



Report on

Virtual National Seminar on

Accelerating Progress Equity in Education during the Pandemic in Bangladesh

Organized by

South Asian Institute of Policy and Governance (SIPG) of North South University, Bangladesh & KASpaces of the Konrad Adenauer Stiftung (KAS), Singapore





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Jointly organized by



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18-19 September 2021

This report has been compiled by

Dr. M. Mahfuzul Haque

Associate Professor

South Asian Institute of Policy and Governance (SIPG)

North South University, Dhaka, Bangladesh

And

Md. Parvez Hasan Yousuf

Research Associate

South Asian Institute of Policy and Governance (SIPG), North South University, Dhaka, Bangladesh

Virtual National Seminar on "Accelerating Progress and Equity in Education during the Pandemic in Bangladesh"

Published in January 2022

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Published by

South Asian Institute of Policy and Governance (SIPG), North South University, Dhaka, Bangladesh sipg@northsouth.edu, www.northsouth.edu/sipg

Cover, Design and Layout: Sharfin Islam

Front and Back Cover Photo Courtesy: REUTERS

Printed in Dhaka in January 2022 Printed by Dot Net Limited

Contents

Abbreviations	1
Foreword	2
Introduction	3
Overview of the Education in Bangladesh	5
Impact of the pandemic on education	7
Highlights from the seminar	10
Blended Learning versus Traditional Classroom	11
Infrastructure and Teachers Development	13
Inequality in Education	14
New Actors in Education	17
Best Practices	20
Opportunities	22
Challenges	23
Recommendations	24
Conclusion	25

Abbreviations

AI	Artificial Intelligence
BdREN	Bangladesh Research and Education Network
CAMPE	Campaign for Education
DHSE	Directorate of Higher and Secondary Education
FSSAP	Female Secondary School Assistance Project
GoB	Government of Bangladesh
HEQEP	Higher Education Quality Enhancement Project
HSFSP	Higher Secondary Female Stipend Project
LMS	Learning Management System
MoPME	Ministry of Primary and Mass Education
MoE	Ministry of Education
MPO	Monthly Pay Order
MPPG	Master of Public Policy and Governance
NFE	Non-Formal Education
PEDP	Primary Education Development Program
PECE	Primary Education Completion Examination
PTI	Primary Teachers' Training Institute
PVE	Proxmox Virtual Environment
SEDP	Secondary Education Development Project
SIPG	South Asian Institute of Policy and Governance
TVET	Technical and Vocational Education and Training
UMIC	Upper Middle-Income Country
UGC	University Grants Commission

Foreword

from Director, Regional Programme Political Dialogue Asia, KAS

While countries across Asia have made substantial progress in the achievement of Sustainable Development Goal 4 on education in the last years, there was a substantial setback due to the outbreak of COVID-19. With schools and education institutions being closed in around 188 countries, nations across the world explored alternative ways to provide continuous education using diverse technologies and other means. While homebased learning with the support of digital platforms cannot fully substitute the traditional classrooms, there is a need to see how the education system in various countries have adapted to the challenges of the pandemic and whether the new changes meet the needs of the society. Further, how can countries ensure that education is made available to all and that no one is left behind?

Every democratic actor might have different roles to play in society, but they should not be working in silos if we want to help the government achieve the Sustainable Development Goals. They must coordinate their efforts to complement the government's efforts, instead of competing with each other's interest and agenda. There is a need to explore and innovate new frameworks in engaging different democratic actors, in particular, how to best implement this framework at the local level.

As such, Konrad Adeneaur Stiftung (KAS) through the KASpaces Program facilitates countries and regions to come together to share experiences and best practices they have used in facing today's challenges, and to ensure education is provided to all - not just during times of challenges, but in the years and decades ahead. These meetings of stakeholders in education are important both to see how education systems in various countries have been implemented during the pandemic and to transform the systems in order to produce more credible and effective models for the future.

Impressive gains have been achieved by Bangladesh to accelerate improvement in human capital, including for the education sector. The shift in focus from education access and outreach, towards improving quality, increasing access, diversified education availability, better ICT, and reversing the dropout rate, have led to

Mr. Christian Echle

Director, Regional Programme Political Dialogue Asia Konrad-Adenauer Stiftung, Singapore marked improvement in education targets, namely higher literacy rates and upward social mobility.

However, COVID-19 has dampened the outlook for education, where school closures have affected accessibility, inequality and learning continuity, in part due to trauma and psychological challenges to marginalised groups. The government responded to this crisis through the COVID-19 Response and Recovery Plan. Remote learning content and rolls out learning were launched through electronic media, mobile, radio, and internet platforms. One of the best practices learnt during the pandemic was allowing for education continuity through multi-modal distance learning. Online learning and teaching became the new normal and necessary in a post-COVID-19 education sector. New actors like telecom operators, providers and facilitators, and edtech related learning apps have also emerged to provide multimodal learning. It is noted, however, that children from marginalised groups were still difficult to reach, unstable internet connectivity and electricity supply, poor financial conditions, and there is a lack of devices available to students who can't attend school.

To improve upon the current situation, Bangladesh will need to invest more into its education infrastructure and capital, which includes upskilling teachers and upgrading learning tools to continue leveraging on a blended model of learning. We are very pleased to present this report from our KASpaces national webinar in Bangladesh. This report showcases not only the best practices but also the various challenges that were overcome in Bangladesh. The report reflects the perspective of various stakeholders from teachers, policymakers, IT companies as well as students. The discussions in the student's forum in which we had the strong participation of stakeholders from different parts of Bangladesh sharing their rich experiences has also been reflected in this report.

We would like to thank our partners South Asian Institute of Policy and Governance (SIPG), North South University for their cooperation in the implementation of this webinar.

Introduction

There can be no denial that improvement in the education system can play a critical role in the development of the human capital of a country. Impressive gains have been achieved in Bangladesh in accelerating growth, and in lowering poverty, and improvement in the human capital over the years. This has been possible for adopting appropriate policies and strategies in the education sector. The national education policy of 2010 and the Perspective Plan of 2021 shaped the overall policy guidelines for an inclusive education system having wider coverage in both urban and rural areas. While the initial focus was access and serving the outreach, now it has been shifted to improving quality, increasing access and availability in both technical and vocational education, and improvement in information communication technology (ICT) and reversing the dropout rate. Consequently, there has been a marked improvement in the overall education coverage of the country by increased literacy rate, and with an upward trend of the workforce having basic primary, secondary, and tertiary education.

The education sector has received significant focus and attention as reflected in the perspective plan 2021 of Bangladesh, successive National Five-Year Plans (sixth and seventh), and implemented under the Education Policy 2010. As Bangladesh aspires to graduate to Upper Middle-Income Country by 2031, the Perspective Plan of 2041 puts enormous challenges in moving beyond literacy and enrollment, which would require a greater share of the educated workforce in the economy for further growth. Therefore, several challenges lie ahead in sustaining growth in the education sector. A key concern to be noted here as Labour Force Survey 2016-2017 notes that only 31 percent of the population under the age of 15 years and above does not have primary education. In the case of urban literacy, it is only 22% lower than rural which is 34.8 percent. The gender gap persists with the literacy rate; however, concerning enrollment in both primary and secondary education, gender parity has been achieved. Enrolment in science subjects in higher secondary level is observed to be low. Likewise, in the Madrasah stream, quality of education remains a key concern.

At the higher education level, there has been a growth in terms of the number of students, teachers, and institutions, but there appears to be a lack of preparedness among the students to embrace the opportunities being created by the Fourth Industrial Revolution as there has been a decline in choosing education streams of science, technology, engineering and mathematics. There has also been apathy towards technical and vocational training among the students. Further to this, the mismatch of skill gaps is also being attributed by absence of industry-academia collaboration which also reinforces the existing weakness of the education system of the country.

Bangladesh constitution commits itself for ensuring uniform basic education for all. The Government of Bangladesh has expanded the provision of compulsory primary schooling across the country. However, several streams of education systems such as Madrasah and English Medium Schools operate in the country which produces varying standards of educational outputs with varying learning outcomes. This has led to far reaching effects on human capital particularly at the backdrop of public and private provisions in delivering public goods such as education.

