.6	37.8	38.5	38.1

Annex 3.16. Percentage distribution of students' households by changes in income and expenditure during the pandemic and geography

Changes in HH income and expenditure	Geography		Both
	Rural	Urban	
Income			
Decreased	81.8	82.1	81.9
Increased	0.6	0.5	0.6
Same as before	17.6	17.4	17.5
Expenditure			
Decreased	26.2	29.1	27.3
Increased	36.4	31.6	34.6
Same as before	37.4	39.3	38.1

Annex 3.17. Percentage distribution of students' households by the yearly economic status of households during the pandemic and the pre-pandemic year and grade

Yearly economic status of HH	Grades in 2021						Both
	5	6	7	8	9	10	
During the pandemic							
Always in deficit	10.9	9.8	11.7	11.2	11.4	8.3	10.5
Sometimes in deficit	59.8	58.8	55.7	57.1	55.4	58.0	57.6
Breakeven	25.5	27.4	27.9	28.3	28.7	28.2	27.6
Surplus	3.8	4.0	4.7	3.4	4.5	5.5	4.3
Pre-pandemic year							
Always in deficit	1.4	1.5	1.8	1.3	1.8	0.7	1.4
Sometimes in deficit	10.6	9.8	11.4	12.1	9.1	8.7	10.3
Breakeven	51.5	49.2	51.0	48.7	49.3	49.3	49.8
Surplus	36.5	39.5	35.8	37.9	39.8	41.3	38.5

Annex 3.18. Percentage distribution of students' households by yearly economic status of households during the pandemic and the pre-pandemic year and geography

Yearly economic status of HH	Geography		Both
	Rural	Urban	
During the pandemic			
Always in deficit	11.3	9.2	10.5
Sometimes in deficit	58.7	55.7	57.6
Breakeven	26.6	29.3	27.6
Surplus	3.4	5.8	4.3
Pre-pandemic year			
Always in deficit	1.6	1.1	1.4
Sometimes in deficit	12.6	6.5	10.3
Breakeven	50.0	49.7	49.8
Surplus	35.8	42.7	38.5

Annex 3.19. Percentage distribution of students' households by change in yearly economic status from pre-pandemic to pandemic period and grade

Change in yearly HH economic status	Grades in 2021						Both
	5	6	7	8	9	10	
Increased	0.4	0.5	0.4	0.3	0.8	0.1	0.4
No change	21.8	21.3	24.8	22.6	20.7	22.0	22.2
One step decrease	55.6	56.3	55.4	56.2	56.9	56.4	56.2
2–3 steps decreased	22.2	21.9	19.4	20.9	21.6	21.5	21.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Annex 3.20. Percentage distribution of students' households by change in yearly economic status from pre-pandemic to pandemic period and geography

Change in yearly HH economic status	Geography		Both
	Rural	Urban	
Increased	0.6	0.2	0.4
No change	23.1	20.7	22.2
One step decrease	55.7	57.0	56.2
2–3 steps decreased	20.6	22.1	21.2
Total	100.0	100.0	100.0

Annex 4.1. Percentage change in the number of students from 2020 to 2021 by grade, gender and geography

Grades	Gender		Geography	
	Boys	Girls	Rural	Urban
Pre-primary	-14.3	-10.5	-9.4	-15.7
Grades 1–3	6.7	1.0	-0.3	7.7
Grades 4–5	19.7	9.3	11.8	16.0
Grades 6–8	-3.0	-4.5	-3.9	-3.8
Grades 9–10	9.7	5.6	8.2	6.3

Annex 4.2. Distribution of school-aged children by year, education level-wise age, geography, and gender

Age with level of education	Rural			Urban			All
	Boys	Girls	Both	Boys	Girls	Both	
Year 2020							
Pre-primary (5y)	280	282	562	195	196	391	953
Primary (6–10y)	1,792	1,781	3,573	1,166	1,042	2,208	5,781
Secondary (11–15y)	2,215	2,493	4,708	1,286	1,445	2,731	7,439
Total	4,287	4,556	8,843	2,647	2,683	5,330	14,173
Year 2021							
Pre-primary (5y)	306	283	589	207	206	413	1,002
Primary (6–10y)	1,641	1,557	3,198	1,070	973	2,043	5,241
Secondary (11–15y)	2,224	2,559	4,783	1,342	1,437	2,779	7,562
Total	4,171	4,399	8,570	2,619	2,616	5,241	13,805

Annex 4.3. Pre-primary gross enrolment ratio by gender, geography and year

Gender/Geography	Year		Change from 2020 to 2021
	2020	2021	
Gender			
All boys	136.0	80.9	-55.1
All girls	132.6	84.4	-48.2
Geography			
Rural areas	136.6	87.3	-49.3
Urban areas	130.9	76.0	-54.9
Rural area			
Rural boys	141.4	85.6	-55.8
Rural girls	131.9	89.0	-42.9
Urban area			
Urban boys	128.2	73.9	-54.3
Urban girls	133.7	78.2	-55.5
All	134.3	82.6	-51.7

Annex 4.4. Primary gross enrolment ratio by gender, geography and year

Gender/Geography	Year		Change from 2020 to 2021
	2020	2021	
Gender			
All boys	98.8	99.1	0.2
All girls	111.6	113.8	2.2
Geography			
Rural areas	107.2	108.3	1.1
Urban areas	101.6	102.9	1.3
Rural area			
Rural boys	100.9	101.3	0.4
Rural girls	113.6	115.8	2.2
Urban area			
Urban boys	95.7	95.9	0.2
Urban girls	108.2	110.6	2.4
All	105.1	106.2	1.1

Annex 4.5. Secondary gross enrolment ratio by gender, geography and year

Gender/Geography	Year		Change from 2020 to 2021
	2020	2021	
Gender			
All boys	70.9	71.9	1.0
All girls	80.2	81.5	1.3
Geography			
Rural areas	76.0	77.6	1.6
Urban areas	75.5	75.9	0.4
Rural area			
Rural boys	70.9	72.4	1.5
Rural girls	80.5	82.2	1.7
Urban area			
Urban boys	71.0	71.1	0.1
Urban girls	79.6	80.4	0.8
All	75.8	77.0	1.2

Annex 4.6. Percentage of children enrolled in qawmi, hafizia or nurani madrasas by age group and year

Age group	Year					
	1998	2000	2005	2008	2013	2016
5-year	0.6	0.3	0.9	1.3	1.0	3.4
6–10 years	1.4	0.9	1.9	3.3	3.0	4.6
11–15 years	1.3	1.2	1.9	2.3	2.5	2.9
Total	1.3	1.0	1.8	2.7	2.6	3.7

Sources: Education Watch Household Surveys, 1998, 2000, 2005, 2008, 2013, 2016

Annex 4.7. Percentage of headteachers by their opinion on the student groups who are relatively more vulnerable to dropout

Student groups	School type		All
	Primary	Secondary	
Students of low-income families	87.8	88.6	88.2
Whose parents are not conscious about education	62.9	63.2	63.1
Who had none to help in studies at home	23.9	18.4	21.1
Those who were already lagging behind	14.7	24.4	19.6
Those who are addicted to cell phones	8.1	17.9	13.1
Girls	9.6	26.9	18.3
Boys	16.2	12.9	14.6
Rural areas	20.8	22.9	21.9
Urban areas	3.0	0.5	1.8
Students of marginalised areas (hill/haor/char)	9.1	9.0	9.0
Students of lower grades	2.0	3.0	2.5
Students of upper grades	4.6	10.0	7.3

Terminal examinees (grades 5, 8 and 10)	1.5	5.5	3.5
Those who had no cell phone at home	3.0	2.0	2.5
Special needs children	2.0	0.0	1.0

Multiple responses counted

Annex 4.8. Percentage of head teachers by the attempts they have planned to reduce dropout

