

Konrad Adenauer Sharing Political and Civic Engagements Spaces (KASpaces)

Accelerating Progress and Equity in Education



Konrad Adenauer Sharing Political and Civic Engagements Spaces (KASpaces)

Accelerating Progress and Equity in Education

Editors

Christian Echle

Megha Sarmah

Chua Wei Quan



© 2022 individual report authors

Editor-in-Chief: Christian Echle
Editors: Megha Sarmah, Chua Wei Quan

Publisher:
Konrad-Adenauer-Stiftung Ltd
Arc 380
380 Jln Besar
#11-01
Singapore 209000
Registration Number: 201228783N
Tel: (65) 6603-6160
Tel: (65) 6227-8343
Email: Politics.Singapore@kas.de
Website: www.kas.de/singapore

All rights reserved. No part of this book may be reprinted or reproduced or utilised in any form or by any electronic, mechanical or other means, now known or hereafter invented, including photocopying or recording, or in any information storage or retrieval system, without permission from the publisher.

The responsibility for facts and opinions in this publication rests exclusively with the authors and their interpretations do not necessarily reflect the views or the policy of Konrad-Adenauer-Stiftung.

ISBN: 978-981-18-3465-3 (paperback)
978-981-18-3505-6 (ebook)

Design, Layout and Typeset:
Select Books Pte Ltd
65A, Jalan Tenteram
#02-06, St Michael's Industrial Estate
Singapore 328958
Website: www.selectbooks.com.sg

Contents

Preface	5
Bangladesh	9
Bhutan	37
Cambodia	47
India	63
Indonesia	85
Japan	109
Malaysia	129
Nepal	151
Pakistan	167
The Philippines	189
South Korea	207
Taiwan	229
Thailand	269
KASpaces Regional Roundtable	301
Partner Organisations	315



Preface

Since the introduction of the Sustainable Development Goals in 2015, most countries in Asia have made a fair amount of progress in improving accessibility to and reducing inequality in education, in line with SDG number 4. This progress has been negated by the Covid-19 pandemic, which has led to the closure of schools and children having to stay at home without the adequate capacity and resources to ensure continuity in their education. To counter this, governments in Asia have turned to remote and blended learning via digital learning tools to ensure that students do not suffer from learning losses. However, challenges still arise from these new approaches. Not all countries or local governments and education institutions came prepared with the right digital infrastructure and learning tools when the pandemic struck. Both students and teachers faced digital literacy challenges in striving to be ready to take advantage of what remote and blended learning had to offer. This was exacerbated by the rural-urban digital divide, with remote or less developed areas often adversely affected by the lack of stable internet access and electricity supply. Disadvantaged and marginalised groups are in danger of slipping further behind with insufficient support.

From addressing these challenges, best practices emerged and lessons were learnt. These include the need for continuous teacher capacity-building, caring for vulnerable groups, and making full use of various tools such as Ed-Tech as well as radio and television broadcasting. Institutional arrangements also matter, as the pandemic has led to calls for local governments and education institutions to have more autonomy and empowerment to implement innovative education arrangements during crises. New actors in education, such as civil society organisations, social enterprises, and telecoms and internet service providers, have surfaced during this crisis. This emphasises the need for collaborations with existing and new partners to accelerate the accessible and equal provision of education for all to ensure that no one is left behind.

All democratic actors have roles to play in society, but they should not be working in silos if we want to help the government achieve the SDGs. 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 universal framework at the local level.

Education is key to the global integrated framework of the Sustainable Development Goals. Therefore, Konrad Adenauer Stiftung, through the KASpaces programme, facilitates an exchange between stakeholders from different countries in the region. In coming together and sharing experiences and best practices which are used in facing today's challenges, they can support each other in ensuring that education is provided to all, not only during times of challenges but also in the 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 integrate the systems in order to produce more credible and effective models for the future as a whole.

We are very pleased to present this collection of reports of our thirteen national webinars. These reports showcase the best practices of the thirteen countries as well as the challenges they have overcome. They reflect the perspectives of various stakeholders, including teachers, policymakers, IT companies and students.

We would like to thank all our twenty-six partners for joining us in this endeavour to contribute to the achievement of SDG4 in Asia.



Christian Echle
Director
Political Dialogue Asia, Singapore







Bangladesh

South Asian Institute of Policy and
Governance, North South University

Introduction

There can be no denial that improvements 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 economic growth, lowering poverty, and improving the human capital over the years. This has been possible because of the adoption of 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 with wider coverage in both urban and rural areas. While the initial focus was on access and outreach, it has now shifted to improving quality, increasing access to and availability of both technical and vocational education, improving information and communications technology (ICT) and reducing the dropout rate. Consequently, there has been a marked improvement in the overall education coverage in the country through an increased literacy rate, and 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 implementation under Education Policy 2010. As Bangladesh aspires to graduate to become an upper middle-income country by 2031, the perspective plan of 2041 places enormous challenges on moving beyond literacy and enrolment, 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 is that Labour Force Survey 2016-2017 notes that only 31 percent of the population aged 15 years and above does not have primary education. In the case of urban literacy, it is low, only 22%, compared to rural literacy, which is 34.8 percent. The gender gap persists

with the literacy rate; however, concerning enrolment in both primary and secondary education, gender parity has been achieved. Enrolment in science subjects at higher secondary level is observed to be low. Likewise, in the *Madrasha* stream, the quality of education remains a key concern.

At the higher education level, there has been 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 the number of students choosing the 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 to the absence of industry-academia collaboration, which also reinforces the existing weaknesses of the education system of the country.

The Bangladesh constitution commits itself to 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 *Madrasha* and English medium schools, operate in the country, thereby producing varying standards of educational outputs with varying learning outcomes. This has led to far-reaching effects on human capital, particularly against the backdrop of public and private provisions in delivering public goods such as education.

Nevertheless, affirming the commitments and challenges in realising the targets of SDG 4, Bangladesh has been pursuing its development goals, focusing on the development of human capital in her successive five-year plans. Realising the fact that by building human capital, improvements in education, imparting of skills, training, wellbeing in health and other human development indicators, and productive capacity of individuals are possible, investments in education, such as building infrastructure, expanding the education system with respect to its outreach to different sections of society, and focusing on the quality of education have been persistently sustained in the development agenda. Therefore, in order to seize the capacity created by market opportunities by individuals, Bangladesh has been putting topmost priority on education, particularly in spreading the opportunities in education to all, improving the access to and quality in education, improving enrolment at the primary and secondary levels, reducing the dropout rate at the secondary level, expanding technical and vocational education, and ensuring quality at the higher education levels in the country.

Education Governance

The education system in Bangladesh is structured and managed under two administrative divisions under the Ministry of Education and Ministry of Primary and Mass Education. The ministries and divisions are responsible for making public policies and for overall implementation of the allocated responsibilities within their jurisdictions. The ministries and divisions have attached departments and directorates under their jurisdictions as well as several autonomous bodies.

The Ministry of Education was further bifurcated into two divisions, namely Secondary and Higher Education and Technical and Madrasha, in 2016. The Secondary and Higher Education division formulates and implements public policies and is involved in planning, monitoring, evaluating, and executing plans and programmes in secondary and higher education. The division of Secondary and Higher Education is responsible for the management and supervision of institutions under its control. However, the governmental policies in education highlight and uphold the following principles during formulation.

- Provide values-based education
- Emphasise job-oriented and needs-based education
- Modernise the curriculum
- Ensure efficient management at all levels
- Strengthen information and communications technology
- Ensure teacher effectiveness at all levels
- Ensure gender parity at all levels of education

Education Expenditure

When it comes to education and technology, only 12.3 percent of the overall development expenditure is allocated, 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 programme, and sti-

¹ Seventh Five Year Plan of Bangladesh (2016-2020). Government of Bangladesh.

pend programme (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-school teachers' training institutions have been built. Likewise, for the expansion of ICT, over 3,000 ICT labs have been built in secondary schools.

Overview of 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 enrolment in pre-primary and early childhood learning have been made possible, raising it to 1.7 million in 2018 from 0.9 million in 2010. However, the limited number of teachers trained in pedagogy available for pre-primary and early childhood education remains a major challenge.

Progress in Primary Education

Primary education includes grade 1 to grade 5. At present, there are approximately 134,147 primary schools, which include government, non-government, *madrasha*, and NGO-managed primary schools. The enrolment rate of 97.9% at the primary level needs to be further accelerated to 100%. Gender parity at the primary level has been achieved. The dropout rate has 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 349,000 in 2018, from 215,000 in 2012. Therefore, this resulted in a further reduction of the teacher-student ratio to 25 in 2018, from 42 in 2012. In order to strengthen and improve the quality in primary education, major steps have been taken with regard to teacher recruitment and training, upgrading of textbooks, introduction of ICT, and improvement of school facilities, among others. To further improve and sustain the quality of primary education, Primary Education Development Programme (PEDP-IV) was launched in 2018. To reduce dropout and ensure continuity in education, since 2002, the government has also introduced the Primary Education Stipend Project, which channels a fixed monthly stipend to the mothers of school-going children. Distributions of free textbooks, school meals programmes, etc. are some interventions that attempt to deal with equity and meet the nutritional needs of school children. In terms of teachers' training, PEDP-IV also catered for head teachers' training. Around 60,000 teachers were given leadership training and 35,000 teachers were given training on ICT.

Modern computer laboratories have been built in 50 teachers' training institutes, which offer the platform for ICT training for teachers in primary education.

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

Non-Formal and Adult Literacy

Non-formal education (NFE) has been initiated since the independence of the country to increase 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 an ambitious plan targeting an estimated 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 20,000 institutions are dedicated to offering secondary education for 10.3 million students and the number of teachers is around 246,845 in 2019. Gender parity has been achieved; out of 10.5 million students, 5.6 million are girls. It is claimed that the female stipend programmes, namely the Female Secondary School Assistance Programme (FSSAP) I and II, and the Higher Secondary Female Stipend Project (HSFSP), have played key roles in promoting greater enrolment and educational continuity of female students. Several projects have been launched by the Directorate of Secondary and Higher Secondary (DSHE), focusing on educational quality and teachers' training. It is to be noted that although 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 terms of low enrolment in classes and in particular in the low number of

participants in science subjects. The lack of trained teachers, perceived difficulty of science subjects and also poor job market are often claimed as reasons for the low share of science students in higher secondary education.

Madrasha Education

The number of *madrashas* (religious schools,) both registered and non-registered, has increased from 9,200 and 14,000 respectively, which cater for 3.1 and 3.8 school-going children in the recent past. Most of the *madrashas* are rural based. The educational quality and relevance to the job market have been sources of major concern in *madrasha* education when compared with the mainstream education system of the country. Government efforts have been implemented to put greater focus and attention on revamping and modernising the *madrasha* curriculum to make it more relevant and comparable to that of the mainstream education system of the country.

Progress in Higher Education

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

Progress with Skill Development

Expansion and modernisation of technical and vocational education (TVET) to build a skilled workforce has been a major focus of the government's education policy. It is realised that for Bangladesh, to graduate to become 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 from 1 percent in 2009. The National Education Policy of 2010 and the National Skills Development Policy of 2011 recognise the need for improvements in the TVET stream of education and to address 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 is reflected by the Education for All policy, adopting universal education up to grade 8, providing a stipend programme for inclusion and greater participation and continuity of girls in secondary education, and expanding 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 educational institutions on 18 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 was 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 school education authorities.

The education system of Bangladesh constitutes a large system, having 38.6 million students, with 3.6 million students in pre-primary, 18 million in primary, 13 million in secondary and 4 million in tertiary education. With the pandemic, the immediate fallout was marked with the closure of educational institutions in 2020. Therefore, the education of about 38.6 million students 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 were postponed for that academic year, and the studies of students have been halted or disrupted.

Table 1: Number of students enrolled at various educational levels.

All Categories: Government and others			
Level	Total	Girls	Boys
Pre-primary	3,578,384	1,785,825	1,792,559
Primary	17,338,100	8,799,033	8,539,067
Secondary	12,885,346	6,951,936	5,933,410
Higher Secondary	2,984,474	1,401,910	1,582,564
Tertiary	3,293,381	13,444,957	1,848,424
Diploma	310,334	54,976	255,358
Non-Formal	1,500,000	750,000	750,000
Total	41,890,019	21,088,637	20,801,382

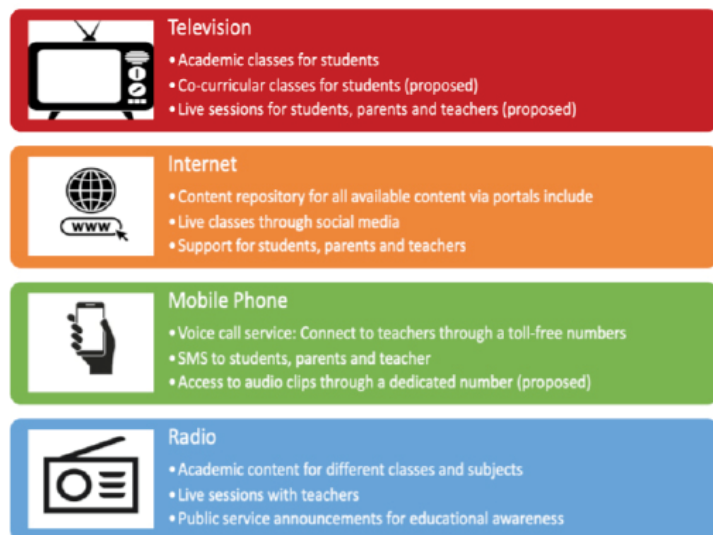
Source: Shikkhya Songlap (2020).