Nevertheless, affirming the commitments and challenges in realizing the targets of SDGs 4, Bangladesh has been pursuing its development goals focusing on the development of human capital in her successive five-year plans. Realizing the fact that by building human capital, improvement in education, imparting skills, training, wellbeing in

health and other human development indicators, productive capacity of individuals is possible, as such, investment in education such as building infrastructure, expanding the education system to the outreach sections of the society, and by focusing on quality of education has been persistently sustained in the development agenda. Therefore, in order to seize the capacity created by market opportunities by the individuals, Bangladesh has been putting topmost priority in education particularly in spreading the opportunities in education for all, improving the access and quality in education, improving enrollment in primary, secondary, and reduce the dropout rates at secondary level, expanding technical and vocational education, and ensure quality in higher education level of the country.

Education Governance

The Education System in Bangladesh has been structured and managed under two administrative Divisions under the Ministry of Education, and Ministry of Primary and Mass Education. Ministries and Divisions are responsible for making public policies and for overall implementation of the allocated responsibilities within its jurisdiction. Ministry or Divisions have Attached Departments and Directorates under its jurisdiction as well as several autonomous bodies.

The Ministry of Education has been further bifurcated into two divisions namely Secondary and Higher Education and Technical and Madrasah in 2016. The Secondary and Higher Education Division formulates and implements public policies, thereby involving itself in planning, monitoring, evaluating, and in execution of plans and programs in secondary and higher education. The Directorate of Secondary and Higher Education is responsible for management and supervision of institutions under its respective control. However, the policy formulation process highlights and upholds provisions for:

- Providing value-based education
- · Emphasizing job-oriented and need-based education
- Modernization of curriculum
- Ensuring efficient management at all levels
- Strengthening Information and Communication Technology
- Ensuring teacher effectiveness at all levels, and
- Ensuring gender parity at all levels of education

Education Expenditure

1

For education and technology, only12.3 percent of the overall development expenditure is allocated to it which barely covers about 2.2 per cent of GDP¹. Initiatives are persistently taken to improve the standard of pre-school and primary level education, secondary education quality and access, enhancement in quality in higher education, increased coverage of the school feeding program, and stipend program (from 3.5 million to 20 million and from 7.8 million to 13.0 million respectively). Teachers' development has received due attention and 12 primary teachers training institutions have been built. Likewise, for the expansion of ICT, over 3000 ICT labs have been built in the secondary schools.

Seventh Five Year Plan of Bangladesh (2016-2020). Government of Bangladesh.

Overview of the Education in Bangladesh

Progress in Pre-Primary and early Childhood Education

There has been a marked improvement in the expansion of pre-primary and early childhood education. Improvements in enrollment in pre-Primary and early childhood learning has been made possible raising it to 1.7 million in 2018 from 0.9 million in 2010. However, the number of trained teachers in pedagogy available for pre-primary and early childhood education remain as a major challenge. Therefore, appropriate measures for their continuous training and development warrants more focus and attention.

Progress in Primary Education

Primary education includes grade 1 to grade 5. At present, there are approximately 134147 primary schools which include government, non-government, Madrasah, and NGO-managed primary schools. The enrolment rate of 97.9% in primary level needs to be further accelerated to 100%. Gender parity in primary school has been achieved which needs to be further sustained. The dropout rates in primary education have fallen to 20 percent in 2018 compared to 50 percent in 2006. The number of teachers in government primary schools has also been increased to 349000 in 2018 from 215000 in 2012. Therefore, it resulted in further narrowing down of the teacher-student ratio to 25 in 2018 from 42 in 2012. In order to strengthen and improve quality in primary education, major steps have been taken with regard to teacher recruitment and training, upgrading textbooks, the introduction of ICT, and improved school facilities are some worth mentioning. To further improve and sustain the quality of primary education, the Primary Education Development Program (PEDP-IV) was launched in 2018. To reduce drop out and ensure continuity in education, the government has also introduced the Primary Education Stipend Project since 2002 which channelized fixed monthly stipends to the attending students. Distributions of free textbooks, school meals programs are some of the interventions dealing with the issue of equity and for meeting the nutritional status of the school children. PEDP-IV further provides opportunities for head teacher training of primary schools. According to some estimates, around 60000 teachers were given leadership training school children. PEDP-IV further provides opportunities for head teacher training of primary schools. According to some estimates, around 60000 teachers were given leadership training and 35000 teachers were given training on ICT. Modern computer laboratories have been built in 50 Teachers Training Institute which offers the platform for ICT training for the teachers in Primary Education.

To sum up, in primary education, overall school enrollment has been achieved close to 100 percent. The dropout rate has also reduced significantly below 20 percent. Gender parity has been achieved. Competency-based curriculum and textbooks have been revised and creative question papers have been introduced in examinations in grade 5. A diploma in education has been introduced in Primary Teachers Institution (PTI). Stipend for the children given to mothers through mobile transfer is instrumental in greater participation of the students with reduced dropouts. Despite such positive gains, there are still challenges of sustainability particularly in further reducing the dropout rate, reducing the teachers and students' absenteeism, and bringing more improvement in the class contact hours for grades 3 and 5 which is estimated to be 791 hours in a year according to Annual Sector Performance Report 2019.

Non-formal and adult literacy

Non-formal education (NFE) was initiated since independence of the Country to expand literacy rates and encourage continued education for adults. The Non-Formal Education Policy was launched in 2006 to eliminate illiteracy from the country. The 7th Five Year Plan embarked on a huge plan targeting an estimated number of 32.5 million adolescent and adult illiterates.

Progress in Secondary Education

Recent trends suggest a higher growth rate in enrolment at the secondary level. Around 20000 institutions are dedicated to offering secondary education for 10.3 million students and the number of teachers is around 246845 in 2019. Gender parity has been achieved where out of 10.5 million students, 5.6 million are girls. It is claimed that the girl's stipend programs namely the Female Secondary School Assistance Program (FSSAP) I and II, the Higher Secondary Female Stipend Project (HSFSP) have played key roles in greater enrolment and continuity of girl students in school. Several projects are launched focusing on quality and teachers training implemented by the Directorate of Secondary and Higher Secondary (DSHE). It is to be noted that though the number of students and institutions at the secondary level has increased, the number of teachers has not grown at a similar pace. It is observed that major challenges remain in low enrolment in class and in particular in low number of participants in science subjects. Lack of trained teachers, perceived difficulty in science subjects and also poor job market are often claimed as reasons for the low share of science students in higher secondary education.

Madrasah Education

The number of *Madrasah* (religious schools) both registered and non-registered have marked a significant growth from 9200 and 14000 which caters for 3.1 and 3.8 school-going children in the recent past. Most of the Madrasahs are rural based. Quality and relevance to the job market have been sources of major concern in Madrasah education when compared with the mainstream education system of the country. However, more efforts are needed to revamp and modernize the Madrasa curriculum to make it more relevant and comparable to mainstream education of the country.

Progress in Higher Education

Since 2009, there has been a huge growth in the development of tertiary education in both public and private sectors. According to recent estimates, there has been a huge growth in the number of universities which rose from 82 in 2009 to 145 in 2018. Such growth is attributed to the surge in demand for higher education in the country. However, it is to be noted that the enrolment at the tertiary level is still very low and accounts only for 12.1 percent. The male and female students' participation in tertiary level account for 15.5 percent and 8.7 percent respectively. Quality and external efficiency of education at the tertiary level remain as a major weakness.

Progress with Skill Development

Expansion and modernization of Technical and Vocational Education (TVET) for building a skilled workforce has been a major focus of the government education policy. It is realized that for Bangladesh, for graduating to an upper-middle-income country, an increased enrolment in TVET will be very critical. However, enrolment in TVET has increased to 16 percent in 2018. The National Education Policy of 2010 and the National Skills Development Policy of 2011 highlights the need for improvement of TVET stream of education and addresses the issue of low enrolment and greater relevance to the job market.