Planned attempts	School type		All
	Primary	Secondary	
Awareness building among parents	88.2	80.6	84.2
Motivate students through home visits	64.5	55.5	59.7
Arrange parent-teacher meetings	33.7	32.5	33.1
Ensure regular attendance of students	20.7	22.0	21.4
Financial help to needy students	16.6	22.5	19.7
Waiver of tuition fees for students of poor families	5.3	26.7	16.7
Attempt to increase student-teacher relationship	8.3	12.6	10.6
Arrange student-teacher meetings	8.3	9.9	9.2
Initiate prize for attendance	9.5	6.8	8.1
Improve teaching-learning environment	10.1	6.8	8.3
Keep low pressure of studies after reopening	4.1	5.2	4.7
Reduce the number of examinations	0.6	1.0	0.8

Multiple responses counted

Annex 4.9. Percentage of headteachers by their suggestions for the ministry to protect dropout

Suggestions	School type		All
	Primary	Secondary	
Financial support to the low-income families	44.6	51.8	48.3
Provide <i>upabritti</i> to all students	35.9	54.3	45.4
Increase the value of <i>upabritti</i>	45.1	38.7	41.8
Mid-day meal for every student	43.5	28.1	35.5
Strong surveillance to protect early marriage	18.5	42.7	31.1
Strong surveillance to protect child labour	16.8	22.1	19.6
Increase monitoring of schools	21.2	18.1	19.6
Waiver of admission fees	3.8	9.0	6.5
Monitoring of waiver of admission fees	2.7	9.5	6.3
Provision of free secondary education	0.5	7.0	3.9
Make secondary education compulsory for all	1.1	5.0	3.1
Strong surveillance to protect against eve-teasing	3.8	4.5	4.2

Multiple responses counted

Annex 5.1. Percentage of schools by activities carried out during school closure, school type and geography, 2020

Activities	School type		Geography		All
	Primary	Secondary	Rural	Urban	
Connected students/parents over the phone	91.8	78.0	86.4	82.5	84.8
Students' home visited	70.9	57.0	70.7	53.2	63.9
Asked students to do school assignments	27.0	77.0	48.3	58.4	52.3
Offered online classes	33.7	65.5	44.6	57.8	49.7
Asked students to study at home	52.0	37.5	46.7	41.6	44.7
Asked students to watch BTV/Sangsad TV	44.4	29.5	38.8	33.8	36.9
Provided feedback on assignments	8.7	14.0	10.7	12.3	11.4
Provided homework through website/phone/Facebook	5.1	11.5	7.4	9.7	8.3
Asked students to browse academic content on Internet	3.6	6.0	3.3	7.1	4.8
Asked students to take private tuition	2.0	1.0	2.1	0.6	1.5
Offered face-to-face classes sometimes	2.6	0.0	0.4	2.6	1.3

Note: Multiple responses counted

Annex 5.2. Percentage of schools by activities carried out during school closure, school type and geography, 2021

Activities	School type		Geography		All
	Primary	Secondary	Rural	Urban	
Connected students/parents over the phone	81.0	73.8	77.9	76.6	77.4
Students' home visited	62.7	49.2	60.0	50.5	56.0
Asked students to do school assignments	82.5	88.9	88.3	82.2	85.7
Offered online classes	63.5	72.2	65.5	71.0	67.9
Asked students to study at home	46.0	30.2	37.9	38.3	38.1
Asked students' to watch BTV/Sangsad TV	35.7	25.4	29.7	31.8	30.6
Provided feedback on assignments	29.4	23.8	29.7	22.4	26.6
Provided homework through website/phone/Facebook	4.8	9.5	6.2	8.4	7.1
Asked students to browse academic content on Internet	4.0	5.6	5.5	3.7	4.8
Asked students to take private tuition	1.6	4.0	3.4	1.9	2.8
Offered face-to-face classes sometimes	0.0	2.4	1.4	0.9	1.2
Sometimes arranged face-to-face examination	0.0	1.6	0.7	0.9	0.8
Sometimes arranged online examination	0.0	1.6	0.0	1.9	0.8

Note: Multiple responses counted

Annex 5.3. Percentage of schools by activities carried out during school closure and school type, 2020

Activities	Primary		Secondary	
	Gover nment	Newly nationalised	Non- government	Madra sa
Connected students/parents over the phone	94.1	88.5	76.4	80.8
Students' home visited	72.0	69.2	54.3	61.6
Asked students' to do school assignments	30.5	21.8	78.7	74.0
Offered online classes	41.5	21.8	72.4	53.4
Asked students' to study at home	48.3	57.7	34.6	42.5
Asked students' to watch BTV/Sangsad TV	49.2	37.2	28.3	31.5
Provided feedback on assignments	11.0	5.1	15.7	11.0
Provided homework through website/phone/Facebook	5.9	3.8	15.0	5.5
Asked students' to browse academic content on Internet	4.2	2.6	7.1	4.1
Asked students' to take private tuition	0.0	5.1	0.0	2.7
Offered face-to-face classes sometimes	1.7	3.8	0.0	0.0

Note: Multiple responses counted

Annex 5.4. Percentage of schools by activities carried out during school closure and school type, 2021

Activities	Primary		Secondary	
	Govern ment	Newly nationalised	Non- government	Madrasa
Connected students/parents over the phone	85.5	74.0	68.8	81.6
Students' home visited	61.8	64.0	41.6	61.2
Asked students to do school assignments	81.6	84.0	90.9	85.7
Offered online classes	64.5	62.0	81.8	57.1
Asked students to study at home	51.3	38.0	27.3	34.7
Asked students to watch BTV/Sangsad TV	36.8	34.0	23.4	28.6
Provided feedback on assignments	31.6	26.0	24.7	22.4
Provided homework through website/phone/Facebook	5.3	4.0	10.4	8.2
Asked students to take private tuition	1.3	2.0	2.6	6.1
Asked students to browse academic content on Internet	5.3	2.0	9.1	0.0
Offered face-to-face classes sometimes	0.0	0.0	1.3	4.1
Sometimes arranged face-to-face examination	0.0	0.0	2.6	0.0
Sometimes arranged online examination	0.0	0.0	1.3	2.0

Note: Multiple responses counted

Annex 5.5. Percentage of schools by problems they faced in carrying out various activities during school closure, school type and geography

Problems faced	School type		Geography		All
	Primary	Secondary	Rural	Urban	
Not having phones in students' homes	71.6	69.8	67.4	75.9	70.7
Absent of phone owner fathers at home	41.4	25.3	33.0	33.1	33.0
Poor internet/mobile connectivity	27.2	37.9	37.2	25.6	32.8
Students/parents' disinterest in keeping contact with school	27.8	25.3	28.0	24.1	26.5
Not having students' phone numbers to school	22.5	14.8	18.8	18.0	18.5
Students' disinterest in doing assignments	11.2	23.6	18.3	16.5	17.7
Parents unable to bear mobile data cost	14.8	20.3	16.1	20.3	17.7
Students' disinterest in online classes	11.2	22.5	13.8	22.6	17.1
Not having smartphones to the teachers	11.8	20.9	14.7	19.6	16.5
Parents sometimes annoyed at phone calls	14.8	9.3	12.8	10.5	12.0
Lack of ICT skills of students	9.5	13.2	6.4	19.5	11.4
Teachers' disinterest in calling students/parents	7.1	10.4	7.8	10.5	8.8
Engagement of students in income-generating activities	3.6	12.6	10.6	4.5	8.3
Lack of ICT skills of teachers	1.8	3.8	1.8	4.5	2.8
Teachers busy with other income-generating activities	0.6	1.6	0.5	2.3	1.1
Problems in uploading online class videos on Facebook	0.0	1.6	0.5	1.5	0.9

Note: Multiple responses counted

Annex 5.6. Percentage of schools by problems they faced in carrying out various activities during school closure and school type