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 assessments, inequality in learning, increase in dropouts resulting in more out-of-school children, decreased 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 Covid-19 is the discontinuity from learning of around 36.8 million students. The second chance education scheme with a target of reaching around 1,000,000 out-of-school students has been disrupted due to the closure of the schools. In addition, the youth and adult literacy programmes of the government and non-government organisations (NGOs) have also been suspended, which will also have a bearing on the literacy rate, which had seen improvements prior to Covid-19.²

Given the uncertainty and prolonged nature of school closures, 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.

² Bangladesh Ministry of Education. Covid-19 response and recovery plan. May 2020. Government of Bangladesh.

Figure 1: Multimodal response to Covid-19 in Bangladesh.



Source: Shikkhya Songlap (2020).

Campaign for Education (CAMPE) observes that the impact of Covid-19 on school closure led to trauma and psychological challenges, risking learning discontinuity. The marginalised groups 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 because of school closure. As such, CAMPE recommended that the education budget should be enhanced by 15% and to plan for a three-year (2020-2023) period for recovery and to deal with the disruption of the academic calendar.

Other initiatives

The other initiatives undertaken amid the pandemic for continuing education is mentioned below according to Shikkhya Songlap 2020.

Mukto Paath e-learning Platform

Total learners: 10,00,000; total classes: 180+; total courses: 180+; and total partners: 100+.

Virtual Class Synchronous LMS for Tertiary Education and Training

Implemented by Ministry of Education on 23 June 2020.

Total Coverage: 47 institutions (34 universities or colleges, 13 training institutions). A total of 2,859+ virtual classes were organised, 570+ teachers were connected and trained, 5,900+ students/learners were connected, and 2,850 virtual classes were organised.

Learning Training Courses for Teachers

A total of 30+ courses were organised, having 278,000+ registered teachers.

Teachers Portal: A Network for Teachers Professional Development

The total number of teachers registered was 467,665+.

Content: 252,000+.

Model Content: 1,000+.

Blog: 180,000.

110,150 live classes were recorded and 10,000,000 learners benefited.

However, a couple of challenges became apparent. For example, how to reach the whole of the student population, how to reach the younger children, how to operate in a low-tech environment in the primary education sector, how to deal with resource constraints and how to monitor and assess remote learning initiatives. Therefore, several options were devised on the basis of short-, medium- and long-term perspectives. While these strategies were being conceived, a 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 responses and sustaining good practices.

Table 2: Education continuity through digital media.

Platform	Number of classes	Learner Coverage
TV <i>Sangshad</i> Education skills	2,500+	27 million
Facebook live and YouTube	90,000+	1 million each day
Community Radio based class	200+	500,000 each day

Source: Shikkhya Songlap (2020).

Best Practices Discussed at the Virtual National Seminar

One of the best practices in dealing with the pandemic was to allow continuity of students' education through multi-modal distance learning during school closures. However, children from the marginalised groups of the society remained hard to reach for various reasons.

Studies also suggest that Covid-19 has resulted in enhanced knowledge and awareness among school children about hygiene and safety protocols. 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.



At Mirpur Girls Ideal, temperature is being measured at the entrance. Students and teachers are all required to maintain the proper health protocols.

The virtual National Seminar titled "Accelerating Progress and Equity in Education during the Pandemic in Bangladesh", held on 18-19 September 2021, was organised 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. There were four business sessions in this national seminar, focusing respectively on the thematic areas of blended education, infrastructure 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, Government of Bangladesh. He emphasised the role of educational institutions in producing qualified, tech-savvy, and skilled human resources for a knowledge-based society to meet the challenges and demands of the fourth industrial revolution. He also lauded the national seminar as being very timely and hoped that the ideas and experiences that would be shared in the virtual seminar would help to accelerate progress in Bangladesh’s educational sector amid the pandemic. Dr. Shamsul Alam also opined that educational management needed to be more transparent, inclusive and of international standards so as to be able to implement SDG 4, i.e., quality education in Bangladesh.

“The students of our country have suffered the most during the pandemic,” said Special Guest Professor Dr. Muhammed Alamgir, Member, University Grants Commission of Bangladesh, at the seminar. He added that extensive research in education, particularly at the tertiary level, was a must and that 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 sectors) to figure out ways to break the cycle so as to produce good-quality and employable graduates. He also pointed towards the inefficiency in resource utilisation in the education sector, and called for a shift in mindsets 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, Konrad Adenauer Stiftung. The inaugural pro-

gramme 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 would 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. 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 among the participants.

Blended Learning versus Traditional Classroom

Online learning and teaching have become the new normal amid the pandemic as traditional classrooms were closed for a prolonged period of time. But many teachers and students are facing difficulties to join online classes due to financial constraints, unstable internet connectivity, lack of computers or other digital devices, lack of proper technical knowledge and outages of electricity. Moreover, students' overall well-being have been affected as they were not physically attending school. These resulted in psychological and behavioural changes in the students that make them do unpleasant activities. In addition, the rates of child marriage and child labour have also increased, which ultimately raised the dropout rate during the pandemic.

The education sector, following the directives of the government of Bangladesh, implemented multiple strategies so that all students could continue their studies. Through the programme *Amar Ghore Amar School* (my school in my home), many students got the opportunity to learn easily by watching TV. Moreover, teachers, both in urban and rural areas, tried their best to keep in touch with students who were 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, spoke on the topic titled "Covid-19, Response and Recovery Plan - Prospects and challenges for inclusive quality education." He discussed the government directives for online classes that had started on 28 March 2020. The government has taken many initiatives concerning the overall well-being of stu-

dents, especially the adolescents. This includes the programme *Amar Ghore Amar School* (my school in my home), which is being broadcasted on BTV's Sangsad TV Channel for four hours every day. This programme has been designed for the students of grade 1 to grade 10. In addition, remote learning has been started in 20,400 schools and to find out its effectiveness, tracer studies have been conducted. The results reported in the tracer studies were mostly positive but there were a few difficulties encountered due to network glitches. Although there were some difficulties, the overall motive of the government to keep students attached to their schools has been successfully implemented.

Professor Dr. A. Q. M. Shafiul Azam, Director, Planning & Development, Directorate of Secondary and Higher Education, Ministry of Education, Government of Bangladesh, spoke on "The Impact of Covid-19 on Secondary Education in Bangladesh". He said that in order to transform the education sector into a resilient and responsive system, a three-phased plan to address the challenges had been implemented. The purpose of this three-phased plan was to ensure learning continuity and safety for children, ensure readiness and support for recovery to re-open in the post-pandemic period and build system resilience by sustaining good practices. In addition, the education sector protects vulnerable groups through emergency responses. During this situation, it can be said that the crisis has created opportunities for learning and collaboration. As a result, policymakers should 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, spoke on "The ongoing Pandemic and its impact on Girls' Education at Secondary Level: Expe-

rience from Government Girls' School, Rangpur". She highlighted some challenges faced by students. Many students are wasting time on social media. 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 increases in financial difficulties. She opined that despite the challenges faced by both teachers and students, the education sector did its best to encourage students to continue their education through assignments and other tasks.

Ms Shuli Chakrabarty, Assistant Teacher, Jahanara Smrity Girls' High School, Netrokona district, Mymensingh Division, Bangladesh, spoke on "Pros and cons of the new online system in contrast to traditional classrooms". She stated that teachers had built up close contact with students who did not have access to computers or smartphones to help them to cope with the online studying system. She also suggested that to engage students to study more, the education sector needed to think out of the box in designing and creating methods and contents of teaching. Consequently, blended methods of education could be started to boost the whole learning process.

Ms Shampa Kundu, MPPG Student, SIPG, North South University, Dhaka, presented on "Perspectives on continued education in selected non-Government Secondary Schools during the pandemic – an empirical study". Her research findings stated that in the rural areas, frequent outages of electricity were a regular issue and that this had led to a major challenge to the conduct of online classes for both teachers and students. Moreover, the Wi-Fi network was also very poor in rural areas. Furthermore, most of the parents living in the rural areas were financially unstable to buy an android mobile set or mobile data set for their children. As a consequence of these major challenges, schools in rural areas were conducting their online classes through their schools' and personal Facebook pages, in which teachers upload their pre-recorded classes and students are asked to solve the assignments given.

Infrastructure and Teachers' Development

Infrastructure building and teachers' development have been a priority of the government in its development agenda. 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, four non-government schools and three private colleges were nationalised. The academic buildings of 1,500 selected private colleges and 1,218 colleges have been built and 282 college building constructions are underway. ICT learning has been established in 70 educational institutions. The vertical construction of 332 educational institutions has been completed. 1,646 educational institutions have been brought under Monthly Pay Order (MPO), and 622 secondary schools have launched midday meals. Since 29 March 2020, *Amar Ghore Amar School* (my school in my home) has been offering four hours of televised recorded class lectures for class 4 to class 10. Out of 20,499 schools and 4,238 colleges, 15,676 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 ICT-based training in traditional classrooms as well as a new ground for the assessment of students. This has certainly been recognised as a new phase of teachers' development and training across the country.

The business session on infrastructure and teachers' development was chaired by Mr. Md. Nazrul Islam Khan, Former Secretary, Government of Bangladesh. Five panellists highlighted the good practices that have been introduced and raised some emerging challenges against 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, and the associated challenges and prospects amid the pandemic. After a detailed discussion, it was held that a blended model was necessary for the post-Covid-19 situation and should be continued in the coming days. It was also reckoned that technology could act as a barrier and might inhibit technology use in the classroom. Therefore, it was stressed that teachers should be trained to be tech-savvy so as to be able to impart online education. Meanwhile, ICT-based training and the online platform 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.

Mr. Ismail Hossain, Statistics Officer, Monitoring and Evaluation, Directorate of Primary Education (DPE), Government of Bangladesh, highlighted the governmental initiatives on infrastructure and teachers' development in primary education with reference to the pre-Covid-19 period and the ongoing situation, and the need to leverage on changes, keeping in view the post-Covid-19 situation. For continued

education, it was suggested that remote learning should be embedded in the regular education system of the country, and that it was important to pay attention to the sustainability mechanism for the remote learning platform, and for remote teachers' professional development to be initiated and continued. This would also ease the training backlog and also ease training at their workplaces.

“Investing in education – the development of hardware and software in education sector”, a critical area even prior to Covid-19, received significant attention in all development projects in the education sector. Mr. Md. Abdullah Al Mamun, Deputy Secretary, Ministry of Education, Government of Bangladesh, highlighted the importance of this segment of development. He opined that more investment in the development of hardware and software in the education sector would be needed, particularly at rural educational institutions. The government has already set up ICT labs in secondary schools and gradually all rural schools, in particular, should come under the purview of ICT labs for ICT-based learning. This would ease the current deficit in the online and 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.

Photo 3: Business session 2 on “Infrastructure and Teachers Development”.



Professor Md. Gulam Faruque, Principal, Dhaka Teachers Training College, presented the scenario of assessing the training needs of teachers and covered the training methods and practices in introducing new tools of learning. He stressed the need for teachers' training for the new online education system and the introduction of the world-class learning management system (LMS) CANVAS to teachers and students, and its effective use thereafter.

Mr. Bodiuzzaman Ahmed, Secondary Education Officer, Companiganj, Sylhet, who represents the higher and secondary education directorate at the level of Upa-

zila, highlighted the ground realities and challenges of continuing education during the pandemic. He highlighted the ongoing infrastructural development projects in Upazila as well as the training needs of teachers under the emerging situation. He also elaborated on the challenges of the learning environment: how flash floods, natural hazards, landslides, and speed of the internet network interfere and constrain the learning environment of students at the level of Upazila. Besides the low motivation of students, parents also often hinder the pace of continuing education.

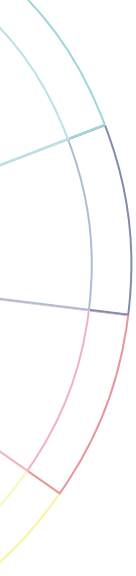
The chair of the session in his closing remarks stressed the need for making the community library popular, and called for an action plan for teacher's development, availability of e-books, and YouTube tutorials for students and teachers, all of which may expedite the learning process and compensate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

Inequality in Education

Inequality in education persists at all levels and it has its manifestations in many ways, such as inequality in access, inequality in learning outcomes, and inequality in opportunities due to socio-economic conditions and the rural-urban divide. Inequality 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 has led to some form of continuity towards education. This includes remote learning programmes, carried out 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 the remote continuity of education for all learners has become clearly evident.⁴ According to the United Nations, the crisis is exacerbating pre-existing education disparities by reducing the opportunities for many of the most vulnerable children, youth, and adults, such as those who are living in poor or rural areas, girls, refugees, persons with disabilities, and forcibly displaced persons, to continue their learning.