Equity aspects of Education

The government adopted various policy measures to address the issue of equity in education. This has been reflected by various interventions such as the Education for All policy, in adopting universal education up to grade 8, in providing stipend programs for inclusion and greater participation and continuity of girls in secondary education, and in further expansion of the scope and coverage of non-formal education.

Impact of the pandemic on education

The impact of Covid 19 has posed an unprecedented burden on the education system of the country since the closure of the educational institutions from 18th March 2020. The government has responded to the crisis prudently and developed the Covid 19 Response and Recovery Plan for the education sector in May 2020. The Covid 19 Response and Recovery Plan has been developed through a consultative process with the leadership of the Ministry of Primary and Mass Education (MoPME) and Ministry of Education (MoE) and with the coordinating role of UNICEF. The plan provides a set of options and strategies for implementation by the school education authorities.

With the education system having 38.6 million students of which 6 million students in pre-Primary School, 18 million in primary, 13 million in secondary, and 4 million in tertiary education, the impact of Covid 19 was huge in terms of learning continuity. The immediate fallout was marked by the closure of educational institutions from 2020. Therefore, the education of about 38.6 million students of Bangladesh came to a temporary halt with the closure of the institutions. The first term examination in primary education, and the Higher Secondary School Certificate examination was postponed for the academic year 2020, as well as studies of the students have been either halted or disrupted.

An Categories. Government and others				
Level	Total	Girls	Boys	
Pre-primary	3578384	1785825	1792559	
Primary	17338100	8799033	8539067	
Secondary	12885346	6951936	5933410	
Higher Secondary	2984474	1401910	1582564	
Tertiary	3293381	13444957	1848424	
Diploma	310334	54976	255358	
Non-Formal	1500000	750000	750000	
Total	41890019	21088637	20801382	

Table 1: Number of students enrolled in various educational levels

(Source: Shikkhya Songlap, 2020)

All Categories: Government and others

The rapid response and recovery plan acknowledged the impacts on short-medium and long-term perspectives and identified the following: learning loss due to discontinuation, increasing risk to learning outcomes and assessment, inequality in learning, increase in dropout resulting in more out of school children, teacher engagement and development, increased risk of a hygiene issue, gendered impact of school closure, impact on children in rural areas, impact on children with disabilities, safety and psychological issues, disruption and uncertainty in non-formal education, and increase in youth unemployment. It is estimated that the immediate direct impact of the Covid 19 is the discontinuity from learning of around 36.8 million students. The second chance education scheme with a target of reaching around 1000000 out-

of-school students has been disrupted due to the closure of the schools. Besides, youth and adult literacy programs of the government and non-Government Organizations (NGOs) have also been suspended which will also have an adverse effect on the literacy rate which saw improvements prior to Covid 19².

Given the uncertainty and prolonged nature of school closure, the government responded to the crisis urgently and launched remote learning content and rolled out learning through four platforms. These are electronic media, mobile, radio and internet platforms.

Figure 1: Multimodal response to Covid 19 in Bangladesh

	Television • Academic classes for students • Co-curricular classes for students (proposed) • Live sessions for students, parents and teachers (proposed)
WWW K	Internet Content repository for all available content via portals include Live classes through social media Support for students, parents and teachers
 Image: A second s	Mobile Phone • Voice call service: Connect to teachers through a toll-free numbers • SMS to students, parents and teacher • Access to audio clips through a dedicated number (proposed)
O ≡	 Radio Academic content for different classes and subjects Live sessions with teachers Public service announcements for educational awareness

(Source: Shikkhya Songlap, 2020)

2

The national coalition of NGOs working in basic education Campaign for Education (CAMPE) observes that the impact of Covid-19 on school closure led to trauma and psychological challenges, risking learning continuity of children. The marginalised groups in particular faced trauma, stress-related challenges, and limited access to distance learning opportunities as they remained hard to reach despite State and non-State interventions. CAMPE also observed that there is an enormous learning loss due to the discontinuation of education by school closure. As such, CAMPE recommended that the education budget should be enhanced by 15% and plan for a three-year (2020-2023) period for recovery and to deal with the disruption of the academic calendar.

Other initiatives

Several other initiatives which were undertaken amid the pandemic for continuing the education are mentioned below according to Sikkhya Songlap 2020.

Mukto Paath e-learning Platform

Total learner 10, 00,000, total class 180+, total Courses 180+, and total Partners 100+.

Virtual Class Synchronous LMS for Tertiary Education and Training

Implemented by the Ministry of Education June 23, 2020.

Total Coverage 47 institutions (34 universities or colleges, 13 training institutions). A total of 2859+ virtual classes were organized, 570 + teachers were connected and trained, 5900 + students/learners were connected, and 2850 virtual classes were organized.

Learning Training Courses for teachers

A total of 30+ courses were organized having 278000+ registered teachers.

Teachers Portal: A Network for Teachers Professional Development

The total number of teachers registered was 467665+ Content 252000+ Model Content 1000+ Blog- 180000 110150 live classes were recorded, and 10,000,000 learners were benefitted.

However, a couple of challenges are also realized. For example, how to reach the whole of the student population, in reaching the younger children, in operating in a low-tech environment in the primary education sector, in dealing with resource constraints and in monitoring, and accessing remote learning initiatives. In order to deal with these challenges, several options were devised as a basis of short-, medium- and long-term perspectives. While these strategies were conceived, few issues were given due consideration such as children's safety and learning continuity, readiness and support for recovery and reopening in the post-emergency period, building system resilience through learning from Covid 19 response and sustaining good practices.

Platform	Number of classes	Learner Coverage
TV Sangshad Education skills	2500+	27 million
Facebook live and YouTube	90000+	1million each day
Community Radio based class	200+	500000 each day
(0 01:111 0 1 2020)		

(Source: Shikkhya Songlap, 2020)

Highlights from the seminar

The virtual National Seminar titled "Accelerating Progress and Equity in Education during the Pandemic in Bangladesh" (18-19 September 2021) was organized by the South Asian Institute of Policy and Governance (SIPG) at North South University and KASpaces of the Konrad Adenauer Stiftung (KAS), Germany. The purpose of the national seminar was to share experiences and address the challenges of SDG 4, which is to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all in this pandemic. One of the best practices in dealing with the pandemic is to allow continuity of the education through multi-modal distance learning during the school closure. However, the children from marginalised groups of the society remained somehow hard to reach.

Studies also suggest that Covid 19 has resulted in enhanced knowledge and awareness of the school children about hygiene and safety protocol. At the tertiary level, internet connectivity has enabled distance education across the country, though there have been concerns about the digital divide in terms of infrastructure and connectivity.

Four business sessions were organized in this national seminar on thematic areas of blended education, infrastructural and teachers' development, the digital divide in the education sector and new actors of education. The best practices and challenges are discussed below session-wise:

Inaugural Session

The virtual National Seminar titled "Accelerating Progress and Equity in Education during the Pandemic in Bangladesh" commenced on 18 September 2021. Dr. Shamsul Alam, Hon'ble State Minister, Ministry of Planning inaugurated this virtual seminar.



Photo 1: Inaugural Session of the two-day virtual National Seminar

The government is planning to raise the education expenditure to 3.5% of the GDP by the fiscal year 2025," said Dr. Shamsul Alam, Hon'ble State Minister, Ministry of Planning, and Government of Bangladesh. He emphasized the role of educational institutions to produce qualified, tech-savvy, and skilled human resources for a knowledge-based society to meet the challenges and demands of the 4th industrial revolution. He also lauded the national seminar to be very timely and hopes that the ideas and experiences that will be shared in this virtual seminar will help to accelerate progress in our educational sector amid the pandemic. Dr. Shamsul Alam also opined that the educational management needs to be more transparent, inclusive and of international standards to implement the SDG 4 i.e., quality education in Bangladesh.