Problems faced in carrying out activities	Primary		Secondary	
	Government	Newly nationalised	Non-government	Madrasa
Not having phones in students' homes	70.1	74.2	73.8	61.7
Absent of phone owner fathers at home	40.2	43.5	23.8	28.3
Poor internet/mobile connectivity	30.8	21.0	42.6	28.3
Students/parents' disinterest in keeping contact with school	27.1	29.0	30.3	15.0
Not having students' phone numbers to school	23.4	21.0	11.5	21.7
Students' disinterest in doing assignments	11.2	11.3	20.5	30.0
Parents unable to bear mobile data cost	17.8	9.7	23.0	15.0
Students' disinterest in online classes	14.0	6.5	23.0	21.7
Not having smartphones to teachers	12.1	11.3	20.5	21.7
Parents sometimes annoyed at phone calls	14.0	16.1	9.8	8.3
Lack of ICT skills of students	10.3	8.1	12.3	15.0
Teachers' disinterest in calling students/parents	7.5	6.5	9.8	11.7
Engagement of students income-generating activities	2.8	4.8	9.0	20.0
Lack of ICT skills of teachers	2.8	0.0	2.5	6.7
Teachers busy with other income-generating activities	0.9	0.0	1.6	1.7
Problems in uploading online class videos on Facebook	0.0	0.0	0.8	3.3

Note: Multiple responses counted

Annex 5.7. Percentage distribution of headteachers' by their opinion on the effectiveness of their activities during school closure by geography and school type, 2020

Effectiveness	Geography		Primary		Secondary	
	Rural	Urban	Government	Newly nationalised	Non-government	Madrasa
Very effective	13.2	19.5	18.6	24.4	8.7	13.7
Effective	36.8	39.0	45.8	33.3	34.6	34.2
Moderately effective	30.6	24.7	25.4	21.8	38.6	21.9
Less effective	17.4	16.2	8.5	17.9	17.3	28.8
Ineffective	2.1	0.6	1.7	2.6	0.8	1.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

Annex 5.8. Percentage distribution of headteachers' by their opinion on the effectiveness of their activities during school closure by geography and school type, 2021

Effectiveness	Geography		Primary		Secondary	
	Rural	Urban	Government	Newly nationalized	Non-government	Madrasa
Very effective	17.9	31.8	32.9	32.0	9.1	24.5
Effective	48.3	41.1	40.8	46.0	53.2	38.8
Moderately effective	26.9	16.8	18.4	14.0	29.9	26.5
Less effective	6.9	10.3	7.9	8.0	7.8	10.2
Ineffective	-	-	-	-	-	-
Total	100.0	100.0	100.0	100.0	100.0	100.0

Annex 5.9. Percentage distribution of headteachers by their report on change in effectiveness of their activities from 2020 to 2021

Change	Primary			Secondary			Geography		All
	Government	Newly nationalised	Both	Non-government	Madrasa	Both	Rural	Urban	
Decreased	13.2	8.0	11.1	3.9	6.1	4.8	4.9	12.1	8.0
The same	50.0	54.0	51.6	59.3	59.2	59.2	59.7	49.5	55.4
Increased	36.8	38.0	37.3	36.8	34.7	36.0	35.4	38.3	36.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Annex 5.10. Percentage of headteachers by their opinion on the activities they could do but did not do due to various limitations by school type and geography

Activities could be done	School type		Geography		All
	Primary	Secondary	Rural	Urban	
Take face-to-face classes on a limited scale	43.0	52.1	49.7	44.1	47.5
Home visit of students to see whether they study at home	26.1	25.4	26.0	25.2	25.7
Offer online classes to students	21.1	18.3	22.0	16.2	19.7
Arrange face-to-face examination at a limited scale	17.6	21.8	20.2	18.9	19.7
Take assignments to students' homes	14.8	14.8	12.7	18.0	14.8
Arrange face-to-face classes daily for terminal examinees	12.7	15.5	13.9	14.4	14.1
Ask students to watch BTV/Sangsad TV	5.6	8.5	6.4	8.1	7.0
Provide assignments to students	9.2	4.2	7.5	5.4	6.7
Provide feedback on assignments	7.0	6.3	9.8	1.8	6.7
Connect students over the phone	5.6	7.0	8.1	3.6	6.3
Orient teachers about assignments	3.5	6.3	2.9	8.1	4.9
Upload homework on the school's Facebook/web page	2.8	2.8	1.7	4.5	2.8

Note: Multiple responses counted

Annex 5.11. Percentage of headteachers by their opinion on the activities they could do but did not do due to various limitations and school type

Activities could be done	Primary		Secondary	
	Govern- ment	Newly nationalised	Non- government	Madra sa
Take face-to-face classes on a limited scale	40.0	48.1	55.7	46.3
Home visit of students to see whether they study at home	21.1	34.6	21.6	31.5
Offer online classes to students	18.9	25.0	17.0	20.4
Arrange face-to-face examination at a limited scale	18.9	15.4	21.6	22.2
Take assignments to students' homes	16.7	11.5	18.2	9.3
Arrange face-to-face classes daily for terminal examinees	13.3	11.5	18.2	11.1
Ask students to watch BTV/Sangsad TV	7.8	1.9	9.1	7.4
Provide assignments to students	11.1	5.8	5.7	1.9
Provide feedback on assignments	5.6	9.6	4.5	9.3
Connect students over the phone	5.6	5.8	6.8	7.4
Orient teachers about assignments	2.2	5.8	6.8	5.6
Upload homework on the school's Facebook/web page	3.3	1.9	3.4	1.9

Note: Multiple responses counted

Annex 5.12. Percentage distribution of headteachers by frequency of watching the academic programmes on television and school type

Frequency of watching	Primary		Secondary	
	Government	Newly nationalised	Non-government	Madrasa
Often	23.4	25.3	20.3	13.7
Sometimes	57.6	57.0	65.6	57.5
Not that much	15.3	15.2	12.5	16.4
Never	3.4	2.5	1.6	12.3
Total	100.0	100.0	100.0	100.0

Annex 5.13. Percentage distribution of headteachers by assessment categories on the effectiveness of the academic programmes on television and school type

Effectiveness	Primary		Secondary	
	Government	Newly nationalised	Non-government	Madrasa
Very effective	13.2	19.5	14.3	9.4
Effective	39.5	26.0	38.1	35.9
Moderately effective	24.6	33.8	23.8	21.9
Less effective	21.1	13.0	22.2	29.7
Ineffective	1.8	7.8	1.6	3.1
Total	100.0	100.0	100.0	100.0

Annex 5.14. Percentage of headteachers by their suggestions on how the academic programmes telecasted through television can be made more effective by school type

Suggestions	Primary		Secondary	
	Government	Newly nationalised	Non-government	Madrasa
Motivate students to watch classes on TV	42.9	41.9	52.1	39.6
Motivate parents to ask students to watch TV	31.4	38.7	31.6	39.6
Use more joyful teaching method	37.1	27.4	25.6	24.5
Provision of phone calls from students after classes	21.0	14.5	29.1	22.6
Expand duration of class time	29.5	22.6	19.7	11.3
Not to telecast the same programme several time	15.2	8.1	9.4	17.0
Keep a provision of home work	11.4	11.3	13.7	9.4
Present everything in Bangla	10.5	9.7	6.0	7.5
Upload TV classes in YouTube/online	4.8	3.2	12.8	3.8

Note: Multiple responses counted

Annex 5.15. Percentage of headteachers by the reasons of ineffective TV programmes, level of education and geography

Suggestions	School type		Geography		All
	Primary	Secondary	Rural	Urban	
Many students do not watch BTV	65.5	72.3	66.3	73.2	68.9
Many do not know about Sangsad TV	29.1	33.1	33.7	26.8	31.1
Do not know about this programme	20.9	15.5	21.2	13.4	18.2
Not having dish line at home	44.6	52.7	55.4	37.5	48.6

Note: Multiple responses counted

Annex 5.16. Percentage of headteachers by the reasons of ineffective TV programmes and school type

Suggestions	Primary		Secondary	
	Government	Newly nationalised	Non-government	Madrasa
Many students do not watch BTV	64.0	67.8	69.1	78.4
Many do not know about Sangsad TV	29.2	28.8	34.0	31.4
Do not know about this programme	19.1	23.7	16.5	13.7
Not having a dish line at home	44.9	44.1	51.5	54.9

Note: Multiple responses counted

Annex 5.17. Percentage distribution of headteachers by their opinion regarding the percentage of students of their schools watched the academic programmes on television