Given this rising inequality in education and the digital divide between the 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.

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



The panellists of this session were academicians and practitioners who shared their knowledge, expertise, and experience in managing schools and teaching during Covid-19 and who therefore had practical experience in handling the issue of inequality in education.

Senior Operations Officer from the World Bank Dr. Mokhlesur Rahman stressed the need for looking at the pandemic from a global perspective and then compared how Bangladesh had been faring with the situation. From a global view, it may be seen that almost all the countries are re-opening their 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-19 situation is inequality. Inequality has increased substantially in Asia, Saudi Arabia, and Uganda with the pace of vaccination and re-opening of schools. The teacher shortage is another crisis. In Bangladesh, Covid-19 has not only had a negative impact but also brought positivity. Due to Covid-19, the national seminar was organised virtually and such virtual seminars are happening frequently. Dropout from school is happening alongside blended learning. Botswana recently reported that learning outcomes have increased, and China has achieved large improvements in their learning instead of losing out.

Bangladesh is achieving success in gender parity but many girls have also dropped out of school during the Covid-19 pandemic because of early marriage. The World Bank was managing a large-scale project in the higher education sector called “Higher Education Quality Enhancement Project (HEQEP)” to address educational quality. It brought about significant improvements in tertiary education governance, and also enabled access to the online platform of education through the Bangladesh Educational Research Network (BdREN) in the higher education sector. Another project of the World Bank is “Higher Education and Transformation Programme”. It is the next-generation programme, with a regional focus that will have a forward-looking approach and deal with the post-pandemic situation, coping with inequality and having a futuristic approach. He assured that the World Bank’s assistance would continue for the realisation of SDG 4.

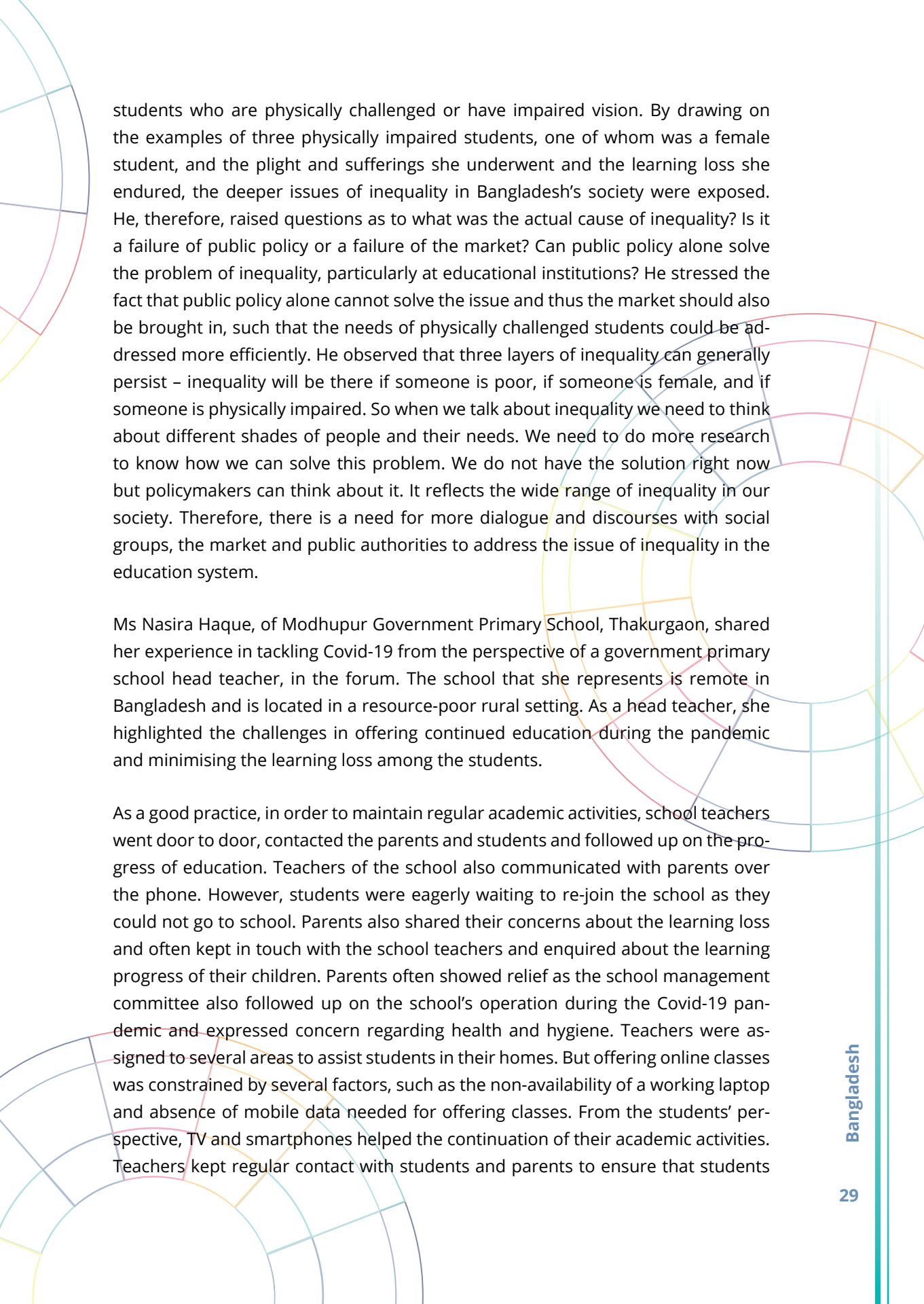
Photo 4: Business session 3 on “Inequality in Education”.



BRAC’s school education programme has been successful and in this pandemic situation, they have been instrumental in pursuing continued education. Mr. Mofakharul Islam, Programme Manager, Field Operations, BRAC Education Programme, highlighted BRAC’s response in providing training to all its teachers during the global crisis, and its interactions with parents, especially about the dos and don’ts. The government of Bangladesh did a good job by introducing Sangsad TV (Parliament TV) as well as a radio programme but the beneficiaries of BRAC are mostly those from poor backgrounds who do not have smartphones. They use feature phones; therefore, BRAC started to make conference calls to students. But this did not go well with pre-primary school students as, rather than listen carefully, they would start to play with their phones. As a result, BRAC developed content for community radios and started to broadcast. A total of 11 community radio stations have been used to broadcast education programmes. The programmes are enjoyable and 90% of parents and children listen to the programmes. BRAC prepared the re-opening guidelines and sent them to all the teachers and schools. Before that, students and teachers are all vaccinated. All necessary precautionary measures had been taken prior to entry into the classes.

The experience and ramifications of inequality can be manifested not only at primary and secondary levels but also discerned in every aspect, from early childhood learning to tertiary level.

Dr. Shakil Ahmed shared his insights based on his long experience having served both public and private universities in Bangladesh. He observed that students from leading private universities have relatively stronger infrastructural support and online platforms compared to those from the public universities in the country. He reckoned that the issue of inequality must be addressed from a holistic, socio-economic perspective and that the approach should also incorporate the issue of



students who are physically challenged or have impaired vision. By drawing on the examples of three physically impaired students, one of whom was a female student, and the plight and sufferings she underwent and the learning loss she endured, the deeper issues of inequality in Bangladesh's society were exposed. He, therefore, raised questions as to what was the actual cause of inequality? Is it a failure of public policy or a failure of the market? Can public policy alone solve the problem of inequality, particularly at educational institutions? He stressed the fact that public policy alone cannot solve the issue and thus the market should also be brought in, such that the needs of physically challenged students could be addressed more efficiently. He observed 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 this problem. 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, the market and public authorities to address the issue of inequality in the education system.

Ms Nasira Haque, of Modhupur Government Primary School, Thakurgaon, shared her experience in tackling Covid-19 from the perspective of a government primary school head teacher, in the 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 on the progress of education. Teachers of the school also communicated with parents over the phone. However, students were eagerly waiting to re-join the school as they could not go to school. Parents also shared their concerns about the learning loss and often kept in touch with the school teachers and enquired about the learning progress of their children. Parents often showed relief as the school management committee also followed up on the school's operation during the Covid-19 pandemic and expressed concern regarding 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 and absence of mobile data needed for offering classes. From the students' perspective, TV and smartphones helped the continuation of their academic activities. Teachers kept regular contact with students and parents to ensure that students

did not drop out, in addition to supervising their academic activities and checking their homework.

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 array of actors not typically known for their visible contribution in offering distance learning. They are the new emerging actors; their role has been expanded and they have transformed the nature of learning. The new actors are represented by telecoms operators, providers and facilitators who offer distant modes of learning through the electronic media and allow learning at home. This has been facilitated by learning materials, real-time classes, as well as attending classes offline, listening to recorded lectures.

This session was chaired by Professor Dr. Abdul Hannan Chowdhury, Dean of Business School, NSU. Four panellists 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.



At Mirpur Girls Ideal, temperature is being measured at the entrance. Students and teachers are all required to maintain the proper health protocols.

Mr. Mohammad Tawrit, CEO, Bangladesh Educational Research Network, spoke on the “Role of Technology in Providing Online Teaching – Prospects and Challenges: Lessons from BdREN”. He highlighted how technology had played a major role in providing continued education. He highlighted the need for the “Blended Model of Pedagogy” to be the future of education and that in order to reap its full benefits, both students and teachers needed to change their attitudes. He insisted that faculties are also required to change their mode of lecture delivery. He pointed out the initial challenge in catering to the network needs 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 the distribution of the system in a more efficient manner, by overcoming the problem with the introduction of a software called Magic Box and adapting Proxmox, which increased the efficiency to 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.

Photo 5: Business session 4 on “New Actors in Education”.



The North South University, a private university, is the forerunner in providing online education at the tertiary level. This has been possible due to the existing robust infrastructure, the support and patronage of the Board of Trustees and 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 how online classes with credible exams and proctoring is going to usher in a new era for educational institutions, and how geographical or political boundaries are no longer considered an impediment for receiving a quality education. North South University 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, a traditional mindset, and the high price of data as a few of the major reasons behind the digital divide in Bangladesh. He also pointed out that the online educa-

tion curriculum in Bangladesh needed to be revised and geared towards practical sessions and application to learning.

Mr. Hasin Shahed Shad, a student at 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 emphasised eradicating the disparity in digital education, using Artificial Intelligence (AI) in conducting examinations and script checking, and the need for activity-based learning using apps such as EduTech.

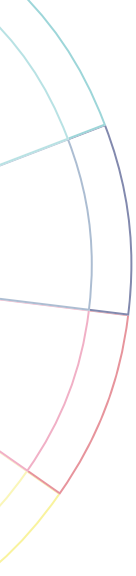
Conclusion

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, graced the session of the seminar as the chief guest. "Honourable Prime Minister and her government will continue to make efforts so that the digital divide and gaps in education are minimised and each Bangladeshi gets a fair opportunity to education," said Mr. Mannan. He said that he hoped that the end of the difficult time was near and that the existing inequity in the education sector could be eliminated.

Photo 6: Closing Session of the two-day virtual national seminar.



Ms Alina Reiss, Deputy Director, Political Dialogue Asia Programme, KAS, said that she appreciated the initiatives undertaken by the Bangladesh government, such as the three-phase response plan, utilisation of AI, personalised learning system, and use of TV, radio, and mobile to facilitate remote learning during the pandemic. She



also highlighted the importance of exchanging dialogues and research among different organisations to ensure quality education.

The 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 North South University had been able to keep the momentum of academic activities through online learning and that it was the first among the public and private universities in Bangladesh to complete an online convocation.

Professor Atiqul Islam, Vice-Chancellor, North South University, was the chair of the session. He said that the digital divide was minimised by providing financial and technical support to the students of NSU, and that the pandemic had led to some innovations that would remain with them for the upcoming days. He opined that when the university re-opened, they would 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” was the future of education and that to reap its full benefits, both students and teachers needed to adapt to it. He further added that the deficit in ICT infrastructure, poverty, a traditional mindset, and the high price of data were a few of the major reasons behind the 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. 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 during the two-day virtual national seminar.

List of abbreviations

BdREN	Bangladesh Educational Research 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
NFE	Non-Formal Education
PEDP	Primary Education Development Program
PECE	Primary Education Completion Examination
PTI	Primary Teachers' Training Institute
SEDP	Secondary Education Development Project
TVET	Technical and Vocational Education and Training
UMIC	Upper Middle-Income Country
UGC	University Grants Commission







Bhutan

ICLEI – Local Governments for Sustainability, South Asia
Royal University of Bhutan

1. Introduction and Overview of Education

Bhutan is situated on the southern slopes of the eastern Himalayas, locked between China to the north and India to the south and comprising a land area of 38,394 km¹. All of the development policies and activities of the Royal Government of Bhutan (RGoB) and education in Bhutan are guided by the concept and philosophy of Gross National Happiness (GNH). Education has played a central role in the social, economic, political, cultural, intellectual and environmental development of the country, giving it a distinct identity as a small, peaceful, progressive and happy nation. The formal education system has expanded since the First Five Year Plan (FYP), promulgated in 1961, to address basic educational needs and develop the human resources required for the socio-economic development of the country.