"Students of our country have suffered the most during the pandemic", said Special Guest Professor Dr. Muhammed Alamgir, Member, University Grants Commission of Bangladesh in the seminar. He added that extensive research in education, particularly at the tertiary level is a must and new challenges created by the pandemic should be addressed not only holistically, but also intelligently. He also laid emphasis on changing our mindset according to the reality of today's world and said that a 'blended learning model' could play a key role to guarantee uninterrupted education in the future.

Professor M. Ismail Hossain, Pro-Vice-Chancellor, North South University chaired the session. He spoke about the vicious cycle of low-quality education in Bangladesh and the importance of conducting research (both in the public and private sector) to figure out ways to break the cycle to produce good quality and employable graduates. He also pointed towards the inefficiency in resource utilization in the education sector calling for a shift in the mindset for the proper usage of resources.

"Leaving no one behind is the mantra of SDG goals 2030 which is very important for the world and Bangladesh," stated Mr. Christian Echle, Director, Regional Programme Political Dialogue Asia of Konrad Adenauer Stiftung (KAS). The inaugural program began with the welcome speech of Prof. Sk. Tawfique M. Haque, Director of SIPG. He said that simply unlocking the doors of schools and colleges will not be sufficient to cover the loss within the education sector caused by the pandemic. The inaugural session ended with the vote of thanks by Dr. M Mahfuzul Haque, Faculty, SIPG, NSU. The virtual national seminar was attended by academics, researchers, primary and secondary school teachers, college administrators, local-level education officials, representatives from the Ministry of Education, Ministry of Planning, journalists, and students.

Blended Learning versus Traditional Classroom

Like many other countries, online learning and teaching have become the new normal amid the pandemic in Bangladesh as the traditional classrooms were closed for a prolonged period. But many teachers and students faced difficulties to join online classes due to the financial crisis, unstable internet connectivity, lack of computers or other devices, lack of proper technical knowledge and outages of electricity. Moreover, students' overall well-being has been affected resulting in psychological and behavioral changes which often manifested in non-conforming behavior and inappropriate activities. In addition, child marriage and child labor saw a rise during the pandemic which also led to an increase in the dropout rate. Following the directives of the government, Bangladesh has implemented multiple strategies so that all students could continue their studies. Through the program '*Amar Ghore Amar School*' (my school in my home), many students got the opportunity to continue learning by watching TV. Moreover, teachers both in urban and rural areas tried their best to keep in touch with the students who are unable to attend online classes. Home assignments have been given to the students through email to make them more engaged in study.

The business session on Blended Learning versus Traditional Classroom was chaired by Professor Salahuddin M. Aminuzzaman, Adviser, SIPG, NSU. Five panelists highlighted the good practices and challenges of the new Blended Learning in contrast to traditional classrooms.

Mr. Quzi Munirul Islam, Additional Secretary (PRL), Ministry of Education, Government of Bangladesh (GoB) spoke on the topic titled, 'COVID -19, Response and Recovery Plan- Prospects and challenges for inclusive quality education.' He pointed out that with the beginning of the pandemic, the government issued directives for online classes from March 28, 2020. He further pointed out that the government has taken many initiatives concerning the overall well-being of the students, especially the adolescents. One of such programs, is the '*Amar Ghore Amar School*' (my school in my home) programme which is being broadcasted on BTV's Sangsad TV Channel for 4 hours every day. This program has been designed for the students of Grade 1 to Grade 10. In addition, remote learning has been initiated in the country's 20400 schools. In order to find out its effectiveness, tracer studies have also been conducted which reveal positive outcomes with the exception of a few challenges arising out of network glitches. Despite the challenges, the government's overall plan to keep the students attached to their schools has been successfully implemented.

Professor Dr. AQM Shafiul Azam, Director, Planning & Development, Directorate of Secondary and Higher Education, Ministry of Education, GoB highlighted 'The Impact of COVID-19 on Secondary Education in Bangladesh'. During his presentation, he highlighted that a three-phased implementation plan in transforming the education sector into a resilient and responsive system has been undertaken. He maintained that the three-phased plan was launched to ensure learning continuity and safety to children, to trigger readiness and support for recovery to reopen in the post-pandemic period and build system resilience by sustaining good practices. In addition, the education sector protects vulnerable groups through emergency response. During this situation, the crisis has developed opportunities for learning and collaboration. During this situation, the crisis has developed opportunities for learning and collaboration. As a result, policymakers are required to use these opportunities to make sustainable changes.



Photo 2: Business Session-1 on 'Blended Learning versus Traditional Classroom'

Ms. Farida Yasmin, Head Mistress, Rangpur Government Girls' School discussed the ongoing Pandemic and its impact on Girls' Education at Secondary Level: Experience from Government Girls' School, Rangpur'. She highlighted some challenges faced by the students. According to her, many students are found to have indulged in social media which led to a wastage of their learning time. Moreover, the rate of child marriage has also increased during the pandemic resulting in the increased dropout rate of girls. The rate of child labour has also increased due to the increase in financial crisis. She opined that despite the challenges faced by both teachers and students, the education sector does its best to encourage students to continue their education through assignments and other tasks during the pandemic.

Ms. Shuli Chakrabarty, Assistant Teacher, Jahanara Smrity Girls' High School, Netrokona district, Mymensingh Division, Bangladesh highlighted the 'Pros and cons of the new online system in contrast to traditional classrooms.' She stated that teachers have built up-close contact with the students who do not have access to computers or smartphones to help them in coping with the online studying system. She also stressed the need for education planners to think out of the box in designing and creating methods and contents of teaching in order to actively engage the students more towards studies during crises like the ongoing pandemic. Apart from this, a blended form of education could be practiced where the students will have the opportunity to have active learning experience.

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Ms. Shuli Chakrabarty, Assistant Teacher, Jahanara Smrity Girls' High School, Netrokona district, Mymensingh

Division, Bangladesh highlighted the 'Pros and cons of the new online system in contrast to traditional classrooms.' She stated that teachers have built up-close contact with the students who do not have access to computers or smartphones to help them in coping with the online studying system. She also stressed the need for education planners to think out of the box in designing and creating methods and contents of teaching in order to actively engage the students more towards studies during crises like the ongoing pandemic. Apart from this, a blended form of education could be practiced where the students will have the opportunity to have active learning experience.

Ms. Shampa Kundu, MPPG Student, SIPG, North South University, Dhaka presented on the findings of her paper on 'Perspectives of continued education in selected non-Government Secondary Schools during the pandemic-an empirical study'. Her research findings point to the frequent outages of electricity in rural areas which pose a major challenge to both teachers as well as students for online classes during the pandemic. Coupled with this, weak Wi-Fi networks also result in poor delivery of online classes. Furthermore, most of the parents living in the rural areas can hardly afford android mobile sets or mobile data for the education of their children. As a mitigation, schools in rural areas are conducting their online classes through their schools' and personal Facebook Pages of teachers where they upload their prerecorded classes and assignments are uploaded for the students.

Infrastructure and Teachers Development

Infrastructure building and teachers' development have been a priority of the government in its development agenda in successive plans and programmes. The Fourth Primary Education Development Plan (PEDP-IV), the Secondary Education Development Project (SEDP), and earlier projects have been supporting both infrastructure and teachers' development along with relevant reforms in primary and secondary education. It may be noted that in 2019-2020³, 4 non-government schools and 3 private colleges have been nationalized. Academic buildings of 1500 selected private colleges, 1218 college buildings have been built and 282 college building constructions are underway. ICT learning has been established in 70 educational institutions. Vertical construction of 332 educational institutions has been completed. A total of 1646 educational institutions have been brought under Monthly Pay Order (MPO), and 622 secondary schools have launched midday meals for the students. Since March 29, 2020, after the pandemic "*Amar ghore amar school*" (my school in my home), has been offering 4 hours of televised recorded class lectures from class IV to Class X. Out of 20499 schools and 4238 colleges, 15676 schools, and 700 colleges have offered online classes during the pandemic. The online platform provides a new context for teachers' training and development. The prolonged nature of the pandemic also gives a context and ground for embedding traditional classrooms with ICT-based training and a new ground for the assessment of students. This has certainly been recognized as the new phase of teacher's development and training across the country.