Percentage of students	Primary			Secondary			Geography		All
	Government	Newly nationalised	Both	Non-government	Madrasa	Both	Rural	Urban	
≤10%	28.4	36.4	31.6	26.0	39.1	30.6	37.0	21.9	31.1
11–20%	13.8	19.5	16.1	27.6	17.4	24.0	22.3	16.6	20.1
21–40%	16.4	23.4	19.2	22.8	23.2	23.0	17.2	27.2	21.1
41–50%	18.1	6.5	13.5	11.8	14.5	12.8	13.0	13.2	13.1
50%+	23.3	14.3	19.7	11.8	5.8	9.7	10.5	21.2	14.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Annex 5.18. Percentage of households with selected ICT devices at home by year and students' Grade

ICT devices	Grades in 2020						Level of significance
	4	5	6	7	8	9	
2020							
Basic/feature phone	93.2	92.4	93.7	91.3	91.8	92.1	ns
Smartphone	53.8	54.4	57.7	59.4	63.4	65.9	p<0.001
Television set	56.8	55.4	56.7	57.6	58.3	57.6	ns
Internet	46.6	46.0	53.6	53.9	58.2	62.2	p<0.001
2021							
Basic/feature phone	92.5	91.3	92.0	91.3	92.0	92.3	ns
Smartphone	59.5	61.1	64.2	66.0	70.3	76.0	p<0.001
Television set	54.5	53.2	57.6	56.9	56.6	58.2	ns
Internet	55.1	57.5	60.7	63.9	68.1	72.6	p<0.001

Note: ns = not significant at p = 0.05

Annex 5.19. Percentage distribution of households by various types of Internet facilities, students' grades and year

Types of Internet facility	Grades in 2020						All
	4	5	6	7	8	9	
2020							
Broadband	5.3	5.5	6.2	5.9	6.6	6.5	6.0
Mobile data pack	39.7	39.0	45.6	44.5	47.8	52.6	44.8
Both	1.6	1.5	1.8	3.5	3.8	3.2	2.5
None	53.4	54.0	46.4	46.1	41.8	37.8	46.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2021							
Broadband	6.5	8.7	9.1	8.5	8.6	7.5	8.2
Mobile data pack	47.2	46.6	50.4	51.4	55.2	62.3	52.1
Both	1.5	2.2	1.4	4.0	4.2	2.8	2.7
None	44.9	42.5	39.1	36.1	31.9	27.4	37.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Annex 5.20. Percentage of students used ICT gadgets for academic purposes by gadget type, year and students' Grade

ICT gadgets	Grades in 2020						Level of significance
	4	5	6	7	8	9	
2020							
Basic/feature phone	8.7	11.7	12.7	13.9	13.3	15.3	p<0.01
Smartphone	11.6	15.9	32.3	33.5	39.9	42.7	p<0.001
Television set	13.9	14.8	22.3	22.4	27.6	25.1	p<0.001
Internet	10.1	14.8	30.0	31.9	39.1	42.8	p<0.001
Any of the above	25.4	32.6	51.1	51.3	59.3	60.8	p<0.001
2021							
Basic/feature phone	7.1	10.5	10.9	9.1	12.4	14.6	p<0.01
Smartphone	19.3	30.6	40.9	45.4	51.8	59.5	p<0.001
Television set	8.8	6.7	10.1	12.1	14.1	13.3	p<0.01
Internet	17.8	31.0	39.1	44.9	52.6	58.2	p<0.001
Any of the above	27.9	40.7	52.1	55.8	63.1	68.1	p<0.001

Annex 5.21. Percentage distribution of students by level of engagement in self-studies at home, Grade, gender and geography

Level of engagement in studies at home	Grade in 2020						Gender		Geography	
	4	5	6	7	8	9	Boys	Girls	Rural	Urban
Never	1.5	1.6	1.2	1.5	0.4	0.9	1.2	1.2	1.1	1.3
Rarely	3.1	2.2	2.1	1.9	2.4	1.7	3.1	1.6	2.4	2.1
Sometimes	11.9	8.9	8.2	7.6	7.6	8.1	9.4	8.2	9.5	7.7
Often	38.2	37.0	40.1	41.2	38.8	44.8	41.4	38.8	42.3	36.6
Usually	25.6	28.3	23.5	28.7	30.7	23.6	24.6	28.4	27.7	25.5
Always	19.7	21.9	24.9	19.1	20.1	21.0	20.2	21.8	17.1	26.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Annex 5.22. Percentage of students tutored by household members during school closure by Grade in 2020, gender, geography and year

Grade/area/gender	Year		Level of significance
	2020	2021	
Grade in 2020			
Grade 4	58.8	58.9	ns
Grade 5	55.6	50.2	ns
Grade 6	40.8	38.9	ns
Grade 7	35.3	31.6	ns
Grade 8	30.0	29.5	ns
Grade 9	21.0	19.9	ns
Level of significance	p<0.001	p<0.001	
Gender			
Boys	42.9	40.6	ns
Girls	38.3	36.5	ns
Level of significance	p<0.01	p<0.05	
Geography			
Rural	36.7	34.5	ns
Urban	46.1	43.7	ns
Level of significance	p<0.001	p<0.001	
All	40.3	38.3	ns

Annex 5.23. Percentage of students tutored by household members during school closure by geography, gender and period

Area/ gender	Periods				
	March–May, 2020	June–Aug., 2020	Sept.–Dec., 2020	March–May, 2021	June–Aug., 2021
Rural					
Boys	34.6	35.3	34.8	35.6	33.9
Girls	33.2	33.8	33.8	33.6	33.8
Urban					
Boys	47.2	48.2	48.6	46.2	47.1
Girls	39.8	40.0	40.2	39.1	39.5
All	44.2	43.5	45.5	44.3	45.3

Annex 5.24. Percentage distribution of students by level of tutoring received from household members, Grade, gender and geography

Level of tutoring from HH members	Grade in 2020						Gender		Geography	
	4	5	6	7	8	9	Boys	Girls	Rural	Urban
Never	35.4	41.5	56.2	62.8	64.7	76.4	53.4	58.1	60.4	50.0
Rarely	6.1	3.4	4.9	3.0	3.4	1.7	4.0	3.6	3.8	3.7
Sometimes	9.2	8.7	6.0	6.6	6.6	4.9	8.2	6.1	6.6	7.6
Often	32.1	31.2	22.6	17.8	17.3	12.6	23.0	21.8	20.5	25.0
Usually	11.9	7.9	4.5	5.3	4.6	2.4	6.5	5.8	5.8	6.6
Always	5.2	7.3	5.8	4.5	3.4	1.9	4.9	4.6	2.9	7.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Annex 5.25. Percentage of students receiving private tuition during school closure by Grade in 2020, gender, geography and year

Grade/gender/area	Year		Level of significance
	2020	2021	
Grade in 2020			
Grade 4	54.7	49.9	ns
Grade 5	65.2	51.2	p<0.001
Grade 6	61.0	51.6	p<0.01
Grade 7	63.0	53.9	p<0.01
Grade 8	67.4	51.8	p<0.001
Grade 9	64.6	54.0	p<0.001
Level of significance	p<0.001	ns	
Gender			
Boys	66.3	56.7	p<0.001
Girls	59.9	48.5	p<0.001
Level of significance	p<0.001	p<0.001	
Geography			
Rural	59.8	46.5	p<0.001
Urban	67.3	59.8	p<0.001
Level of significance	p<0.001	p<0.001	
All	62.7	52.1	p<0.001

Note: ns = not significant at p = 0.05

Annex 5.26. Percentage of students receiving private tuition during school closure by geography and gender

Area/ gender	Periods				
	March–May, 2020	June–Aug., 2020	Sept.–Dec., 2020	March–May, 2021	June–Aug., 2021
Rural					
Boys	47.3	44.0	44.6	44.3	43.3
Girls	39.8	38.1	38.7	37.5	36.9
Urban					
Boys	48.9	50.9	54.9	54.0	56.6
Girls	43.9	46.1	50.3	46.6	50.8
All	42.2	43.5	45.5	44.3	45.3