The RGoB continues to accord high importance to education as an engine of growth in the nation-building process. The past millennium of modern education has enhanced access to education and demonstrated its immense benefit to the country in terms of producing a generation of nation builders. Despite these achievements, the system still faces several challenges as it seeks to further enhance educational access, quality, equity and system efficiency at all levels of the education system².

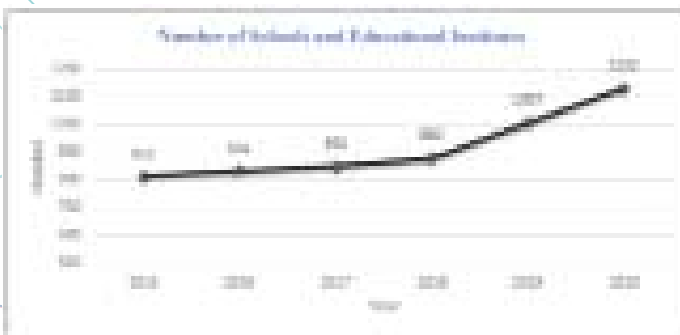
¹ National Statistical Bureau, Government of Bhutan. 2021. Statistical Yearbook of Bhutan. (<https://www.nsb.gov.bt/download/9723/>).

² Ministry of Education, Royal Government of Bhutan. 2014. Bhutan Education Blueprint 2014-2024. (https://www.globalpartnership.org/sites/default/files/bhutan_education_blueprint_2014-2024.pdf).

The Constitution of the Kingdom of Bhutan 2008 states: “The State shall endeavour to provide education to improve and increase knowledge, values and skills of the entire population with education being directed towards the full development of the human personality”. The State shall provide free education to all children of school-going age up to the tenth standard and ensure that technical and professional education shall be made generally available and that higher education shall be equally accessible to all based on merit³. These provisions in the constitution of Bhutan are outcomes of what is possible and desirable based on the last 50 years’ experience of building up a public education system and making it accessible to its people. Before the promulgation of the constitution of Bhutan, the Planning Commission, the highest central planning authority, published a seminal document – Bhutan 2020: A Vision for Peace, Prosperity and Happiness – in 1999 which outlines the education policy that is followed in Bhutan. Before the Bhutan 2020 document, there were two policy documents: Education Policy 1974 and Education Policy 1984.

The modern education system has expanded from about 11 schools before 1961 to 1,132 schools and other educational institutes in 2020, spanning from early childhood care education to technical and vocational education, and tertiary education. Figure 1 shows the progressive growth of the total number of schools and institutes over six years⁴.

Figure 1: Growth in Number of Schools and Educational Institutes.



Over the last 60 years, Bhutan has been moving away from an economic and social feudal system to becoming a modern democratic state. This movement is not without its frictions and challenges. Schooling has played a key role in promoting both

³ The Royal Government of Bhutan. 2008. *Constitution of the Kingdom of Bhutan*. (<https://www.nab.gov.bt/assets/templates/images/constitution-of-bhutan-2008.pdf>).

⁴ Policy and Planning Division, Ministry of Education, Royal Government of Bhutan, 2020. *Annual Education Statistics 2020*. (<http://www.education.gov.bt/wp-content/uploads/2020/11/AES-2020-Final.pdf>).

the economic and social development of modern Bhutan. However, Educating for GNH (ENGH) impacts each of the current issues in Bhutanese education. Most of these were evident before the EGNH initiative. For example, the Ministry of Education has begun to address gender in education, students with disabilities, teacher training, student-centred learning, and quality control. The Royal Government is concerned about education and employment, particularly in rural areas.

2. Impact of the Pandemic on Education

The Covid-19 epidemic has spread across the globe, affecting practically all countries and territories. The epidemic was initially discovered in Wuhan, China, in December 2019. Countries throughout the world warned people to exercise caution. Washing hands, wearing face masks, maintaining a physical distance, and avoiding big gatherings and assemblies have all been used as public health initiatives. To flatten the curve and control the spread of the disease, lockdowns and stay-at-home techniques have been implemented⁵.

Bhutan first declared the closing of schools and institutions and the reduction of business hours during the second week of March 2020⁶. The complete nationwide lockdown was implemented from 1 August 2020⁷. In the interim, people were allowed to roam around, offices were reopened, schools and colleges were reopened for some levels, and other educational institutions continued with online classes. The school closure has impacted more than 170,000 Bhutanese pupils in grades PP–XII. The consequences are far-reaching, and they have had an impact on learning this academic year and will continue to do so in the coming days. Alternative instructional and assessment strategies must be developed and implemented quickly. The Covid-19 epidemic has paved the way for digital learning to be implemented⁸. Bhutan's government and citizens were unaware of the pandemic and were unprepared to deal with the emergency that it posed. Some of the key impacts of the global pandemic on Bhutan's education sector are as follows:

⁵ Sintema, E. J. 7 April 2020. Effect of COVID-19 on the performance of grade 12 students: Implications for STEM education. *EURASIA Journal of Mathematics, Science and Technology Education*, 16(7). (<https://doi.org/10.29333/ejmste/7893>).

⁶ Kuensel. 6 March 2020. First confirmed coronavirus case in Bhutan. Kuensel. (<https://kuenselonline.com/first-confirmed-coronavirus-case-in-bhutan/>).

⁷ Palden, T. 12 August 2020. Women test COVID-19 positive after five tests locking down entire country. Kuensel, pp. 1–2.

⁸ Dhawan, S. 2020. Online learning: A panacea in the time of COVID-19 crises. *Journal of Educational Technology*, 49(1), 5–22. (<https://doi.org/10.1177/0047239520934018>).

- **The physical disconnect between teacher and students.** Even if distant learning methods are in place, nothing beats face-to-face interactions with an instructor for promoting focus, engagement, and the opportunity to receive feedback on learning. The youngsters in the lower primary classes are the ones who are most affected by this problem.
- **Access to modern infrastructure and technology.** The administration has made tremendous headway in connecting even the most remote areas to the internet and mobile phone networks. As a result of an educational approach to the epidemic that heavily relies on the use of technology, the digital divide (in terms of gadgets) has a big impact on children. Many households are unable to afford laptops, smartphones, or television sets, and hence are unable to reap the benefits of connectivity.
- **Learning time has been cut in half due to a variety of causes.** Actual “teaching” time was severely constrained during the pandemic. Even if students watched all of the TV shows for their age group every day, the contact time would be significantly less than a typical school day, which lasts about five hours.
- **Children in outlying areas.** When it comes to learning, students living in remote areas and specially abled students face a range of difficulties. They are unlikely to have access to broadcast television or the internet, and many will lack parental support for self-educational resources. Many youngsters, particularly new entrants, will have not heard English (the medium of instruction) for almost a year and will struggle to understand what is being taught when they return to school.



3. Best Practices

The RGoB carried out a series of measures to build the country's capacity to tackle emergencies brought about by the Covid-19 pandemic. These measures were incorporated in the policy design and framework from the first wave of the pandemic's spread in Bhutan. Some of the best practices are as follows:

Infrastructure and Teacher Development

Learner-Centeredness Approach: Learner-centeredness is crucial in higher education and teacher education. Though traditionally most visible in classroom settings, there is a growing recognition that learner-centred methods are just as important in higher education, particularly in teacher education. According to research⁹, adults are more likely to be self-directed and reflective, define learning goals, and apply their life experiences to what and how they learn. This is why learner-centred strategies are effective in higher education; however, not enough research has been carried out on learner-centred strategies in higher education. Proponents of learner-centeredness have been advocating for it to be made the fundamental pedagogy of university courses for a long time.

Education in Emergency: When the pandemic struck, the school system and educators in Bhutan were forced to adopt, through numerous internet platforms, "Education in Emergency", a system for which they were not prepared. The emergency brought with it challenges such as homeschooling requiring parents to step in to support the students' learning academically as well as economically, children with disabilities requiring additional and special support, and teachers having to add creative elements to their teaching style to compensate for the limitations of virtual teaching. To continue the education process during the pandemic, teaching and learning through online platforms such as Google Classroom and Zoom, the virtual learning environment and social media and group forums like Telegram, Messenger, WhatsApp and WeChat became a household reality. These platforms could continue to be in use once face-to-face teaching resumes, as they provide additional resources and coaching to learners.

Apart from the challenges that online education posed for educators, schools, institutes and the government, the pandemic brought several opportunities to the unprepared to implement e-learning systems. Online learning has created the op-

⁹ Kerka, S. 2002. Myths and realities teaching adults: Is it different? ERIC database. ED468614.

portunity to teach and learn in innovative ways unlike in the normal classroom setting. It forged strong connections between teachers and parents like never before. Recent research on pedagogy during an unfolding pandemic¹⁰ has revealed how teachers and educators, along with cooperation from parents and students, are proactively devising and implementing creative solutions at their local level to improve online teaching and learning. Additionally, to forge a more interactive and engaging environment for teaching and learning, educational organisations have made their tools and solutions available for free.

Inequality in Education

The RGoB has been integrating principles of GNH in the education sector since its inception, aligned with “Leave no one behind”, the central, transformative promise of the 2030 Agenda for sustainable development. Bhutan has been striving to integrate the GNH ideology into schools through the “Educating for GNH” (EGNH) strategy since 2010, making GNH a major priority in basic and secondary school curricula, as well as for tertiary education. The biggest obstacle in universalising primary education in Bhutan lies in enrolling and retaining children who have been unable to attend school for various reasons. The country requires an inclusive education approach with additional arrangements for facilities, structures, and contents to meet the learning needs of all children, including those with impairments and learning issues, those requiring special care and attention, and those living in very distant sections of Bhutan.

The use of computers and information technology not only expands the horizons of learning for students and teachers but also helps teachers from remote schools connect with their peers and benefit from professional support services. A long-term strategic framework will be developed for connecting schools through Information and Communication Technology (ICT) and computer literacy will become an essential feature of teacher training.

The mastering of basic literacy and numeracy as well as the acquisition of essential values applicable to everyday life in Bhutan are fundamental. Individual learning styles and special needs will have more options within the curriculum and educational system. This will imply a gradual transition from strict formal learning, which includes curriculum structure, learning time, and assessment systems, to a dynam-

¹⁰ Doucet, A., Netolicky, D., Timmers, K., and Tuscano, F. J. 2020. Thinking about pedagogy in an unfolding pandemic: An independent report on approaches to distance learning during COVID19 school closures. Education International and UNESCO. (https://issuu.com/educationinternational/docs/2020_research_covid-19_eng).

ic learning system that offers more options and adapts to the learners' learning needs and pace.

Many students enrolled in elementary schools are now active and sound learners, whose parents have already received some schooling and frequently have strong opinions about the educational system. This is an opportunity to broaden the scope of educational planning while also establishing a solid foundation of support for improving educational quality. A frequent discussion forum between the general public and education officials will be developed using existing fora such as the National Television, in addition to School Management Boards and parent-teacher groups, to assess education policies and programmes.

The level of expertise and exposure to ICT for both educators and learners influence the choice of pedagogy for online education. So far in Bhutan, platforms such as Microsoft Teams, Google Classroom, Canvas and Blackboard, which help teachers create educational content, have been used. These platforms provide features like workplace chat, video meeting, file storage, and various media file sharing, and aid the tracking of student learning and assessment through quizzes and assignments.

The flipped classroom technique allows teachers to distribute learning resources such as articles, pre-recorded movies, and YouTube links before the class, saving the online classroom time for deeper knowledge transmission through interaction with professors and peers. Problem-solving, critical thinking, and self-directed learning are all encouraged as a result of this. Videoconferencing technologies (Google Meet, Zoom, Slack, Cisco Webex) and customisable cloud-based learning management platforms (Elias, Moodle, BigBlueButton, Skype) are becoming more popular in virtual classrooms.



New Actors in Education

According to Schofield¹¹, tertiary education in Bhutan currently faces four major challenges: expanding tertiary enrolment, promoting high-quality research, the balance between quality assurance and innovation and flexibility, and the “fit” between graduates’ skills and preferences and job market demands.

While the establishment of private schools will be encouraged, the experience of other countries shows that building a private school sector in secondary education raises a range of problems. For example, this may result in a conflict between the autonomy of the private school and government responsibility for ensuring standards and providing possible subsidies. The RGoB will address this by implementing policies and mechanisms to ensure the smooth development of this sector.

It is important to bring school teaching/learning processes and material more in line with future workplace skill set requirements. This is a large assignment that is only possible through innovation and with everyone’s support and cooperation. To start with, the secondary school curriculum will be realigned to provide emphasis on mastery of key subjects such as languages and mathematics, thinking and analytical skills, and teamwork with project-oriented systems.

Development of core competencies to be achieved through secondary education, as well as the forging of closer ties between schools, communities and the world of work, will require institutionalising processes to continually monitor and respond to labour market characteristics and demands.