With the above backdrop, the business session on infrastructure and teachers' development was chaired by Mr. Md. Nazrul Islam Khan, Former Education Secretary, Government of Bangladesh. Five panelists highlighted the good practices that have been introduced and raised some emerging challenges in the backdrop of the pandemic.

Professor Dr. Sanjoy Kumar Adhikary, Member, Bangladesh Accreditation Council in his presentation highlighted the role of infrastructure and teachers' development- its challenges and prospects amid the pandemic. After detailed discussion, it is held that a blended model is necessary for the post-Covid situation and will be continued in the coming days. It is also reckoned that technology could act as a barrier and may inhibit technology use in the classroom. Therefore, it is stressed that the teachers are encouraged and facilitated to impart online education. Earlier efforts on ICT-based training and online platforms of teaching have facilitated the pace of transformation to online teaching which brought continuity in the education sector. It was possible due to the rapid response by the government and all the relevant actors and stakeholders.

Mr. Ismail Hossain, Statistics Officer, Monitoring and Evaluation, Directorate of Primary Education (DPE), Government of Bangladesh highlighted Governmental Initiatives on Infrastructure and Teachers Development in Primary Education with reference to the pre-Covid, ongoing situation, and leveraging change keeping in view of the post-Covid situation. For continued education, given the experience of pandemic, integrating remote learning in the regular education system of the country is essential. He stressed the need to recognize and pay attention to the sustainability mechanism of Remote Learning Platform, and for initiating teacher's professional development on a remote basis. This will also expedite the

Annual Report 2019-2020, Ministry of Education, Government of Bangladesh (www.shed.gov.bd)

3

pace of training and development at their own workplaces and ease the training backlog.

'Investing in education- the development of hardware and software in the education sector', a critical area even prior to Covid 19, has received significant attention in all development projects in the education sector. Mr. Md. Abdullah Al Mamun, Deputy Secretary, Ministry of Education, Government of Bangladesh (GoB) highlighted the importance of this segment of development. He opined that more investment in the development of hardware and software in the education sector will be needed particularly at the rural educational institutions. The government has already set up ICT labs in secondary schools with gradual expansion to all rural schools. It will ease the current deficit in online or distance learning environments. He also highlighted the proper implementation of the 'COVID-19 response and recovery plan' developed by the Ministry of Primary and Mass Education, Government of Bangladesh.



Photo 3: Business session-2 on 'Infrastructure and Teachers Development'

Professor Md. Gulam Faruque, Principal, Dhaka Teachers Training College stressed the need for teachers training and familiarity with the teaching environment on an online platform. He highlighted the current deficit in coverage of teachers training and methods on an online platform and also highlighted the need for introducing new tools of training and learning. He further stressed introduction and use of the world-class Learning Management System (LMS), CANVAS to the teachers and students.

Mr. Bodiuzzaman Ahmed, Secondary Education Officer, Companiganj, Sylhet who represents the higher and secondary education directorate at the level of Upazila has highlighted the ground realities and challenges of continuing education during the pandemic. He highlighted the ongoing infrastructural development projects in Upazila and highlighted the training needs of teachers under the emerging situation. He also stated the challenges of the learning environment, how flash floods, natural hazards, landslides, and network and speed of internet interfere and constrain the learning environment of students at the level of Upazila. Besides low motivation of students and parents also often hinder the pace of continuing education.

The Chair of the session in his closing remarks stressed the need for making the community library popular, and called for an action plan for teacher's development, availability of e-books, YouTube tutorials for students and teachers which may expedite the learning environment and compensate for the learning loss due to the pandemic.

Inequality in Education

Inequality in education persists in all levels and it has its manifestations in many ways such as inequality in access, inequality in learning outcomes, inequality in opportunities due to socio-economic conditions, in rural-urban divide, and which is also further exacerbated by the digital divide. Due to the pandemic, more than 1.5 billion children and youth have been affected with learning loss from disruptions of academic activities. However, the government has embarked on a robust response and recovery plan which led to some form of continuity towards education and includes remote learning programs, through the internet, TV, or radio, or through a combination of these mediums. However, inequity in

access to the internet, data packages, and devices to support remote continuity of education for all learners has become clearly evident (Alasuutari, 2020)⁴. According to the United Nations (2020), the crisis is exacerbating pre-existing education disparities by reducing the opportunities for many of the most vulnerable children, youth, and adults those who are living in poor or rural areas, girls, refugees, persons with disabilities, and forcibly displaced persons to continue their learning.

Given this context of rising inequality in education and digital divide between rural and urban areas of Bangladesh, the session on "Addressing inequality in Education" highlighted the issues of inequality and how this has further widened the gaps of learning.

The panelists of this session are academicians and practitioners who shared their knowledge, expertise, and experience in managing school and teaching during COVID-19 and thereby had practical experience in handling the issue of inequality in Education.

Senior Operations Officer from the World Bank's Dr. Mokhlesur Rahman stressed the need for looking at the pandemic from a global perspective and relate it to the context of Bangladesh and how it is faring with the situation. From a global view, it may be seen that almost all the countries are reopening the schools, and some are going for blended learning. The most important global priority is vaccination and most countries of the world are working on that. The latest development in education in the COVID situation is inequality. Inequality has increased substantially and is happening in Asia, Saudi Arabia, Uganda with the pace of vaccination and reopening of schools. The teacher shortage is another crisis. In Bangladesh, COVID has not only a negative impact but brings positivity. Such as, dropouts from school are happening, besides blended learning has also brought new hopes in continuing education. Botswana has recently reported that learning outcomes have increased, and China has achieved large improvement in their learning instead of losing.

Bangladesh is achieving success in gender parity but such gains are at risk of falling as many girls have dropped out of school during COVID-19 because of early marriage. World Bank has been investing in the higher education sector called 'Higher Education Quality Enhancement Project (HEQEP)' to address quality, which brought about significant improvement in tertiary education governance, and also enabled access to the online platform of education through the Bangladesh Research and Education Network (BdREN) in the higher education sector. Another project of the World Bank is 'Higher Education and Transformation Program' has been initiated as the next-generation program with a regional focus, having a forward-looking approach and dealing with the post-pandemic situation, and inequality in education. He assured that World Bank's assistance will continue for realizing the SDG goal 4.



Photo 4: Business session-3 on 'Inequality in Education'

⁴ Alasuutari, H. (2020, April 20). Tackling inequity in education during and after COVID-19. World Bank Blogs. Retrieved from (https://blogs.worldbank.org/education/tackling-inequity-education-during-and-after-covid-19)

BRAC's school education program has been successful and instrumental in pursuing continued education during the pandemic. Mr. Mofakkharul Islam, Program Manager, Field Operations, BRAC Education Programme highlighted that during this global crisis, BRAC has been playing pioneering role in providing training to all its teachers, also initiated awareness programs for parents especially about the do's and don'ts during the pandemic. The government of Bangladesh did a good job by dedicating and introducing Sangsad TV (Parliament TV) which has provided the platform for virtual learning during the pandemic. Likewise, BRACs introduced as a pilot basis Radio School program which is targeted to the pre-primary students of poorer sections of the society and for those who do not afford smartphones. The school Radio Program targets 5/5 + aged children with developmental activities and early learning. The programmes also intended to assist parents for nurturing their children in a better way focusing on developmental needs. BRAC developed content for community radios and started to broadcast. A total of 11 community radio stations had been used to broadcast the education program. The programs are enjoyable and 90% of parents and children listen to the program. BRAC also introduced the Home School Programme through mobile conference calls from April 2020. BRAC prepared the school reopening guidelines and sent all the teachers and schools. BRAC's program therefore, supplement the national efforts to reach pre-primary children through distance learning.