Annex 5.27. Percentage distribution of students by level of private tutoring received during school closure, grade, gender and geography

Level of private tutoring	Grade in 2020						Gender		Geography	
	4	5	6	7	8	9	Boys	Girls	Rural	Urban
Never	34.6	27.9	33.5	28.9	24.7	26.8	25.7	32.2	32.9	24.5
Rarely	17.0	18.4	15.8	14.0	21.5	19.3	17.2	18.1	18.4	16.7
Sometimes	15.5	12.6	15.8	16.6	15.1	18.8	15.4	15.9	15.0	16.7
Often	8.4	15.8	11.3	11.9	14.3	16.9	14.6	11.9	12.7	13.7
Usually	14.3	13.8	12.3	18.0	15.5	11.8	14.7	13.9	13.2	15.9
Always	10.3	11.5	11.1	10.6	9.0	6.4	12.3	8.0	7.9	12.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Annex 5.28. Percentage of students who submitted school assignments during school closure by geography and gender

Area/ gender	Periods				
	March–May, 2020	June–Aug., 2020	Sept.–Dec., 2020	March–May, 2021	June–Aug., 2021
Rural					
Boys	4.2	18.5	65.1	68.7	82.4
Girls	3.2	16.7	63.3	71.2	84.3
Urban					
Boys	5.1	31.0	71.1	71.3	82.3
Girls	4.2	28.4	71.7	74.7	86.8
All	4.0	22.0	66.8	71.4	84.0

Annex 5.29. Percentage of students submitted school assignments during school closure by Grade in 2020, gender, geography and year

Grade/area/gender	Year		Level of significance
	2020	2021	
Grade in 2020			
Grade 4	20.4	74.6	p<0.001
Grade 5	27.7	84.8	p<0.001
Grade 6	88.7	84.2	p<0.05
Grade 7	88.7	91.1	ns
Grade 8	90.3	86.9	ns
Grade 9	88.8	86.9	ns
Level of significance	p<0.001	p<0.001	
Gender			
Boys	68.2	83.3	p<0.001
Girls	66.9	85.9	p<0.001
Level of significance	ns	ns	
Geography			
Rural	64.4	84.1	p<0.001
Urban	72.3	85.6	p<0.001
Level of significance	p<0.001	ns	
All	67.4	84.8	p<0.001

Note: ns = not significant at p = 0.05

Annex 5.30. Percentage distribution of students by level of submitting school assignments, Grade, gender and geography

Level of submitting assignments	Grade in 2020						Gender		Geography	
	4	5	6	7	8	9	Boys	Girls	Rural	Urban
Never	21.8	12.3	3.5	1.9	1.8	2.6	7.8	6.9	7.5	7.1
Rarely	29.6	25.7	16.3	10.6	13.5	15.2	19.4	17.8	20.4	15.9
Sometimes	40.0	43.5	25.9	28.9	31.3	32.5	32.5	34.7	35.1	31.8
Often	6.9	13.6	41.4	47.8	39.6	39.0	30.5	31.9	30.6	32.2
Usually	1.5	4.7	12.6	10.4	13.3	10.7	9.7	8.2	6.3	12.4
Always	0.2	0.2	0.4	0.4	0.6	0.0	0.2	0.4	0.1	0.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Annex 5.31. Percentage of students watched academic programmes on television during school closure by Grade in 2020, gender, geography and year

Indicators	Year		Level of significance
	2020	2021	
Grade in 2020			
Grade 4	12.8	7.3	p<0.01
Grade 5	14.9	4.5	p<0.001
Grade 6	25.2	8.8	p<0.001
Grade 7	25.3	10.6	p<0.001
Grade 8	32.5	8.8	p<0.001
Grade 9	28.3	10.7	p<0.001
Level of significance	p<0.001	p<0.01	
Gender			
Boys	23.2	9.3	p<0.001
Girls	23.1	7.8	p<0.001
Level of significance	ns	ns	
Geography			
Rural	18.4	6.7	p<0.001
Urban	30.9	10.9	p<0.001
Level of significance	p<0.001	p<0.001	
All	23.2	8.4	p<0.001

Note: ns = not significant at p = 0.05

Annex 5.32. Percentage of students watched academic programmes on television during school closure by geography and gender

Geography/ gender	Periods				
	March–May, 2020	June–Aug., 2020	Sept.–Dec., 2020	March–May, 2021	June–Aug., 2021
Rural					
Boys	7.0	12.8	13.5	5.6	5.2
Girls	7.3	13.8	14.1	6.1	6.2
Urban					
Boys	16.9	24.1	22.1	12.0	10.9
Girls	15.8	21.8	22.6	8.4	7.3
All	10.6	16.9	17.1	7.6	7.0

Annex 5.33. Percentage distribution of students by level of watching academic programmes on TV, Grade, gender and geography

Level of watching	Grade in 2020						Gender		Geography	
	4	5	6	7	8	9	Boys	Girls	Rural	Urban
Never	84.7	83.6	75.9	74.7	67.7	70.7	75.8	76.6	80.9	69.5
Rarely	8.8	10.1	15.2	13.0	16.9	16.5	13.9	13.0	11.6	16.0
Sometimes	4.4	4.9	5.1	8.1	11.6	9.4	6.8	7.6	5.3	10.0
Often	1.7	1.4	2.9	3.0	3.0	2.8	2.6	2.3	2.2	2.8
Usually	0.2	0.0	0.8	1.3	0.8	0.4	0.8	0.4	0.0	1.4
Always	0.2	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Annex 5.34. Percentage of students who participated in online classes during school closure by Grade of 2020, gender, geography and year

Indicators	Year		Level of significance
	2020	2021	
Grade of 2020			
Grade 4	2.4	6.1	p<0.01
Grade 5	3.0	4.9	ns
Grade 6	5.1	4.7	ns
Grade 7	7.2	7.6	ns
Grade 8	8.4	9.8	ns
Grade 9	14.0	11.3	ns
Level of significance	p<0.001	p<0.001	
Gender			
Boys	9.2	9.7	ns
Girls	4.6	5.7	ns
Level of significance	p<0.001	p<0.001	
Geography			
Rural	3.6	3.8	ns
Urban	11.7	12.5	ns
Level of significance	p<0.001	p<0.001	
All	6.6	7.4	ns

Note: ns = not significant at p = 0.05

Annex 5.35. Percentage of students participated in online classes during school closure by grade and time periods

Grade	Periods				
	March-May 2020	June-August 2020	September- December 2020	March-May 2021	June-August 2021
Grade					
4	0.8	2.0	2.1	4.8	5.2
5	1.3	1.8	2.6	3.2	4.7
6	1.3	3.2	4.6	4.7	4.3
7	2.2	5.2	6.2	6.6	7.4
8	1.9	4.9	7.5	9.0	8.8
9	1.7	8.2	12.3	9.9	10.5

Annex 5.36. Percentage of students participated in online classes during school closure by geography, gender and time periods

Geography & gender	Periods				
	March-May 2020	June-August 2020	September- December 2020	March-May 2021	June-August 2021
Rural					
Boys	0.8	3.0	4.8	5.2	4.9
Girls	0.5	0.9	2.0	1.8	2.2
Urban					
Boys	4.3	11.0	13.0	12.9	13.7
Girls	1.9	5.6	7.9	9.0	10.0
All	1.5	4.2	5.9	6.4	6.8

Annex 5.37. Percentage distribution of students by level of participation in online classes, geography and gender

Level of participation in online classes	Rural		Urban		All
	Boys	Girls	Boys	Girls	
Never	91.8	96.3	78.4	86.0	89.5
Rarely	4.7	2.7	10.0	6.8	5.5
Sometimes	2.4	0.8	5.5	3.7	2.7
Often	0.7	0.1	2.6	1.5	1.0
Usually	0.4	0.1	3.0	1.7	1.1
Always	0.0	0.0	0.6	0.3	0.2
Total	100.0	100.0	100.0	100.0	100.0