Promotion of values is seen as important at all levels of education but in the light of the special challenges of adolescence, it is considered especially important for the age group in secondary schools. Values education will be embedded in school life with exemplary activities, participatory rules and organisational models in classrooms and schools. Consequently, Bhutanese educators are seeking a pathway that would be of considerable interest to many outside Bhutan. There are several reasons for this. First is the interest in GNH itself as a philosophy. Second, its impact on policy is worthy of attention. Third, the attempt to implement GNH through EGNH addresses practical problems of resourcing, culture and custom, practices of teachers and administrators, and a range of other issues.

¹¹ M. J. Schuelka, T. W. Maxwell. eds. Education in Bhutan, Education in the Asia-Pacific Region: Issues, Concerns and Prospects 36. DOI 10.1007/978-981-10-1649-3_5. (<http://www.education.gov.bt/wp-content/uploads/2018/10/Education-in-Bhutan-Culture-Schooling-and-Gross-National-Happiness.pdf>).

4. Conclusion

The impact of the Covid-19 pandemic on teaching and learning, significantly in terms of education differences, applicable pedagogies, and platform suitability for various educational levels including primary, secondary, and tertiary, requires further research and insights. Internet connectivity and quality in Bhutan do not always meet the requirements and the cost of internet services are also expensive relative to the general income profile of the citizens. The detailed research and scientific assessment require effective modes and approaches for making virtual education more attractive and useful for the students and teachers. Apart from this, it is also important to explore further effective feedback mechanisms and approaches for monitoring and evaluating learning performances and results.

The affordability and accessibility of education for all learners of different economic backgrounds are significant challenges in Bhutan. Therefore, it is important to explore education tools that are conducive and useful for everyone. Further, it is also important to identify and implement policy-related interventions. Educational systems around the world, especially in Asian countries, have to invest in the skilled development of lecturers, particularly on ICT and effective pedagogies, considering the current state of affairs. Creating online teaching systems that are creative, useful, innovative and interactive through easy tools is another area of research that needs to be focused upon to address the inequality in education. Such an approach and development focus would ensure that the education system is ready to effectively withstand and tackle any unforeseen situation created by future stresses and shocks. The lesson learnt from the Covid-19 pandemic is that lecturers and students/ learners should be focused and make themselves comfortable with the use of various online educational tools. Once the Covid-19 pandemic is over and normal education patterns resume, the lecturers and learners must continue using online tools of teaching and learning.







Cambodia

Cambodia Development Resource Institute

1. Introduction

The Sustainable Development Goal 4 (SDG Goal 4) of ensuring inclusive and quality education for all and promoting lifelong learning of Agenda 2030 is not only key to the achievement of many other Sustainable Development Goals but also the bedrock of any society. To reduce inequalities and reach gender equality, it is imperative that education is made available to all and that no one is left behind. In 2018, Cambodia modified or localised the SDG by adjusting the target to be achieved by 2030. Of the ten global targets for quality education, Cambodia adopted seven targets and eighteen indicators to be achieved by 2030.

In the effort to achieve this goal, the Ministry of Education, Youth and Sport (MoEYS) has developed several education policies and strategies, including the Education Strategic Plan (ESP) 2019-2023, Teacher Policy Action Plan (TPAP), Policy on Higher Education 2020, and Education Roadmap 2030. At the time of writing, MoEYS is conducting the mid-term review to assess the progress of the ESP 2019-2023 and to identify challenges the education sector is facing. According to the latest education congress available, published in 2020, Cambodia was on the right track to achieve most of the core-breaking indicators set in the ESP 2019-2023 but there are still challenges in realising SDG 4.¹

The following are the main accomplishments and challenges reported by MoEYS. With regard to target 4.1, the net enrolment rate of primary education is 98 percent in Cambodia as of academic year 2017-2018. The dropout rate in primary education has also decreased from 10.5 percent in 2014 to 4.5 percent in 2018. In

¹ MoEYS. 2020. Education Congress: The Education, Youth and Sport Performance in the Academic Year 2018-2019 and Goals for the Academic Year 2019-2020. Phnom Penh: Cambodia Development Resource Institute.

secondary education, the gross enrolment rate for lower secondary has increased by 3.5 percent over the past five years, reaching 56.8 percent in 2018. The gross enrolment rate for upper secondary education increased 2.5 percent to 28.5 percent. These figures are higher than the targets of 54.6 percent and 27.7 percent respectively. In terms of target 4.2, access to early childhood education reached 68.5 percent in 2018 against a target of 68 percent enrolment. For target 4.3, between 2014 and 2018, the number of higher education institutions increased from 110 to 125 and the number of teaching staff increased by 42 percent and lecturers by 40 percent. In addition, the gender disparity in target 4.5 shows that there is almost no gap in gender parity in enrolment from primary education to higher education in Cambodia. Regarding target 4.6, due to the improvement in the non-formal education sector, the adult literacy rate among youths aged between 15 and 24 years old increased to 94.6 percent and the literacy rate of adults aged 15 years and older increased to 85.2 percent in 2017.

In this way, Cambodia has been working on the goals of SDG 4 and has shown steady results. However, challenges remain. Access to all levels of education has improved significantly over the past ten years, especially in primary education. However, low enrolment and high dropout rates in lower secondary schools are still worryingly high. Moreover, according to national assessments and PISA-D, many students fail to acquire the expected knowledge and skills from schools.² These situations represent the next problems that need to be addressed: access to education above the primary education level and low quality of education. To solve these two problems, it is important to provide all children with quality early childhood education so as to reduce dropout rates and inequalities in student outcomes. Although access to early childhood education in Cambodia is improving year by year, it is still at around 50 percent and does not reach enough children living in rural areas. Improving the access and quality of lower levels of education will contribute to the development of quality industrial human resources in higher education in the future.

As mentioned above concerning target 4.5, the gender gap in education enrolment is almost non-existent in Cambodia. However, there are limited statistics related to enrolment and performance of persons with disabilities, indigenous peoples and children in vulnerable situations. To provide quality education to all, it is necessary to have an understanding of these vulnerable groups. The Education Strategic Plan 2019-2023 did not include indicators or specific targets for targets 4.a and 4.c, which are related to the educational environment and the quality of teachers. The

² MoEYS. 2018. Education in Cambodia: Findings from Cambodia's experience in PISA for Development. Phnom Penh: Cambodia Development Resource Institute.

development of the educational environment, which is important to ensure there is no educational gender gap as well as quality education for the vulnerable groups in target 4.5, and the improvement of the quality of teachers through training are also issues that need to be addressed.

2. Impact of the Pandemic on Education

The Covid-19 pandemic has created educational disruptions around the world by forcing schools to shut their doors to curb the spread of the virus. At its peak in April 2020, it is estimated that more than 1.6 billion students worldwide were locked out of their schools. On 16 March 2020, the government of Cambodia decided to close all learning institutes from pre-school to higher education institutes as preventive measures in response to the increase in Covid-19 cases. The Ministry of Education, Youth and Sport has made a great effort to keep the learning going for children and students at all educational levels, by supporting schools to swiftly switch from the traditional physical classroom to new forms of remote teaching and learning modalities such as paper-based worksheets, broadcast media through TV and radio, mobile phones, and digital online platforms. However, students from less affluent households are likely to be hit harder by the pandemic as they have little or no access to distance learning and are less ready to adopt new technologies. In addition, preschool children and early graders are also found to be at high risk of dropping out of school during school closures.

All schools were able to briefly reopen to start the new academic year in January 2021, but the 20 February 2021 incident forced the government to close schools nationwide and to move to distance learning again. A joint Covid-19 assessment in Cambodia conducted by development partners in collaboration with MoEYS in 2020 found that only 70 percent of students engaged in some form of alternative distance learning and only 35 percent of them had access to online learning materials. With the pandemic still spreading widely and getting more severe in Cambodia, the hope of going back to the “old standards” is shrinking and the imperative of the “new normal” becomes more and more obvious.

Although the Covid-19 outbreak has brought many challenges in education, it has helped accelerate online learning rapidly and blended learning has become a buzzword among researchers and practitioners in the field of education. Online learning is expected to forever change the way students learn and it is anticipated that online learning will continue to be a part of and blended with the traditional brick-and-mortar classroom learning even after the pandemic. However, there are

also many challenges in implementing or integrating online learning effectively, especially in developing countries like Cambodia. Some key challenges in delivering distance learning during the Covid-19 pandemic include teacher and student unreadiness to adopt new technologies, lack of needed digital devices, limited institutional capacity to support teachers, and poor access to the internet in rural and remote areas. There are regional disparities in terms of access to and quality of online learning and the pandemic has likely widened the digital divide between the rich and the poor.

3. Best Practices

The national workshop on “Accelerating Progress and Equity in Education” was held on 1-2 July 2021. By engaging Cambodian stakeholders from the central government, provincial education offices, school teachers, universities, and civil society organisations (CSOs), the goal of the national workshop was to promote collaboration and cooperation between various stakeholders and to address the challenges posed by the Covid-19 pandemic on the implementation towards achieving SDG 4 by 2030. The workshop discussed four main topics as follows:

3.1. Blended Learning and Traditional Classroom

The first panel discussed the role of blended learning, which has been used as an alternative teaching and learning model during the Covid-19 pandemic. It began with a presentation by Mr. Ul Run from Kampuchea Action to Promote Education (KAPE). He touched on different models of blending learning, such as the rotation model, flex model, à la carte model, and enriched virtual model, as well as its benefits and disadvantages in comparison to the traditional classroom. KAPE is well known for its role in helping to develop and expand the New Generation School (NGS) programme in Cambodia. Even before the pandemic, KAPE has supported its partnered schools to integrate online learning into the traditional classroom. Blended learning has many different models, but in general, blended learn-



ing refers to teaching or learning approaches that combine classroom and online learning. Its benefits include convenience, variety of contents, independent mode of learning, and cost-effectiveness. However, there are also risks and disadvantages, including lack of attention and commitment from students. Successful blended learning requires interactive teaching and learning with support from educational technology, or EdTech. Despite the usefulness of online learning in helping to keep student learning going on, it is difficult to get students in Cambodia to actively participate in virtual classrooms, especially students in lower grades in primary schools and preschools.

After the presentation, there was a discussion on the topic between four speakers: Mr. Sem Sineth from E2STEM, Mr. Lim Chantha from Hun Sen Chumpouvorn High School, Mr. Khoeng Long Ang from Cambodian Children's Fund, and Dr. Chea Phal from CDRI. Based on the discussion, best practices and lessons learnt on blending learning in Cambodia are:

- **Schools need to be more ready to face uncertainty shocks:** While students and teachers at NGS's partnered schools and E2STEM schools have used online learning and platforms before the Covid-19 outbreak, students and teachers at normal public schools are very new to online or blended learning. E2STEM had developed its learning management system well before the pandemic hit. The learning management system used Moodle and both teachers and students can access all learning materials, including lectures and assignments, anytime. When its school were closed, teachers and students were technologically ready for online learning and had no problem in moving their learning and teaching entirely online. In addition to Moodle, they also used Zoom, Google Classroom, Padlet, Kahoot, PhET, Google slides, Canva, and other applications. On the other hand, most teachers and students at normal public schools are new to online learning and they could not shift to online learning immediately when the government shut down all schools nationwide in March 2020. Due to the unpreparedness and lack of experience, students at normal public schools also showed little interest in online teaching due to its lack of interactions. To make online learning less boring, teachers need to change their teaching approaches. Teachers should also follow up with students and families individually through telephone, video conference, or home visits, if possible. In rural and remote areas where the virus is not widespread, there are also cases where teachers visit students at their homes and conduct onsite teaching in small groups. As not all students have access to digital devices, schools should prepare tablets or affordable laptops such as Chromebooks for students from less affluent households to borrow during such a crisis.