Experience of inequality can be manifested not only at primary and secondary level but its ramifications can be discerned in every aspect from our early childhood learning to tertiary level. Dr. Shakil Ahmed shared his experience from a public and private university context in Bangladesh and shared his insights based on his long experience having served both public and private universities. He observes that students from leading private universities have relatively infrastructural support, and online platforms compared to the other public universities of the country. He reckons that the issue of inequality must be addressed from a holistic, socio-economic perspective and also incorporate the issue of students who are physically challenged or have impaired vision. By drawing examples of three physically impaired students out of whom was the case of a female student. The plight and sufferings of the vision impaired female student and the learning loss due to the pandemic was highlighted to manifest the deeper issues of inequality in the education sector in our society. He, therefore, raised questions: what is the actual cause of inequality? Is it a failure of public policy or the failure of the market? Can public policy alone solve the problem of inequality particularly from our educational institutions? He stressed the need that public policy alone cannot solve unless we also bring in the market by which the needs of the physically challenged students would be addressed more efficiently. He observes that three layers of inequality can generally persist- inequality will be there if someone is poor, if someone is female, and if someone is physically impaired. So, when we talk about inequality we need to think about different shades of people and their needs. We need to do more research to know how we can solve these problems. We do not have the solution right now but policymakers can think about it. It reflects the wide range of inequality in our society. Therefore, there is a need for more dialogue and discourses with social groups, market and public authorities to address the issue of inequality in our education system.

Ms. Nasira Haque, of Madhupur Govt. Primary School Thakurgaon shared her experience in tackling COVID-19 from the perspective of a Government Primary School Headteacher, in this forum. The school that she represents is remote in Bangladesh and is located in a resource-poor rural setting. As a Head Teacher, she highlighted the challenges in offering continued education during the pandemic and minimising the learning loss among the students.

As a good practice, in order to maintain regular academic activities, school teachers went door to door, contacted the parents and students and followed-up the progress of education. Teachers of the school also communicated with the parents over the phone. However, Students were eagerly waiting to join the school as they couldn't come to school. Parents also shared their concerns about the learning loss and often kept touch with the schoolteachers and enquired about the learning progress of their children. Parents often expressed some relief as the school management committee also followed up on the school operation during the Covid 19 and showed concern for health and hygiene. Teachers were assigned to several areas to assist students in their homes. But offering online classes was constrained by several factors such as the non-availability of a working laptop, absence of mobile data needed for offering classes. From the student's perspective, TV and smartphones helped continue their academic activities. Teachers keep regular contact with the students and parents so that they do not drop out in addition to supervising their academic activities and checking home works.

New Actors in Education

The distance mode of learning is not new. Bangladesh also has a long history of offering distance learning for teachers. However, the pandemic has ushered in a new phase of actors not typically known for their visible contribution in offering distance learning. They are the new emerging actors and their new role has expanded and transformed the nature of learning. The new actors are being represented by the telecom operators, providers and facilitators who offer the distant modes of learning through electronic media and allow learning at home. This has been facilitated by learning materials, real-time class versus relaxed time to attend the class in offline listening to recorded lectures.

This session was chaired by Professor Dr. Abdul Hannan Chowdhury, Dean of Business School, NSU. Four panelists explored and highlighted the role of new actors, such as technology and network providers, and how technology can reduce the gaps in the digital divide and transform the traditional learning environment in academic institutions.

Mr. Mohammad Tawrit, CEO, Bangladesh Research and Education Network (BdREN) highlighted the "Role of Technology in Providing Online Teaching - Prospects and Challenges: Lessons from BdREN". He highlighted how technology has played a major role in providing continued education. He stressed the need for "Blended Model of Pedagogy" to be the future of education and to reap the full benefits of it, both the students and teachers need to change their attitude. He insisted that Faculties are also required to change their mode of lecture delivery. He pointed out that there were some initial challenges in managing and catering to the network demands of the tertiary education system of the country. Under the leadership of BdREN, they have been able to manage the problem of licensing limits and also distribution of the system in a more efficient manner by overcoming the problem with the introduction of software called 'Magic Box' and adapting Proxmox Virtual Environment (Proxmox VE or PVE) which increased the efficiency close to 100% compared to the traditional system. This has enabled the use of the network by a large number of faculty members, students, participants for holding online classes, webinars, video conferences and meetings. From the period of March 2020 to July 2021, online classes were recorded to be 1594035 with a participant of 80755578. BdREN's road map highlights a customized LMS combined with Zoom, moving towards Federated Access, attaining sustainability of the provided solution, and lastly a blended mode of pedagogy which can effectively navigate the transition in a post-pandemic world.



Photo 5: Business session-4 on 'New Actors in Education'

The North South University as a private university is the forerunner in providing online education at the tertiary level. This has been possible due to the existing robust infrastructure, support and patronage of the Board of Trustees and also by the hands-on efficient ICT system of the university. Director of Information Technology, Mr. Mahbubul Haq Sarker, in his presentation "On-line teaching during the pandemic; lessons from the North South University" highlighted how North South University rapidly transformed to the online system from the traditional classroom situation. He highlighted some realities with regard to the role of technologies such as online classes with credible exams and proctoring is going to usher in a new era for educational institutions, the geographical or political boundaries are no longer considered an impediment for receiving a quality education, North South University (NSU) is looking forward to the technology that

will replace the system of proctoring and which will be trusted as a credible system. He also highlighted the role of the IT team, the faculty members and the students who made this transformation possible.

'Bridging the digital divide for SDG 4' by Mr. Noman Ullah Bahar, President, SDG Youth Forum of Bangladesh highlighted the deficit in ICT infrastructure; poverty, traditional mindset, and the high price of data are a few of the major reasons behind the digital divide in Bangladesh. He also pointed out that the online education curriculum in Bangladesh needs to be revised and geared towards practical sessions and application to the real world.

Mr. Hasin Shahed Shad, a student of NSU highlighted the role of IT and mobile hardware for online education. He said that the concept of traditional education has changed radically. So, now, being physically present is not the only option. He emphasized eradicating the disparity in digital education, using Artificial Intelligence (AI) in conducting exams and script checking, and the need for activity-based learning using apps such as EduTech.

Closing Session

The closing session of the two-day virtual National Seminar was held on 19 September 2021. Mr. M A Mannan, MP, Hon'ble Minister, Ministry of Planning, Government of Bangladesh who graced the session of the seminar as the chief guest. Mr. M A Mannan pointed out in his speech that the "Honorable Prime Minister and her government will continue to make efforts so that the digital divide and gaps in education are minimized and each Bangladeshi gets a fair opportunity for education". He hoped that the end of this difficult time is near and the existing inequity in the education sector is eliminated.



Photo 6: Closing Session of the two-day virtual National Seminar

Ms. Alina Reiss, Deputy Director, Political Dialogue Asia Program, KAS appreciated the undertaken initiatives by the Bangladesh government such as a three-phased response plan, utilization of AI, personalized learning system, and use of TV, radio, mobile to facilitate remote learning during the pandemic. She also highlighted the importance of exchanging dialogues and research among different organizations to ensure quality education.

Special Guest of the session Mr. Azim Uddin Ahmed, Chairman, Board of Trustees, North South University stated that the timely policy intervention of the Government of Bangladesh through "COVID 19 Response and Recovery Plan in Education Sector" in 2020 provided a framework of strategies and interventions to cope with the adverse impacts of COVID 19. He also added that the North South University has been able to keep the momentum of academic activities through online learning and is the first among the public and private universities to complete online convocation in Bangladesh.

Professor Atiqul Islam, Vice-Chancellor, North South University was the Chair of the Session. He said that the digital divide was minimized by providing financial and technical support to the students of NSU. This pandemic has led us to some innovations that will remain with us for the upcoming days. He opined that when the university opens, we need to ensure the health protocols and participation of all the students through both online and offline measures.

Dr. M Mahfuzul Haque, Faculty, SIPG, NSU reflected on the key takeaways of the two-day National Seminar. He mentioned that a 'Blended Model of Pedagogy' is the future of education and to reap full benefits of it both students and teachers need to adapt to it. He further added that the deficit in ICT infrastructure, poverty, traditional mindset, and the high price of data are some bottlenecks in persisting the current digital divide in Bangladesh.