Annex 5.38. Percentage distribution of students by level of participation in online classes, Grade, gender and geography

Level of participation in online classes	Grade in 2020						Gender		Geography	
	4	5	6	7	8	9	Boys	Girls	Rural	Urban
Never	93.7	93.9	92.2	90.0	85.5	81.4	86.0	92.2	94.4	82.6
Rarely	2.9	3.6	3.7	3.6	8.2	10.9	7.0	4.4	3.5	8.3
Sometimes	1.9	1.0	3.1	3.0	3.6	3.9	3.8	1.9	1.5	4.5
Often	0.8	0.8	0.2	1.7	1.2	1.5	1.5	0.7	0.4	2.0
Usually	0.6	0.4	0.8	1.3	1.0	2.4	1.5	0.7	0.2	2.3
Always	0.0	0.2	0.0	0.4	0.4	0.0	0.2	0.1	0.0	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Annex 5.39. Percentage of students browsed Internet content during school closure by Grade of 2020, grade category, gender, geography and year

Indicators	Year		Level of significance
	2020	2021	
Grade in 2020			
Grade 4	4.1	5.7	ns
Grade 5	5.1	10.7	p<0.001
Grade 6	14.1	15.8	ns
Grade 7	15.1	17.6	ns
Grade 8	22.1	23.9	ns
Grade 9	21.5	24.8	ns
Level of significance	p<0.001	p<0.001	
Gender			
Boys	15.5	19.0	p<0.05
Girls	12.2	14.5	p<0.05
Level of significance	p<0.01	p<0.01	
Geography			
Rural	9.4	12.8	p<0.001
Urban	20.7	21.5	ns
Level of significance	p<0.001	p<0.001	
All	13.7	16.4	p<0.01

Note: ns = not significant at p = 0.05

Annex 5.40. Percentage of students browsed Internet content during school closure by grade and time periods

Grade in 2020	Time periods				
	March-May 2020	June-August 2020	September- December 2020	March-May 2021	June-August 2021
4	2.1	3.4	3.7	5.0	5.7
5	1.8	3.8	4.9	9.7	10.7
6	6.0	10.8	12.7	15.6	15.6
7	5.5	12.2	13.9	16.8	17.4
8	8.0	16.7	21.1	21.9	23.3
9	9.5	17.2	19.9	22.7	24.6

Annex 5.41. Percentage of students' browsed Internet for academic content during school closure by geography, gender and time periods

Geography & gender	Time periods				
	March-May 2020	June-August 2020	September- December 2020	March-May 2021	June-August 2021
Rural					
Boys	4.5	7.1	9.2	13.1	13.5
Girls	2.7	6.6	8.3	11.4	12.0
Urban					
Boys	10.7	20.2	16.9	24.6	25.1
Girls	7.0	14.2	19.3	15.8	18.1
All	5.5	10.7	12.7	15.3	16.2

Table 5.42. Percentage distribution of students by level of browsing Internet content for academic purpose, geography and gender

Level of browsing Internet content	Rural		Urban		All
	Boys	Girls	Boys	Girls	
Never	83.6	85.0	69.5	78.1	80.2
Rarely	6.9	5.6	8.9	6.7	6.8
Sometimes	5.4	5.7	10.4	7.0	6.8
Often	2.5	3.1	7.2	5.8	4.4
Usually	1.4	0.5	2.6	1.8	1.4
Always	0.1	0.1	1.5	0.6	0.5
Total	100.0	100.0	100.0	100.0	100.0

Annex 5.43. Percentage distribution of students by level of Internet browsing for academic purpose, Grade, gender and geography

Level of browsing Internet content	Grade in 2020						Gender		Geography	
	4	5	6	7	8	9	Boys	Girls	Rural	Urban
Never	92.7	87.7	81.1	78.6	71.7	69.4	77.5	82.2	84.4	74.2
Rarely	4.2	6.1	5.8	7.0	8.4	9.2	7.8	6.0	6.1	7.7
Sometimes	1.0	4.5	6.4	6.6	10.8	11.3	7.5	6.2	5.5	8.5
Often	1.7	1.6	4.7	5.3	6.0	6.9	4.6	4.2	2.9	6.4
Usually	0.4	0.0	1.0	2.3	2.6	2.1	1.9	1.0	0.9	2.2
Always	0.0	0.2	1.0	0.2	0.4	1.1	0.7	0.3	0.1	1.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Annex 5.44. Percentage of items/chapters studied by the students in Bangla and mathematics by the level of household members' tutoring

Level of household members' tutoring	Subjects			All three
	Prose	Poetry	Mathematics	
Never	58.2	51.4	59.6	56.6
Rarely	46.5	44.6	55.6	48.9
Sometimes	59.1	52.3	64.6	58.8
Often	62.5	55.5	69.0	62.5
Usually	70.4	62.6	79.6	71.1
Always	73.2	61.7	76.4	70.8

Annex 5.45. Percentage of items/chapters studied by the students in Bangla and mathematics by the level of private tutoring

Level of private tutoring	Subjects			All three
	Prose	Poetry	Mathematics	
Never	52.0	45.4	52.8	50.3
Rarely	56.0	49.5	59.3	55.1
Sometimes	61.5	55.3	64.8	60.7
Often	66.5	59.3	70.8	65.7
Usually	67.2	59.5	74.0	67.1
Always	71.9	63.6	79.5	71.7

Annex 5.46. Percentage of items/chapters studied by the students in Bangla and mathematics by the level of watching academic programmes on television

Level of watching academic programmes	Subjects			All three
	Prose	Poetry	Mathematics	
Never	57.9	50.2	61.1	56.6
Rarely	64.8	59.3	70.7	65.1
Sometimes	72.6	70.5	75.4	72.9
Often/Usually/Always*	66.5	64.7	76.1	69.2

Note: *Grouped due to small sample size

Annex 5.47. Percentage of items/chapters studied by the students in Bangla and mathematics by the level of submitting school assignments

Level of submitting school assignments	Subjects			All three
	Prose	Poetry	Mathematics	
Never	59.3	47.2	59.2	54.5
Rarely	55.8	47.4	60.2	54.7
Sometimes	61.8	52.8	65.6	60.3
Often	60.6	56.1	63.9	60.3
Usually/Always*	64.8	62.3	68.6	65.3

Note: *Grouped due to small sample size

Annex 5.48. Percentage of items/chapters studied by the students in Bangla and mathematics by the level of online class participation

Level of online class participation	Subjects			All three
	Prose	Poetry	Mathematics	
Never	58.6	51.4	62.3	57.6
Rarely	72.8	68.2	74.9	72.1
Sometimes	73.6	71.4	75.5	75.6
Often/Usually/Always*	77.5	72.0	85.8	78.6

Note: *Grouped due to small sample size

Annex 5.49. Percentage of items/chapters studied by the students in Bangla and mathematics by the level of Internet browsing for academic purpose

Level of internet browsing	Subjects			All three
	Prose	Poetry	Mathematics	
Never	58.7	51.3	62.1	57.6
Rarely	65.2	57.5	70.3	64.5
Sometimes	66.2	62.3	71.3	66.8
Often/Usually/Always*	67.6	64.2	72.3	68.1

Note: *Grouped due to small sample size

Annex 6.1. Percentage of headteachers by their opinion on students facing learning loss and school type in 2020

Category of students facing learning loss	Primary		Secondary	
	Government	Newly nationalised	Non-government	Madrassa
Most	36.4	48.1	46.1	49.3
Majority	39.9	38.0	43.8	39.7
About half	18.6	7.6	7.8	6.8
Some	5.1	6.3	2.3	4.1
None	-	-	-	-
Total	100.0	100.0	100.0	100.0

Annex 6.2. Percentage distribution of pre-primary students of 2020 by the category of learning loss perceived by the headteachers