- **Students are less active and assessing their performance during Covid-19 is challenging:** During the discussion, our panellists agreed that assessing student performance remotely during the pandemic is very challenging. Most of the schools with enough resources in Cambodia are able to use Google Classroom or Microsoft Teams as the platforms for online learning. However, our panellist from the public secondary school admitted that students are not as actively participating during online learning in comparison to the traditional classroom. Some students simply turn off the video and stay mute during synchronous live sessions or video conferences. It is also very difficult to prevent students from cheating when examinations are conducted online. The assessment approaches also need to be different from traditional classrooms as we cannot assess students only through regular examinations. There are cases where students who did not attend class regularly perform much better than those who attended class regularly. Student assessment needs to be fair and properly reflect the actual performance of students. Similar challenges are also found even with students in higher education.³ For E2STEM schools it is less challenging as both students and teachers are more experienced and are better prepared for online learning. To ensure that all students have access to online learning the school even lend tablets (Chromebooks) to students from marginalised backgrounds in poor communities. During this time, support from parents is also very important for student learning. Although schools cannot conduct physical classroom activities during school closures, teachers conduct home visits to follow up on the learning of children. From the public floor, participants also raised some concerns about whether the introduction of technology to students at an early stage can bring them more harm than good as some contents on the internet are not safe or proper for children. Technology is a double-edged weapon. In Cambodia, more and more kids are exposed to smartphones or YouTube at a very early stage and as a result, the number of children with autism is rising. Again, parents need to control their children well when the children have access to the internet through smartphones or tablets.
- **Turn challenges into opportunities, making the education system more resilient:** Although there are challenges and disadvantages in implementing blended learning or online learning during the pandemic, there is a consensus that blended learning can help make education more resilient against uncertainties or shocks in the future. It is very beneficial and cost-effective

³ Chea, Hun and Cheam. 2020. Disruption and opportunities during the Covid-19 pandemic in Cambodian higher education: Perspective from teaching staff. Cambodia Development Review 24(4): 1-7.

if it is well designed and implemented. However, to fully reap the benefits of technology, both teachers and students need to be well equipped and prepared in adopted new technologies that keep changing rapidly. The joint assessment conducted by MoEYS, UNICEF and other development partners found that there are digital divides between students in rural and urban areas and that not all students have access to distance learning in Cambodia.⁴

3.2. Infrastructure and Teachers Development

The discussion on infrastructure and teacher development in Cambodia was moderated by Dr. Song Sopheak from CDRI. The speakers included Ms Ren Sovanncharya from Teach for Cambodia, Mr. Uon Virak from VVOB Cambodia, Mr. Bouy Vuthy from Prey Veng Regional Teacher Training Centre, and Mr. Eang Vibol from Kampong Cham Provincial Teacher Training Centre. As the key presenter for the session, Mr. Uon Virak introduced what VVOB as an international civil society organisation has been contributing to the development of teacher development, as well as challenges and lessons learned from their project implementation.


VVOB has provided technical support to the MoEYS through training programmes targeting teachers at primary and secondary schools, focusing on new approaches (student-centred) in science and mathematics teaching, development of online teaching contents, and provision of capacity building training courses for instructors at regional teacher training centres. In alignment with the MoEYS's Teacher Policy Action Plan (TPAP) strategies, VVOB is supporting teachers to develop their career pathways. During the pandemic, VVOB has worked hard with MoEYS to train teachers and develop content for e-learning, but it has been challenging to encourage teachers to shift towards online learning or to integrate online learning into their teaching approach. VVOB will continue to build teacher capacities through training, mentoring and co-facilitation.



⁴ MoEYS and Education Sector Working Group. 2021. The Cambodia COVID-19 Joint Education Needs Assessment. Phnom Penh.

The following best practices and lessons learnt are related to infrastructure and teacher development and are drawn from the Panel 2 discussion:

- **Continuous teacher training from pre-service to in-service is key:** The Covid-19 pandemic has shown that many Cambodian teachers are not well prepared and do not have adequate skills and knowledge to smoothly transition to online learning when schools are abruptly closed to curb the spread of the virus. The government, development partners and civil society organisations have strived to provide additional capacity training virtually to help teachers move their classrooms online. Two of the panellists were the directors of the teacher training centres in Prey Veng province and Kampong Cham province. The training centres offer pre-service training to primary school and lower secondary school teacher trainees in their respective provinces. According to the director of the training centre in Prey Veng, the centre is now better equipped in terms of physical infrastructure for teacher trainees to learn more about educational technologies. MoEYS also has plans to provide more computers and laptops to the labs and to send ICT experts. Soon the teachers and instructors will have their personal email addresses, which will help facilitate communications. Although pre-service teacher training has also been disrupted by Covid-19, the impact seems to be less adverse. Trainers and trainees at the training centre in Kampong Cham are familiar with online learning since it had been integrated into their curriculum before the pandemic outbreak. Even though the centre has been closed as far as physical classrooms are concerned, trainers continue to go to the office to prepare their lessons and to deliver their lessons remotely as the labs at the centre are adequately equipped. However, recently the training centre was designated as a Covid-19 quarantine centre and only a limited number of the teaching staff and management members are now allowed to enter the campus. When asked what strategies should be used to encourage teachers to continue developing their skills and knowledge, incentives was one of the key strategies our panellists raised. The government should have effective policies to incentivise teachers to upgrade their skills and learn new things. For example, a credit system that teachers can use to advance their professional career pathways. In addition, schools also have to be supportive in creating an enabling environment for teachers to build up their capacities.
- **Building from existing foundations:** Teach for Cambodia is a non-profit organisation working in the field of education to solve the problem of educational inequity by placing volunteer teachers through fellowship programmes to partnered public high schools. Instead of inventing something



completely new to solve the existing problems, they have tried to improve the existing models or interventions. During the Covid-19 pandemic, Teach for Cambodia worked with their partnered high schools to build and strengthen teacher capacities, including skills needed for online teaching, and soft skills (problem-solving and ability to adapt new teaching approaches). Teach for Cambodia also provides mentoring and coaching programmes for teachers to nurture their growth mindset and soft skills. In collaboration with the MoEYS, VVOB also takes a similar approach to provide training courses to teachers and teacher trainees at six teacher training centres. Many people, including teachers, still believe that there is no alternative to traditional classrooms that can deliver quality education and that online teaching is not effective. There is a need to change this kind of mindset. VVOB has helped the MoEYS develop material for online learning and teaching and posted them at www.kru.org and MoEYS's YouTube channel so that teachers and students can have free access to the materials.

- **Teachers need to be better equipped with digital and soft skills so as to be ready for uncertainty shocks:** The Covid-19 pandemic has taught the world about radical uncertainty and that education systems need to be better prepared to adapt to future shocks and be more resilient. When schools were closed and teaching needed to be conducted remotely, many Cambodian teachers, including experienced teachers, were not ready and faced many challenges during the transition. Although learning is still going on during the pandemic, the quality of learning and teaching is believed to be compromised, particularly in rural and remote areas. Even teachers themselves remain sceptical about the effectiveness of online teaching and learning. First, there is a need to start by changing the old mindsets and habits of our educators, encouraging them to explore new things and approaches. Even a well-trained and experienced teacher like Ms Sovanncharya from Teacher for Cambodia had difficulties in switching from the traditional classroom to online teaching at first. In addition to digital skills, teachers would also need to have soft skills or 21st-century skills such as teamwork, collaboration, communication and critical thinking skills. There is also a suggestion that MoEYS should establish a standardised learning management system (LMS) using Google Classroom or any platform that is user-friendly for Cambodian teachers and provide in-service training for teachers. It is expected that online learning will continue to be a part of classroom activities in the future in the form of blended learning.

3.3. Inequality in Education

The discussion on inequality in education was moderated by Mr. Yorth Bunny from NGO Education Partnership (NEP). Mr. Yi Kimthan from Plan International, Mr. Nhep Mengcheang from SwissContact, Mr. Chen Dechorith from Friend International, Mr. Khat Samal from Ratanakiri Provincial Education Office (PEO), and Mr. Hong Reaksme from Action Aid Cambodia joined the discussion as panellists. All the panelists have long experience working with marginalised children and students in the field of education. Ratanakiri is one of the remote and mountainous provinces in Cambodia where access to and quality of education still lag behind other areas. In the key presentation of the session, Mr. Khat Samal, Director of Ratanakiri PEO, introduced educational programmes and interventions initiated by MoEYS related to equal access to education and equality of education in his province before and during Covid-19. As the Ratanakiri population is made up of several ethnic minorities, a multilingual education programme is used as one of its key strategies to promote inclusive education. In the multilingual education programme, both Khmer and the mother-tongue languages of the children are used as the languages of instruction. There are many modes of distance learning, including online learning through MoEYS's platform, Microsoft Teams, Google Classroom, Facebook, Telegram, YouTube, and other platforms. However, in Ratanakiri, many students do not have access to the internet and digital devices. Teachers need to visit students' homes and farms to distribute worksheets or broadcast their lessons on radio and TV. MoEYS has also proposed new initiatives, such as the establishment of an ICT office in every city and province with a key person in charge in each school, education responses and educational recovery programmes in collaboration with development partners to make Cambodia's education system more resilient against shocks similar to Covid-19 that need quick adaptation of new technologies.

Following the presentation, a panel discussion on the topic of inequality in education took place among the five speakers: Mr. Yi Kimthan from Plan International, Mr. Nhep Mengcheang from Swisscontact, Mr. Chen Dechorith from Friends International, Mr. Hong Reaksme from ActionAid Cambodia, and Mr. Khat Samal from Ra-



tanakiri Provincial Education Office. From the discussion, best practices and recommendations that were shared are:

- **New Generation School (NGS):** During the Covid-19 pandemic, inequality in education has grown more prominent as students and teachers at public schools in rural areas were less ready in adopting new educational technology. Most public schools also do not have adequate infrastructures such as a learning management systems to enable effective teaching and learning for teachers and students. In this regard, NGS has been observed to be a good model, especially during the pandemic, for its quality curriculum, qualified teachers and sufficient ICT equipment. NGS is a new reform started in 2004 and implemented by the Kampuchean Action to Promote Education and the Ministry of Education, Youth and Sports to innovate and increase the quality of education. Unlike normal public schools, its curriculum focuses on STEM, ICT, and 21st century skills. Moreover, NGS students are enrolled full-time instead of attending either morning or afternoon shifts as per the current practice. Such schools also receive substantial investment from the government and private donors and contributions from the students' parents. It is important to note, however, that this investment is linked to performance, and schools may lose their investment if they do not maintain the higher educational standards explicitly laid out in the standards of accreditation. Like charter schools, the existence of NGS is directly tied to the ability of schools to serve students and parents (otherwise they risk losing their accreditation); this comes along with privileges in using special government funds, receiving high-quality professional development, and performance-based payments. Compared to normal public schools, the teachers and students in NGS schools are found to be much better prepared to transit from traditional classrooms to online teaching and learning during school closures.
- **Innovative financing to narrow the gap between the rich and the poor:** The learning gap between the rich and the poor is huge in Cambodia. Children of affluent families who can afford to pay high school fees benefit from the good quality of education provided by private and international schools, while public schools in rural areas still face challenges in attracting competent teachers and suffer from inadequacy of learning and teaching materials. Although general education at public schools is free, the annual school fees at private and international schools can be as high as several thousand US dollars. To narrow the learning gap between the rich and the poor and that between the urban and the rural, it is suggested that we need to find alternative financial sources to support public schools in rural areas that are underfunded. One of our panellists suggested that one solution was to

impose a higher tax rate on the incomes generated by private schools and earmark the tax revenue to support underfunded public schools. The idea is similar to the sin tax imposed on liquor, cigarettes, and goods that are considered socially undesirable.

- **Making learning more attractive to reduce the dropout rate of marginalised students:** School distance is also an attractive factor in keeping students in school. Hence, there should be one school in each community to make learning more accessible to all students. Besides, the dropout rate among students from grades 5 to 7 is high as students cannot keep up with the lessons and staying in school is not favourable to maintaining their families' livelihood. Therefore, there should be more investment in education for ethnic minorities, females and vulnerable students to close the inequality gap.

3.4. New Actors in Education

Dr. Leng Phirom, President of Kirirom Institute of Technology (KIT), moderated the panel discussion on new actors in education. The panellists were Mr. Soeung Vann from Hun Sen Kampong Chhnang High School, Mr. Hean Sambeourn from Cambodia Academy of Digital Technology, Ms Nay Dalin from Accessed Educators, and Mr. Chhim TithAmatak from Impact Hub. Ms Nay Darlin, project co-leader of Accessed Educators, delivered the key presentation by first discussing the new normal in education whereby traditional teaching and learning has been replaced by new forms of distance and online learning (via radio, TV, learning management system, social media, YouTube, etc.). She touched on the new needs in education, which include the possibility of getting access to and using learning materials, learning facilitators, favourable learning environments, the understanding and ability to take care of mental health, ICT facilities and digital literacy, training programmes on lesson plans and teaching materials, monitoring and evaluation and the precautions to be practised when schools reopen. The unexpected educational disruptions caused by the pandemic have accelerated the expansion in the roles of new actors such as private technological and telecommunication companies, higher education institutes, civil society organisations, local communities, and parents. In Cambodia such new actors include National Institute of Posts, Telecommunications and Information Communication Technology (NIPTICT), E2STEM, Edemy, Teach for Cambodia, Impact Hub and Accessed Educators. They play important roles in supporting students' learning and development. The participation from various actors helps fill in gaps and improves the education system.