The closing session ended with the vote of thanks by Megha Sarmah, Programme Manager -2030 Agenda, Regional Programme Political Dialogue Asia, Konrad Adenauer Stiftung (KAS). Academics, researchers, primary and secondary school teachers, college administrators, local-level education officials, representatives from the Ministry of Education, Ministry of Planning, journalists, and students were present in this two-day-long virtual national seminar.

Best Practices

Blended Learning vs Traditional Classroom

- The Bangladesh Government has responded to the crisis prudently and developed the "Covid 19 Response and Recovery Plan" for the education sector in May 2020. This plan provides a set of options and strategies for the implementation by the school education authorities under the leadership of the Ministry of Primary and Mass Education (MoPME) and the Ministry of Education (MoE) and with the coordinating role of UNICEF.
- Given the uncertainty and prolonged nature of school closure, the Bangladesh Government responded to the crisis urgently and launched 'multi-modal remote learning' content through four platforms such as electronic media platforms, mobile platforms, radio platforms, and internet platforms.
- Remote learning has been launched in 20400 schools across the country to find out its effectiveness, tracer studies have been conducted and it keeps the students attached to their education.
- 'Blended learning and teaching models' have been embedded in both online and offline education systems and have become the new normal.
- The program '*Amar Ghore Amar School*' (my school in my home) offered many students the opportunity to continue learning from home by watching TV as broadcasted on BTV's Sangsad TV Channel for 4 hours every day. This program has been designed for the students of Grade 1 to Grade 10.
- To transform the education sector into a resilient and responsive system; a three-phased plan to address the challenges has been initiated and is being implemented by the government. The purpose of this three-phased plan is to ensure learning continuity and safety to children, readiness, and support for recovery to reopen schools in the post-pandemic period, and to build system resilience by sustaining good practices.

Infrastructure and Teachers Development

- The online platform is being used for the new phase of teachers' development and training across the country to make them tech-savvy and adapt to the new blended model of pedagogy.
- The Fourth Primary Education Development Plan (PEDP-IV), the Secondary Education Development Project (SEDP), and earlier projects have been supporting both infrastructure and teachers' development amid the pandemic along with relevant reforms in primary and secondary education.
- ICT-based training and online platforms of teaching have brought continuity in the education sector. It was possible due to the rapid response by the government and all the relevant actors and stakeholders.
- The government has already set up ICT labs in secondary schools and gradually expanded it to all rural schools to

promote ICT-based learning and to ease the current deficit in online or distance learning environments.

- The new online education system recognized the need to urgently introduce the world-class Learning Management System (LMS), CANVAS to the teachers and students.
- Home assignments have been given to the students through email to make them more engaged in study.
- Schools in rural areas are conducting their online classes through their schools' and personal Facebook Pages in which teachers upload their pre-recorded classes and the students are asked to solve the assignments given.

Inequality in Education

- World Bank projects in the higher education sector like 'Higher Education Quality Enhancement Project (HEQEP)' Higher Education and Transformation Program brought about significant improvement in tertiary education governance which led to positive outcomes amid the pandemic.
- The Bangladesh Research and Education Network (BdREN) has been designed as a high speed dedicated broadband network has enabled access to the online platform of education in the higher education sector and is instrumental in pursuing continued education.
- BRAC Education Programme developed content for community radios and started to broadcast. A total of 11 community radio stations have been used to broadcast the education program. The programs are enjoyable and 90% of parents and children are said to have listened to the program.
- BRAC prepared the reopening guideline and sent it to all the teachers and schools after taking all necessary precautionary measures prior to entry into the class.
- In order to maintain regular academic activities, school teachers went door to door, contacted the parents and students, and followed up on the progress of their learning.
- Teachers at primary and secondary level, both in urban and rural areas tried their best to keep in touch with the students who are unable to attend online classes and help them to cope with the online studying system.
- Teachers at primary and secondary level, keep regular contact with students and parents in person and over the phone in order to reduce drop outs and discontinuity in addition to supervising their academic activities and checking homework.

New Actors in Education

- The new actors like the telecom operators, providers, and facilitators and their roles in particular played a critical role during the pandemic in offering the platform for distant modes of learning through electronic and internet media. This has been facilitated by learning materials, real-time class versus relaxed time to attend the class offline listening to recorded lectures.
- The Bangladesh Research and Education Network (BdREN) used a software called 'Magic Box' and by adapting 'Proxmox Virtual Environment (Proxmox VE or PVE)' which has enabled using the network by a large number of faculty members, students, participants for holding online classes, webinars, video conferences and meetings which has overcome the limitations of licensing.
- Private Universities such as North South University and many other public universities, and colleges gradually switched to the online system of education away from the traditional classroom situation during the pandemic. This has also eased the process of continued learning. Efforts to minimize the gaps of digital divide were also initiated by providing financial and technical support to the students.
- Many activity-based learning apps such as EduTech are being developed which are being used by the students.

Opportunities

- Continuity of education through multi-modal distance learning has ushered in a new possibility which may transcend boundaries and may ease the pace of higher education and learning.
- 'Blended Learning & Teaching Model' could play a key role to guarantee uninterrupted education and remote learning systems in the future. Covid 19 has resulted in enhanced knowledge and awareness of the school children about hygiene and safety protocol.
- Ensure the health protocols and participation of all the students through both online and offline measures.
- It has widened the scope of greater public and private partnership to meet future challenges and to mitigate the learning loss.
- The online platform provides a new context for teachers' training and development.
- The prolonged nature of the pandemic also gives a context and ground for embedding traditional classrooms with ICT-based training and a new ground for the assessment of students.
- New online education systems like the world-class Learning Management System (LMS), CANVAS have brought great opportunities for the teachers and students.
- Online classes with credible exams and proctoring are going to usher in a new era for educational institutions, the geographical or political boundaries are no longer considered an impediment for receiving a quality education for the students.
- Eradicating the disparity in digital education, using Artificial Intelligence (AI) in conducting exams and script checking, and the need for activity-based learning using apps.
- Fully implement the "COVID 19 Response and Recovery Plan in Education Sector" of the Government of Bangladesh that provides a framework of strategies and interventions to cope with the adverse impacts of COVID 19.

Challenges

- Many students are unable to join online classes due to their financial crises.
- Lack of smartphones, computers/laptops or other electronic devices and lack of knowledge to use these hindered both teachers and students to continue with the online education.
- Pandemic has a huge impact on the psychological and behavioral changes of the students.
- The rate of child marriage has also increased during this pandemic resulting in increased number of dropouts.
- The rate of child labour has increased too resulting in increased dropout rates.
- Most of the teachers were not trained about online teaching systems at the outset of the pandemic due to the inadequate number of computers and trainers.
- In rural areas, frequent power or load shedding is very common and creates a major obstacle to attending online classes for both teachers and students.
- Rural areas are less benefited than urban areas due to poor infrastructure and resources.
- Many teachers and students were not accustomed to using a blended model of teaching.
- Students face problems of natural hazards like flash floods, landslides, floods, etc. besides the pandemic.
- The low motivation of students and parents in adjusting to the new system also pose a challenge.
- Inequality has increased between students coming from Urban and rural areas.
- Female students are facing more challenges compared to male students during the pandemic with regard to learning.
- Students with special needs face more challenges compared to normal students.
- Lack of credible and dependable online examination and proctoring systems remain as a major weakness.
- The deficit in ICT infrastructure, poverty, traditional mindset, lack of knowledge and skill in ICT, and the high price of data pose a greater challenge from students' perspective.
- Only a few schools provide online classes as most institutes do not have digitally equipped education facilities.
- Some students in Bangladesh do not have devices such as smartphones. UGC took some initiatives to provide students with interest-free loans to purchase smartphones to overcome the problem associated with participation in online classes.