Category of loss	School type		Geography		All
	Government primary	Newly nationalised	Rural	Urban	
75% or more	32.7	34.3	35.7	30.5	33.2
50–<75%	23.2	23.2	24.8	21.4	23.2
25–<50%	19.7	20.0	20.8	18.7	19.8
<25%	18.6	17.8	14.9	22.1	18.3
No loss	5.8	4.7	3.8	7.3	5.5
Total	100.0	100.0	100.0	100.0	100.0

Annex 6.3. Percentage distribution of primary students of 2020 by the category of learning loss perceived by the headteachers

Category of loss	School type		Geography		All
	Government primary	Newly nationalised	Rural	Urban	
75% or more	31.8	34.1	36.2	28.9	32.5
50–<75%	22.2	23.2	24.2	20.9	22.5
25–<50%	19.3	19.3	20.1	18.5	19.3
<25%	20.0	18.5	15.5	23.5	19.6
No loss	6.7	4.9	4.0	8.2	6.1
Total	100.0	100.0	100.0	100.0	100.0

Annex 6.4. Percentage distribution of secondary students of 2020 by the category of learning loss perceived by the headteachers

Category of loss	School type		Geography		All
	Non-government	Madrassa	Rural	Urban	
75% or more	36.2	39.4	37.2	36.5	36.8
50–<75%	22.5	21.8	21.6	23.3	22.3
25–<50%	21.1	18.8	21.0	20.2	20.7
<25%	17.6	18.0	17.9	17.3	17.7
No loss	2.6	2.0	2.3	2.7	2.5
Total	100.0	100.0	100.0	100.0	100.0

Annex 6.5. Percentage of headteachers by opinion on the students' features who are relatively more vulnerable in terms of learning loss by school type and geography

Students' features	School type		Geography		All
	Primary	Secondary	Rural	Urban	
Students of low-income families	84.8	86.6	84.4	87.7	85.7
Whose parents are not serious about education	63.5	59.7	58.2	66.9	61.6
Rural areas	29.4	28.4	33.2	22.1	28.9
Those who had none to help in studies at home	25.4	24.9	25.4	24.7	25.1
Those who were already lagging behind	19.3	19.4	20.5	17.5	19.3
Those who are addicted to cell phones	10.2	21.4	14.8	17.5	15.8
Girls	9.6	20.4	16.8	12.3	15.1
Boys	15.7	13.4	15.6	13.0	14.6
Students of marginal areas (hill/haor/char)	9.1	8.5	9.8	7.1	8.8
Students of lower grades	7.1	6.5	6.1	7.8	6.8
Terminal examinees (grades 5, 8 10)	2.5	9.5	6.1	5.8	6.0
Students in upper grades	3.6	6.0	4.1	5.8	4.8
Those who had no cell phone at home	5.6	3.5	3.3	6.5	4.5
Special needs children	4.6	1.5	3.3	2.6	3.0
Urban areas	2.0	0.5	0.0	3.2	1.3

Annex 6.6. Percentage of headteachers by opinion on the students' features who are relatively more vulnerable in terms of learning loss and school type

Students' features	Primary		Secondary	
	Government	Newly nationalised	Non-government	Madrassa
Students of low-income families	86.4	82.3	84.4	90.4
Whose parents are not serious about education	65.3	60.8	63.3	53.4
Rural areas	31.4	26.6	31.3	23.3
Those who had none to help in studies at home	26.3	24.1	26.6	21.9
Those who were already lagging behind	19.5	19.0	22.7	13.7
Those who are addicted to cell phones	11.9	7.6	19.5	24.7
Girls	8.5	11.4	18.8	23.3
Boys	13.6	19.0	13.3	13.7
Students of marginal areas (hill/haor/char)	7.6	11.4	9.4	6.8
Students of lower grades	9.3	3.8	6.3	6.8
Terminal examinees (grades 5, 8, 10)	1.7	3.8	7.8	12.3
Students in upper grades	2.5	5.1	7.8	2.7
Those who had no cell phone at home	7.6	2.5	4.7	1.4
Special needs children	4.2	5.1	1.6	1.4
Urban areas	1.7	2.5	0.0	1.4

Annex 6.7. Percentage of students correctly answering some selected items in writing part of literacy test by year

Items	Estimated	Estimated	Estimated
	2002	2016	2021
Writing word 1	80.4	83.1	83.8
Writing word 2	48.6	62.1	56.9
Writing sentence 1	71.5	74.6	72.8
Writing sentence 2	53.7	67.9	62.6
Number of words			
0	15.9	12.9	12.3
1	39.2	28.3	34.7
2	44.9	58.8	53.0
Number of sentences			
0	19.0	16.1	16.7
1	36.8	25.3	31.2
2	44.2	58.6	52.1
Paragraph writing (total score 10)			
Nil	28.4	16.2	22.5
≤3	56.1	29.9	37.1
5+	22.7	58.1	52.6

Annex 6.8. Percentage of students correctly answering some selected items in numeracy part of literacy test by year

Items	Estimated	Estimated	Estimated
	2002	2016	2021
Subtraction (a 2-digit number from another two-digit number)	84.4	86.2	86.1
Multiplication (a 2-digit number with a single-digit number)	75.6	79.4	79.1
Two-step problem-solving needing skills in subtraction and division	50.9	54.5	41.7
Two-step problem-solving needing skills in multiplication and division	36.1	45.5	34.1

Annex 6.9. Percentage of students correctly answering some selected items in the application part of literacy test by year

Items	Estimated	Estimated	Estimated
	2002	2016	2021
Recognizing time	68.8	73.3	64.3
Recognizing right and left hand	83.1	88.8	85.4
Identifying the east/west side of a map	50.7	50.0	47.3
Balance sheet (addition of two 3-digit numbers and three 3-digit numbers separately and subtracting the latter result from the former)	31.5	34.4	24.7
Understanding message from a billboard	23.7	24.3	22.5

Writing own address			
Name	97.7	96.9	97.3
Village/mahalla	87.1	88.2	80.2
Post office	81.5	81.5	72.3
Upazila/Thana	82.5	82.0	73.1
District	83.7	83.4	77.3
All five	66.4	66.0	48.6

Annex 6.10. Percentage of students achieving literacy skills by gender, geography and year

Geography and gender	Estimated, 2002	Estimated, 2016	Projected, 2021	Estimated, 2021	Deviation of 4 from 5
1	2	3	4	5	6
Gender					
Boys	54.2	58.8	60.5	50.8	-9.7
Girls	39.0	48.3	52.1	45.9	-6.2
Geography					
Rural	44.8	51.2	53.7	43.1	-10.6
Urban	56.5	61.2	64.4	56.1	-8.3
All	45.8	53.3	56.3	48.0	-8.3

Annex 6.11. Measurement of variables used in regression analysis

Variables	Measurement
Dependent variable	
Literacy	1 = literate, 0 = non-literate
Explanatory variables	
Gender	1 = boys, 0 = girls
Geography	1 = urban, 0 = rural
Grade	5–10; students' current Grade at the time of literacy test
Fathers' education	0–16; years of schooling completed
Mothers' education	0–16; years of schooling completed
Self-studies	0–10; total score for self-studies in five periods
HH members tutoring	0–10; total score for household members tutoring in five periods
Private tutoring	0–10; total score for private tutoring in five periods
Television classes	0–10; total score for participation in academic programmes on television in five periods
School assignments	0–10; total score for submitting school assignments in five periods
Online classes	0–10; total score for online class participation in five periods
Internet content	0–10; total score for browsing Internet content for academic purposes in five periods
Textbook content	0–36; total number of items/chapters read in 2020 in Bangla and mathematics

Annex 6.12. Logistic regression models predicting rural students' literacy skills

Explanatory variables	Model 1			Model 2		
	Regression coefficient	Wald statistic	Odds ratio	Regression coefficient	Wald statistic	Odds ratio
Gender	0.18	2.90	1.20	0.24*	4.66	1.28
Grade	0.35***	116.25	1.42	0.37***	91.63	1.45
Fathers' education	0.08***	24.40	1.08	0.06***	12.40	1.06
Mothers' education	0.10***	30.15	1.11	0.09***	21.04	1.09
Self-studies				0.15***	26.84	1.16
HH members tutoring				0.04	3.04	1.04
Private tutoring				0.04*	4.87	1.04
Television classes				-0.06	1.41	0.94
School assignments				-0.01	0.09	0.99
Online classes				0.15	2.42	1.16
Internet content				0.03	0.56	1.03
Textbook content				0.02*	5.10	1.02
Constant	-3.51***	188.80		-4.91***	218.66	
-2 Log-likelihood	2060.00			1973.72		
Cox & Snell R ²	0.14			0.18		
Nagelkerke R ²	0.18			0.24		