After the presentation, there was a panel discussion on the topic of “New Actors in Education” among four speakers: Mr. Vann Soeung from Hun Sen Kampong Cham High School, Mr. Hean Samboeun from NIPTICT, Ms Nay Darlin from Accessed Educators, and Mr. Chhim Tithamatak from Impact Hub. Key messages generated from the panel discussion are as follows:

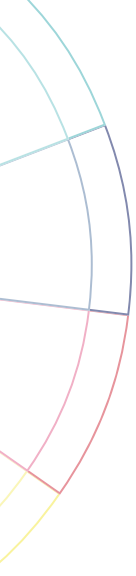
- **Better integration of technology in learning and teaching:** As education has been delivered online through distance learning to eliminate or minimise social contact, the integration of educational technology in teaching methodologies and pedagogy is indispensable. Online learning or blended learning has become a buzzword and is widely practised in Cambodia. More project-based learning, gamification, and learning analytics have also been integrated into learning and teaching. Thanks to technology, foreign lecturers at KIT can now offer their lessons from their own countries without being in Cambodia. There are also plenty of learning materials available online for free, although most of them are in English. However, the abilities and preparedness of teachers and students to adopt new technologies are uneven. It has been a challenge for Cambodia as online learning requires both teachers and students to have digital literacy or digital skills, electronic devices such as computers, tablets, or smartphones, a stable internet connection, and a proper learning environment to ensure effective learning. Online learning has also imposed extra challenges on disadvantaged or rural area students and their parents who cannot afford those devices and/or do not have sufficient digital skills to use those devices to study effectively. It also increases their spendings and the demands on the students’ family as well. Therefore, ICT equipment, teaching resources and digital literacy development for online or distance learning, and support for disadvantaged students and students in rural areas and their families are areas that should be addressed.



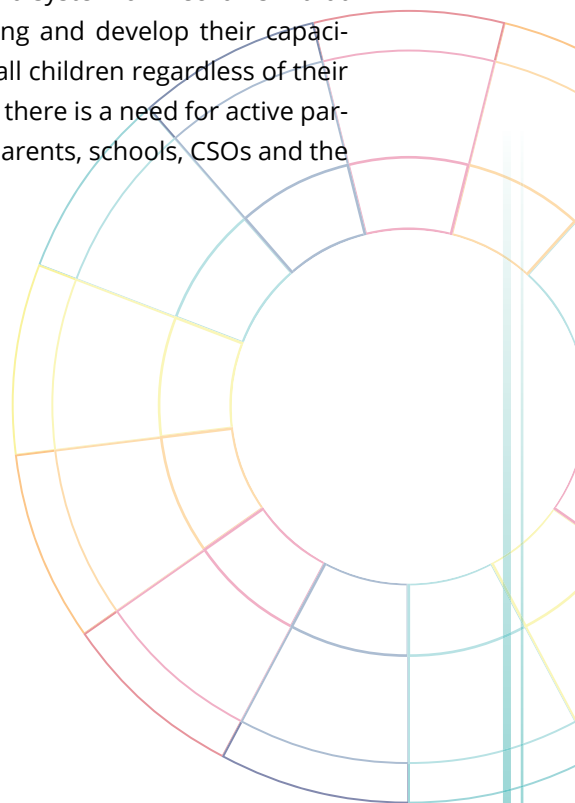
- **It takes a village to raise a child:** More than ever, active involvement from all relevant stakeholders, including parents, teachers, schools, communities, CSOs, and even telecommunication firms, is required to ensure that children have access to quality education. The role of parents in student learning during school closures is considered indispensable, especially for young learners. Parents need to closely cooperate with teachers and schools by following up, supporting and monitoring their children's learning. At NGS schools, in addition to regular assessments, reports are sent to parents to help them keep track of the learning progress of their children. Schools connect with parents regularly to support them if needed, such as providing additional learning materials and lending tablets to poor households. CSOs, such as Impact Hub and Assessed Educators, have brought in solutions and interventions to build online learning platforms for students and teachers. Impact Hub is a network that supports entrepreneurs and local communities through dynamic mentoring programmes, weekly events, and online learning platforms. They have produced materials for online learning that can be easily accessed for free with smartphones and trained teachers on how to conduct flipped classrooms and blended learning. Assessed Educators, another CSO, offers online training and mentorship programmes aimed at enhancing teachers' resilience by introducing technology-enhanced, student-centred teaching approaches and blended learning in Cambodia and the Southeast Asia region. Assessed Education targets young teachers aged between 20 and 30 years old. Internet service providers (ISPs) and telecommunication companies have also supported the MoEYS to improve internet infrastructures and connectivities. National Institute of Posts, Telecommunication and Information Communication Technology, as a public higher education institute, has helped the MoEYS to establish an online learning platform.

4. Conclusion

The two-day virtual national workshop co-organised by Cambodia Development Resource Institute, MoEYS's Department of Policy, and NGO Education Partnership of Cambodia attracted nearly 250 participants from ten countries. Drawing on the presentations and discussions, it can be concluded that the Covid-19 pandemic has added another layer of challenges for Cambodia in reaching the SDG 4 and, to some extent, widened the learning gap and digital divide between the rich and the poor, and between the rural and the urban. However, at the same time, school closures that led to the forced adoption of EdTech for online or distance learning



were also the opportunity for education practitioners and policymakers to rethink how to build an education system that can be more resilient against uncertainties. One of the solutions is building up teachers' and students' digital skills and soft skills that will serve as a foundation for the integration of educational technology and blended learning in the education system. Teachers need to also change their mindsets and be flexible in adapting to new learning approaches so as to make online learning attractive for students; otherwise, students will find learning boring and drop out of the school system. We also need a system or mechanism that can motivate or encourage teachers to keep learning and develop their capacities as part of their lifelong learning. To ensure that all children regardless of their backgrounds have equal access to quality education, there is a need for active participation from all stakeholders, including students' parents, schools, CSOs and the private sector.







India

Convegenius India

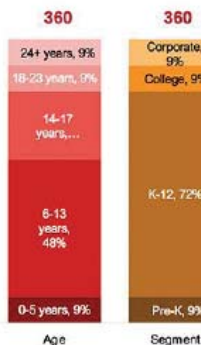


1. Introduction and Overview of Education in India

India has a unique education system designed to uphold its heritage, history, values, and traditions. With a population of more than 1.3 billion, it is no surprise that India runs the largest national school system in the world. Deemed by the nation as a fundamental right, equality of education is essential for promoting and securing all other forms of equality and is, in turn, dependent on the removal of other inequalities.

India is one of the largest market for Education with 360M learners in FY20

Total universe of learners in India (FY20)



K-12 learner universe in India (FY20)



Sources: DICE, ASHR, AICTE, Meti report, PGA Labs analysis

Students' education in rural and urban India differ significantly since the students are offered different opportunities, resources, and even forms of learning.

The education system in India is described as a “10 + 2 + 3” system. It means that the first decade of a child’s education is mandatory, based upon federal regulations set forth by the government. Most students begin their schooling at the age of five, in the form of pre-school. By the time they are six years old, primary school begins. Students are obligated to attend school until age fourteen, at which point they are permitted to cease their learning.

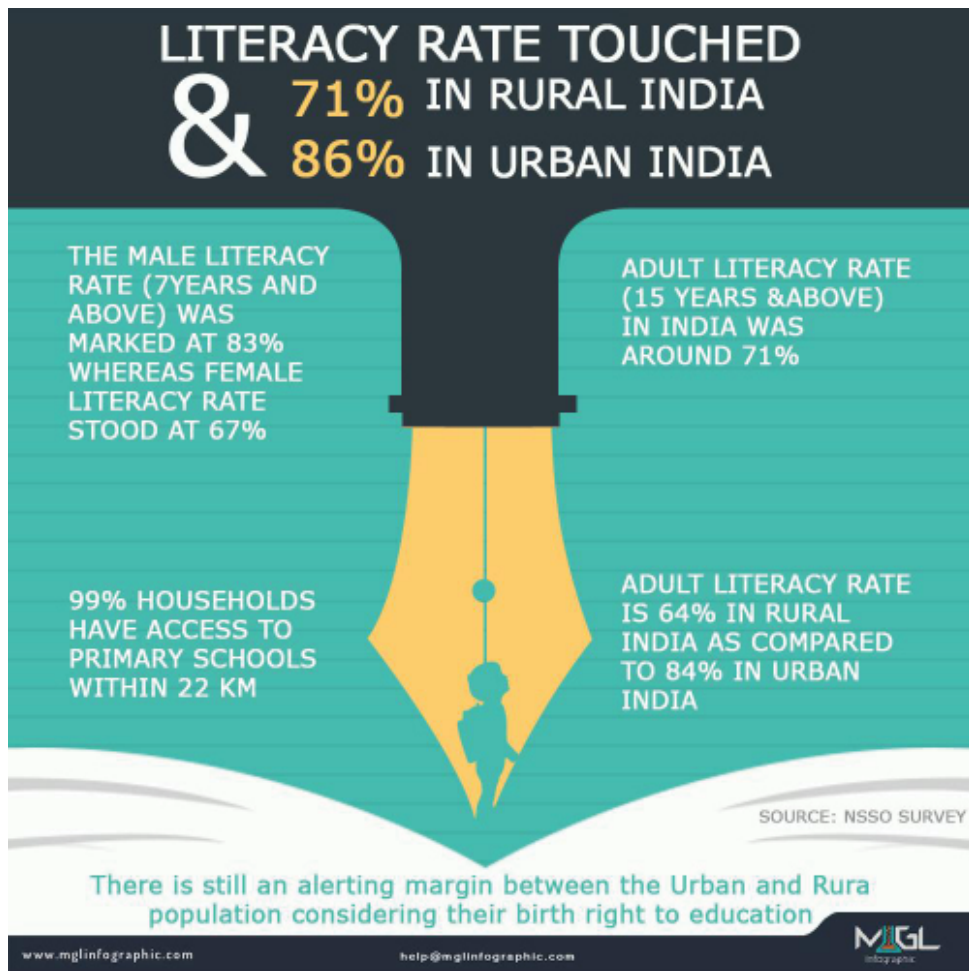
The Indian school system consists of several stages, namely Nursery, Primary, Secondary, Higher Secondary, Graduation, and Post-Graduation. The Pre-primary or the Nursery stage involves the Lower Kindergarten, where students learn the basics of reading and writing. Schools in India are managed by various boards, such as the CBSE board, CISCE board, State Government boards, National Open Schools, and International Schools.

India, a rapidly changing country, still has gaps in access to high-quality education for its youth. It is currently in the youth bulge phase, which is unprecedented throughout the world. The nation has entered a new era, where technology is crucial for the everyday lives of people around India. Students are receiving training on how to use technology effectively so that they can have successful careers in the future.

The nation has undertaken considerable strides in improving access to quality education, increasing primary school enrolment, and decreasing the number of out-of-school children. Education plays an essential, remedial role in smoothing the socio-economic fabric of the country. Since the citizens of India are the most valuable resource, our billion-strong nation needs nurturing and attention in the form of fundamental education to achieve a more harmonious life. This necessitates the all-round growth of our population, which may be accomplished by laying strong educational foundations.

Although traditionally, quality education in India was only available for the elite classes, new education policies have been aiming to achieve equality in education and the right to education for all children irrespective of social class. Today, the literacy rate in India is around 75 per cent. Kerala has achieved a literacy rate of 93 per cent, whereas Bihar is the least literate state in India, with a literacy rate of 63.82 per cent.

As evidenced by each successive census, since 1881, literacy in our country has been on the rise. However, with the population growth rate being so high, the absolute number of illiterate people steadily increased over time.



Source: (<https://newspagedesigner.org/profiles/blogs/literacy-rate-touched-71-in-rural-india-86-in-urban-india>).

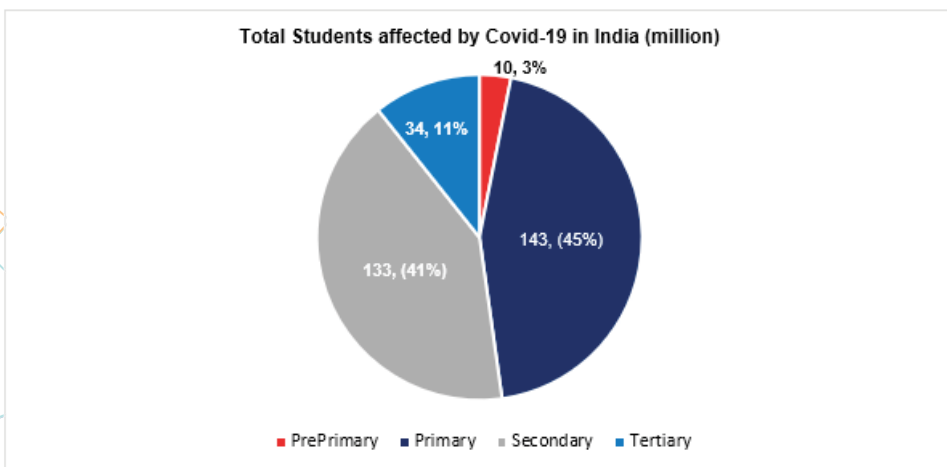
Education in India is at a crossroads, and both typical expansion and the existing pace and scope of improvement simply will not meet the needs of the situation. The catalytic action of education upon the complex and dynamic processes in our country needs to be planned with great sensitivity to successfully serve the needs of the future in the coming decades. A report suggests that this is likely to bring new tensions together with unprecedented opportunities.

2. Impact of Covid-19 on Education

In the early 2020s, a major concern emerged that led to dramatic changes in every aspect of human life. In part or whole, these changes permeated all fields of industry, educational institutions, social life, etc. There were both positive and negative impacts developing around us amid the pandemic.