Recommendations

- A mix of blended education is necessary and continues for the upcoming days such as in-class once a week and online classes can augment the learning and boost up learning progress.
- Teachers training and development to impart online education need to be strengthened.
- Integrating Remote Learning into regular education.
- Developing a sustainability mechanism for Remote Learning Platform.
- More investment in the development of hardware and software in the education sector need to be addressed.
- Teachers' training for the new online education system needs to be strengthened.
- Making community libraries popular can encourage a learning environment.
- Action plan for teachers' development in primary and secondary level will be needed.
- Availability of e-books, YouTube tutorials, etc. for the students and teachers need to be further facilitated.
- Learning from the schooling system designed by BRAC may be integrated.
- Use Community Radio to broadcast recorded class and attendance of students.
- The attitude of both the faculty members and students need to be changed to reap the full benefits of technology in learning.
- Faculties need to adapt themselves to technology and change their presentation style and mode of delivery.
- Capacity improvement of internet service providers, development of telecommunication infrastructure, reducing cost or freeing data for learners, and expanding the access of hardware by making it affordable to the students would be helpful in addressing inequality in the education in the current pandemic situation.
- Government needs to provide incentives for shrinking the digital divide, equipping poor and special-need students with software and adaptive technology, encouraging the establishment of a cyber community and uninterrupted electricity in rural haor, char, and hilly areas.
- AI-based exam and proctoring systems can go a long way to remove limitations of the current online examination systems.
- By using Augmented and Virtual Reality, faculty members may see all students across the globe sitting in one classroom wiping off the grid we are currently seeing in the online class.

Conclusion

The pandemic has taken the world to a new horizon from normal to the new normal situation with new sets of challenges and opportunities. In the arena of education, Bangladesh stands out for its achievement in expanding educational opportunities at the primary, secondary and tertiary levels. Though school enrollment has increased and gender parity has been achieved in both primary and secondary levels, the pandemic has put newer challenges towards inequality and increased dropouts. Crisis creates opportunities for learning and collaboration. From a policy perspective, it offers opportunities to transform the traditional teaching-learning environment and to create sustainable change. Pandemic has ushered a new arena to redefine, shape the scope of blended learning, assessment system and teachers' roles.

Pandemic has marked a huge impact on the psychological and behavioral changes of the students. Many of the students are getting involved in doing various online activities rather than spending time studying. Cyber-crime and cyber harassment have increased as students waste their time in online chatting, creating TikTok videos, watching YouTube and spending time on various social media platforms. These behavioural changes also hampered their family bonding.

Some notable best practices as printed below which are initiated and practiced in Bangladesh may be considered fit to be showcased and shared. These best practices range from BdREN's use of 'magic box' software, teachers' student-centric community-based approach, the multimodal learning tool, TV program '*Amar Ghore Amar School*' (my school in my home), BRAC's Radio School Program, Home School Program through mobile conference call to mention a few. The rapid response strategies and initiatives at macro level by the Bangladesh Government such as a three-phased response plan have been a timely intervention which gave a sense of direction and commitment towards SDG4.

- The Bangladesh Research and Education Network (BdREN) used the software called 'Magic Box' and adapted Proxmox Virtual Environment (Proxmox VE or PVE) that has enabled using the network by a large number of teachers and students to continue with online education.
- The "COVID 19 Response and Recovery Plan in Education Sector" of the Government of Bangladesh that provides a framework of strategies and interventions to cope with the adverse impacts of COVID 19.
- The Government of Bangladesh has launched 'multi-modal remote learning' content through four platforms. These are electronic media platforms, mobile platforms, radio platforms, and internet platforms.
- Remote and 'Blended learning and teaching model' that is a mix of both online and offline education systems has become the new normal.
- Through the program '*Amar Ghore Amar School*' (my school in my home), many students of Grade 1 to Grade 10 got the opportunity to learn easily by watching Sangsad TV Channel for 4 hours every day.
- To transform the education sector into a resilient and responsive system; a three-phased plan to address the challenges has been initiated and being implemented.

The teachers also remained committed to teaching either through online or through community approach. However, for the students coming from marginal groups of society were somehow difficult to reach which our policy perhaps could not focus adequately during the pandemic, and hence should be focused for future targeting the poor and the disadvantaged for ensuring easy accessibility and equity in education. Also, unless a complete inventory of girl or boy students who are unlikely to return to school due to marriage or discontinuity for other reasons are done, the complete assessment of post-Covid mitigation and rehabilitation strategy would be far from being adequate and effective.

The educational institutions (school, college, university) are gradually reopening for physical classes across Bangladesh from 12 September 2021 after eighteen months of closure. The government has embarked on a massive plan to inoculate the students and teachers. Experimental jabs have been already given to school students and it will continue. University students are also being vaccinated as they are returning to their campuses. The experience of dealing with the pandemic will obviously continue to shape the nature, contents, and methods of our education system in the coming days.



South Asian Institute of Policy and Governance (SIPG)

South Asian Institute of Policy and Governance (SIPG) of North South University is the only pioneering institute with a regional focus in Bangladesh. The Institute started its journey in 2008 as a Public Policy and Governance Program (PPG) at North South University intending to cater knowledge in the broader field of policy, governance, and public administration. In 2018, after a decade, the PPG program upgraded to a full-fledged Institute to facilitate the academic program, regional research on various issues related to policy regimes, governance challenges, and discourses in the context of South Asia.

The Institute initiates research, publications, policy briefs, training, and research programs to generate knowledge to strengthen and broaden the intellectual capacity of Bangladesh and regional countries at the policy stage. SIPG is now offering a Master in Public Policy and Governance (MPPG), a 2-year program, and an Executive Masters in Policy and Governance (EMPG), a 1-year program. The masters' programs offered aim to enhance the capacity for young professionals on public policy and governance.



Center for Peace Studies

The South Asian Institute of Policy and Governance (SIPG) also houses an interdisciplinary center known as the Center for Peace Studies (CPS), which aims to facilitate the academic study of peacebuilding and the promotion of a resilient society through evidence-based and empirical research at North South University (NSU). The Center aspires to be a hub of academic research and activity in the areas of conflict studies and peace promotion that will have national, regional and global implications.



Konrad-Adenauer-Stiftung (KAS)

Konrad-Adenauer-Stiftung (KAS) is one of the political foundations of the Federal Republic of Germany. With its international activities and projects, the KAS realizes a substantial contribution to international cooperation and understanding. It is named after the first Chancellor of the Federal Republic of Germany, Konrad Adenauer. Freedom, justice, and solidarity are the basic principles underlying the work of the Konrad-Adenauer-Stiftung (KAS).

Their Regional Programme, Political Dialogue Asia in Singapore organizes international conferences, training programs for members of political parties and civil society organizations as well as political dialogue between parliamentarians and politicians within Asia and between Asia and Europe. The Regional Programme launched a new program called the Konrad Adenauer Sharing Political and Civic Engagement Spaces Programme or KASpaces, in short. Through KASpaces they intend to provide and facilitate a shared engagement space among government officials, political party representatives, and citizen movements/civil society organizations.





North South University

North South University (NSU), the first private university in Bangladesh, was established in 1992. The university is delivering a substantial general education curriculum, has a strategic plan, and has initiated and implemented student instructional learning assessment for degree programs and courses, and is in the process of developing the infrastructure for evaluation of institutional effectiveness for its institutional accreditation.

North South University (NSU) continues to be the only Private University in Bangladesh to be ranked amongst the Global Top 500 in the latest QS Graduate Employability Ranking 2022. NSU has proudly held its undisputed spot as the number one Private University in Bangladesh and has achieved a rank of 301-500. In addition, NSU is consistent across all ranking platforms in QS World University Ranking, Asia Ranking, Subjects rankings (School of Business among the top 350-400 range in the world). NSU continues to solidify its position as the leader in higher education in Bangladesh. NSU continues to make significant strides towards our goal of being in the top 100 in Asia and the top 1000 in the World.







South Asian Institute of Policy and Governance (SIPG) North South University, Bashundhara, Dhaka-1229, Bangladesh SIPG Office: Room 1076, NAC Phone: +880-2-55668200 Ext. 2164/2165 Email: sipg@northsouth.edu



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