Notes: *p<0.05, **p<0.01, ***p<0.001

Annex 6.13. Logistic regression models predicting urban students' literacy skills

Explanatory variables	Model 1			Model 2		
	Regression coefficient	Wald statistic	Odds ratio	Regression coefficient	Wald statistic	Odds ratio
Gender	0.01	0.00	1.00	0.01	0.01	1.02
Grade	0.26***	48.64	1.30	0.28***	40.81	1.33
Fathers' education	0.09***	20.93	1.09	0.06**	9.76	1.07
Mothers' education	0.07**	9.58	1.07	0.05*	4.30	1.05
Self-studies				0.11***	10.77	1.12
HH members tutoring				0.03	1.33	1.03
Private tutoring				0.04	2.84	1.04
Television classes				0.11*	4.37	1.11
School assignments				0.01	0.03	1.01
Online classes				0.09	2.77	1.10
Internet content				-0.05	1.49	0.96
Textbook content				0.02**	8.88	1.02
Constant	-2.34	67.82		-3.76	91.82	
-2 Log-likelihood	1452.70			1382.72		
Cox & Snell R ²	0.12			0.17		
Nagelkerke R ²	0.16			0.23		

Notes: *p<0.05, **p<0.01, ***p<0.001

Annex 6.14. Logistic regression models predicting girls' literacy skills

Explanatory variables	Model 1			Model 2		
	Regression coefficient	Wald statistic	Odds ratio	Regression coefficient	Wald statistic	Odds ratio
Geography	0.25*	3.91	1.29	0.08	0.30	1.08
Grade	0.32***	70.98	1.37	0.32***	52.69	1.38
Fathers' education	0.11***	35.29	1.11	0.08***	18.71	1.09
Mothers' education	0.08***	12.47	1.08	0.06**	6.19	1.06
Self-studies				0.14***	16.56	1.15
HH members tutoring				0.03	1.00	1.03
Private tutoring				0.05*	4.32	1.05
Television classes				0.06	1.04	1.06
School assignments				0.03	0.52	1.03
Online classes				0.13	3.48	1.13
Internet content				-0.03	0.53	0.97
Textbook content				0.03***	12.23	1.03
Constant	-3.11***	113.58		-4.65***	143.09	
-2 Log-likelihood	1490.15			1396.77		
Cox & Snell R ²	0.16			0.22		
Nagelkerke R ²	0.21			0.29		

Notes: *p<0.05, **p<0.01, ***p<0.001

Annex 6.15. Logistic regression models predicting boys' literacy skills

Explanatory variables	Model 1			Model 2		
	Regression coefficient	Wald statistic	Odds ratio	Regression coefficient	Wald statistic	Odds ratio
Geography	0.49***	19.95	1.64	0.44***	14.73	1.55
Grade	0.31***	89.92	1.36	0.34***	78.29	1.40
Fathers' education	0.06***	12.43	1.06	0.04*	5.13	1.04
Mothers' education	0.10***	27.17	1.10	0.08***	19.70	1.09
Self-studies				0.12***	19.68	1.13
HH members tutoring				0.03	2.47	1.03
Private tutoring				0.04	3.63	1.04
Television classes				-0.01	0.01	1.00
School assignments				-0.02	0.63	0.98
Online classes				0.07	1.11	1.08
Internet content				-0.01	0.00	1.00
Textbook content				0.01*	3.99	1.01
Constant	-3.11***	154.84		-4.31***	174.00	
-2 Log-likelihood	2021.73			1959.80		
Cox & Snell R ²	0.13			0.16		
Nagelkerke R ²	0.18			0.22		

Notes: *p<0.05, **p<0.01, ***p<0.001

Annex 6.16. Percentage of headteachers by activities they were considering after reopening of schools, school type and geography

Activities	Primary		Secondary		Geography	
	Government	Newly nationalised	Non-government	Madrasa	Rural	Urban
Increase daily contact hours	52.7	59.5	62.9	63.2	63.8	51.7
Emphasis more on English and mathematics	45.5	36.5	46.0	29.4	43.4	37.1
Increase home visits of the students	42.9	40.5	32.3	27.9	39.1	31.5
Revisit previous Grade lessons before starting current lessons	38.4	32.4	33.9	30.9	34.0	35.0
Seating arrangement mixing advanced and weak students	22.3	18.9	16.9	16.2	20.4	16.1
Provision of everyday classes for examinees	16.1	20.3	14.5	22.1	17.0	18.2
Arrange special coaching for terminal examinees	14.3	12.2	17.7	17.6	16.2	14.7
Provide additional emphasis on class-tests	10.7	8.1	11.3	17.6	13.2	16.8
Arrange general coaching in school	12.5	12.2	21.8	7.4	9.8	14.7
Provision of student counselling	6.3	4.1	11.3	14.7	4.3	16.8
Increase co-curricular activities	8.9	8.1	4.0	10.3	6.0	9.8

Note: Multiple responses considered

Annex 6.17. Percentage of headteachers by steps they thought the ministry should consider after reopening of schools, school type and geography

Steps that the ministry should consider	Primary		Secondary		Geography	
	Government	Newly nationalised	Non-government	Madrasa	Rural	Urban
Avoid long vacation	39.8	37.3	42.7	42.6	44.4	35.0
Increase daily school contact hours	33.3	36.0	46.0	35.3	41.8	32.9
Increased emphasis on school monitoring	34.3	22.7	35.5	38.2	35.8	28.7
Include previous grade lessons in the syllabus	38.0	34.7	21.8	25.0	30.2	28.7
Special training/workshop for teachers	25.9	20.0	35.5	26.5	28.9	26.6
Provide national guidelines from the ministry	27.8	21.3	21.8	23.5	20.7	28.7
Provision of whole-day school on Thursdays	13.0	13.3	13.7	20.6	15.5	13.3
Arrange training for untrained teachers	10.2	9.3	11.3	14.7	12.1	9.8
Appoint mentors/counsellors in each school	6.5	4.0	8.9	10.3	8.2	6.3
Arrange online/TV classes centrally	6.5	0.0	6.5	4.4	5.2	4.2
State-level publicity on the importance of education	4.6	4.0	5.6	4.4	3.9	6.3

Note: Multiple responses considered

Annex 6.18. Percentage distribution of headteachers by their opinion on the proportion of learning loss that may be recovered through various actions and school type

Proportion of recovery	Primary		Secondary	
	Government	Newly nationalised	Non-government	Madrassa
<20%	0.0	1.3	3.1	4.1
20–39%	8.5	7.6	13.3	15.1
40–59%	16.1	11.4	23.4	20.5
60–79%	22.9	26.6	28.1	30.1
80–99%	36.4	38.0	26.6	23.3
100%	10.2	3.8	1.6	2.7
Don't know	5.9	11.4	3.9	4.1
Total	100.0	100.0	100.0	100.0

Annex 6.19. Percentage distribution of headteachers by their opinion on the proportion of learning loss that may be recovered through various actions, school type and geography

Proportion of recovery	School type		Geography		All
	Primary	Secondary	Rural	Urban	
<20%	0.5	3.5	2.5	1.3	2.0
20 – 39%	8.1	13.9	9.0	14.3	11.1
40 – 59%	14.2	22.4	22.5	11.7	18.3
60 – 79%	24.4	28.9	26.6	26.6	26.6
80 – 99%	37.1	25.4	31.1	31.2	31.2
100%	7.6	2.0	2.5	8.4	4.8
Don't know	8.1	4.0	5.7	6.5	6.0
Total	100.0	100.0	100.0	100.0	100.0



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