The Covid-19 impact was everywhere, which resulted in the closure of schools and other educational institutions to reduce the impact of this pandemic. Everything is happening for the well-being of the students so that they can stay safe at home without getting affected by the life-threatening virus.

Over 1.5 million schools in India were shuttered owing to the pandemic, affecting 286 million children from pre-primary through to secondary education. This is in addition to the 6 million girls and boys who were already absent prior to Covid-19. This interruption in schooling has serious economic consequences.



Source: UNESCO
Year: 2020.

As e-learning becomes the “new normal,” authorities are making efforts to make education digitalisation more accessible and cheap to all. The Union government is putting a lot of faith in the Bharatnet initiative, which seeks to increase connectivity by providing internet to 250,000 village panchayats throughout the country via optic fibre.

UGC and MHRD have eaten numerous virtual stages with online vaults, digital books and other web-based educating/learning materials. A mix of conventional

technologies (radio, TV, landline telephones) with portable/web advancements to a solitary stage with all vaults would enhance openness and adaptability to training.

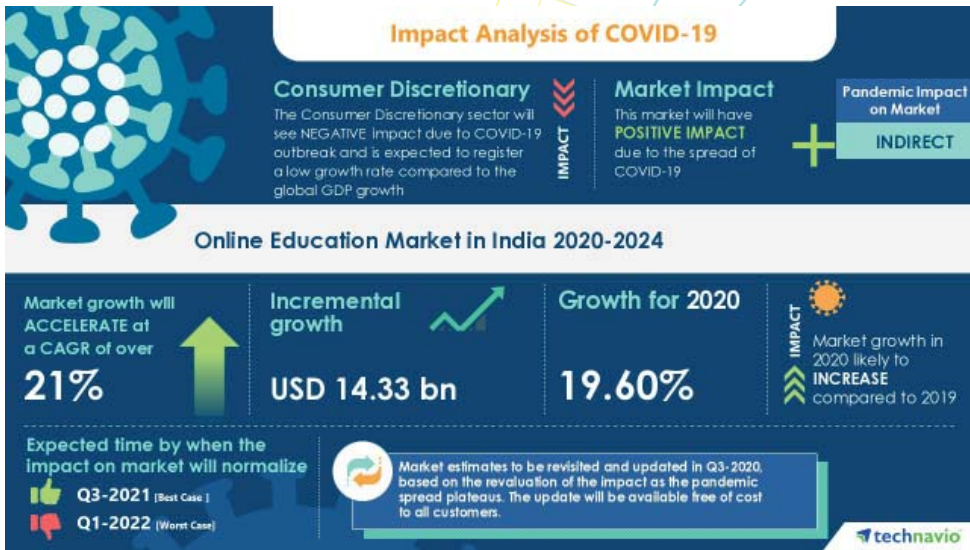
The primary goals for higher education institutions are to prepare students for the workforce by assessing their skills and matching them with what the industry requires. This may be accomplished by integrating research and innovation into the heart of education and making it affordable to all citizens across the country. It is now time to say goodbye to the old and tedious rote-learning methods, which emphasise memorisation over adequate comprehension of the topic. AIMA, IIMs, ISB, Ashoka University, Amity University, and Christ University, among others, have already moved their examinations online.

To fight back the disruption and damage, educational institutes across the country embraced the digital mode of education as a solution to fill the void left by classroom teaching.

Starting in 2020, Indian universities and colleges that were previously prohibited from offering more than 20 per cent of a degree online are removing the limits on online learning in order to increase access to higher education and boost the image of Indian institutions worldwide. Many EdTech firms have also emerged and are providing unrivalled learning management tools, such as blended learning, 3D and DIY kits, and AI-based immersive and interactive learning.

While the changes brought on by Covid-19 have created an evident distinction between the rich and the poor and while the students who are privileged to have access to better facilities can still have the opportunity to enjoy study material, online lectures, and information, those belonging to the less fortunate social strata still find it challenging to achieve the bare minimum. In rural areas, students have limited or no internet access and numerous students may not be able to afford computers, laptops, or smart mobile phones in their homes. This pandemic has not only affected the students but also the low-budget institutions and schools, resulting in the closure of the same.

Teachers, who are all experts in blackboards, chalk, books, and conventional classroom teaching, are new to this digital teaching, and are adopting the new methods and handling them like a pro to aid the students in their current position. However, many teachers are still facing difficulties in using EdTech tools. Technology paves the way for education, thus helping students and teachers to connect virtually through online classes, webinars, digital exams, and so on. But the sad truth is that it is not available to many students all over the nation.



In the present period, this change in the education sector has also started expanding. Now we have a lot of digital platforms for reading lessons. According to data released by the Ministry of Education, 33 crore students have continued their educational studies with the help of digital, online radio. A comprehensive initiative like PM-E-Vidya has been implemented for students in the country. Along with this, programmes like Diksha, Swayamprabha, IIT Pal, Shikshavani Podcast, and Sign Language started. This may be seen as a technological revolution in the field of education. Students living in a remote village are studying and learning like a student living in a hi-tech city.



Today, we need more legitimate government support and government investments to help implement literacy provisions, enhance teaching courses with extensive training programmes, and create a unified learning process involving conventional and technology-driven learning, all of which will make students familiar with the modern digital world and help them be qualified for the existing and future work cultures. India strictly needs to grow its assets in the technological department to avoid literacy loss and maintain the positive returns of online schooling, enhancing the quality of its students and their efficacy.

3. Infrastructure and Teachers' Development

Learning can happen wherever one is. But if we think about it from a schooling perspective, specifically in the light of Covid-19, where a lot of children have not had access to learning in that context, we find that, of course, schools offer a lot of benefits outside of learning as well for children. It is the space that they can get to away from home; it is the space they can have for their relationships. Digital infrastructure should be prioritised to foster the teaching and learning experience in India. With the internet penetration rate in India expected to exceed 55 per cent by the end of 2025, the digitisation of education remains one of our ultimate targets. Taking the cue, several e-learning portals have emerged and are doing well as a rising number of learners register for online courses – the new normal in the post-pandemic world.

If online education is becoming more popular throughout the world, so is the concept of IT-enabled learning in schools. Digital classrooms have gained prominence in recent years across India. These technology-enabled classrooms have experienced great success in fostering opportunities for teaching and learning by integrating learning technology such as computers, specialised software, audience-response technology, assistive listening devices, networking, and audio/visual capabilities. And this tendency is expected to strengthen even more in the future.

In contrast to traditional chalk-and-board techniques, digital classrooms as a medium of teaching have been proven to be extremely successful and visually appealing. While attracting students' audio-visual senses, digital classrooms have a higher appeal among students.

Acknowledging that rapid development requires widespread education, the government introduced a new National Education Policy (NEP) that underscores innovation in addition to the use of technology in education. It also focuses on e-

learning for educational advancement, particularly in rural areas. It has been done primarily to bring quality education to all regions of the country, particularly Tier 2 and 3 cities and towns. The government discovered that technology has the potential to reach out to small towns and villages and offer access to qualified educators. This was a distant fantasy, but huge technological disruptions across the country have effectively completed the hitherto impossible feat.

The move to online education also brings up discussions about the digital gap and the digital preparedness of all stakeholders and institutions. Schools and higher education institutions, such as colleges and universities, are two distinct marketplaces with distinct problems and levels of digital preparedness.

Technology is also assisting teachers in simultaneously connecting with students located across multiple areas. Interactive digital media is also a fantastic answer to the country's teacher shortage. To that end, it intends to employ technology to improve instructors' skills via the online site DIKSHA. This is a digital learning platform created by the government of India's Ministry of Education. It is developed based on open source technology, which is free and customisable by any government. The app can also be used without the internet. The DIKSHA platform is making a difference for students, educators, and parents by providing over a million pieces of e-learning content in over 30 languages.

The digital divide in schools is significantly higher than that in the higher education institutions. The Budget also mentions bridging the digital divide in public and private schools, which is another area in need of reform. The way forward is to construct the digital infrastructure, nurture qualified instructors, and provide a curriculum that is appropriate for each school. We also need to assess school learners' competence for online assessment processes using mock test sessions and analytics.

The considerable shortage of properly qualified and trained teachers, and consequently, the poor learning levels at schools is an issue that needs to be suitably addressed. Quite often, schools fail to invest enough on the development of teachers. Moreover, India faces a shortage of teachers and qualified head teachers. The problem is grave in Tier 2 and Tier 3 cities.

The present learning system entails that a teacher should be equipped with know-how that is beyond the subject matter they are teaching. A range of skills, such as classroom management and school administration, and, most importantly, child psychology, are the added skill sets that a teacher needs to possess. Ironically,

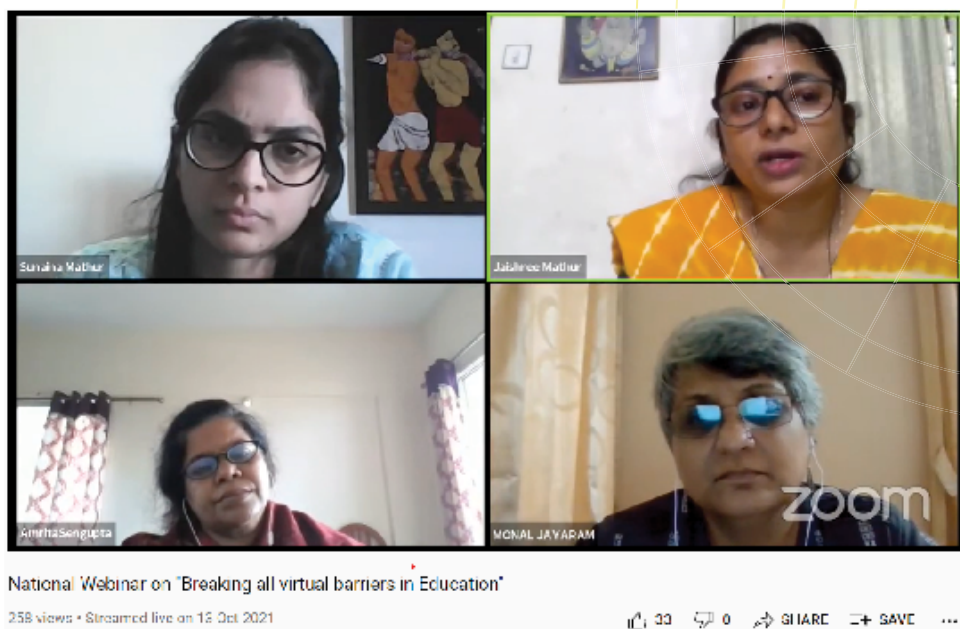
most of the teacher training programmes that are conducted by schools leave scope for more.

When schools had to be shut during the lockdown, while metros and Tier 1 cities experienced massive engagements in online education and live streaming classes, the gap in digital education was evident in Tier 2 and Tier 3 cities, which often remain deprived of the right infrastructure and technology. To add to the issue, most of the teachers were found to be lacking in the relevant skills to promote digital education.

There is vast scope for addressing the issues of teachers' training, considering that they are known to form a key pillar of any educational institution.

ETNB <> KAS National Webinar 2021

Key Learnings from Panel-2



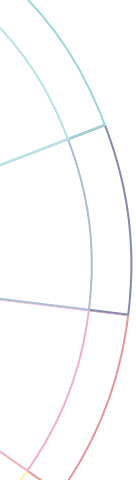
- The post-Covid-19 world has looked into the entire low takes and high takes of reaching teachers and children. In terms of blended learning, which has been tried in India and various other countries, of course, it has various kinds of benefits, but some classroom challenges have not happened on screen.

- There is a great shift in education technology as we are moving from a traditional classroom to blended learning. Now, as we are working digitally, we need to understand what is the digital infrastructure that is needed by our teachers to disseminate the content. There is a need for smart devices and internet connectivity when we talk about the Indian states because there are a lot of geographical variations. We also need to know the apps and software through which a teacher can prepare the content. Knowledge of the software is also essential for the teacher.
- Teachers should be able to use the newer medium to conduct classes, and to use the newer medium itself. Instead of just using textbooks, they should use TV, use WhatsApp, and use radios. In a traditional classroom, what would have happened is reading aloud from the textbook or writing out the chapter on the blackboard. Teachers must have the ability to manage the new classroom in terms of classroom management.
- By bidding farewell to traditional teaching methods and issues such as teacher shortages, insufficient teacher-students ratios, and insufficient teaching resources, digitisation in education has paved the way for the most up-to-date teaching tools and methodologies, which are now reaching students in the most remote parts of the country. And, with inclusive education being one of the government's major aims, the remote teaching approach is likely to be effective.
- Link of the webinar: (<https://www.youtube.com/watch?v=9HoAVlo2Di4>).

4. Inequality in Education

Educational inequity refers to an inequitable education system where members of society do not all receive the same learning opportunities. The Indian education system, notwithstanding efforts to address its critical shortcomings, continues to suffer from several impediments. One of the most important features of the Indian education system is its inherent equalitarian nature.

The democratic and diverse nature of India brings both pros and cons and inequality is one of the major “cons” amongst the many pros. Inequality is an umbrella term that encapsulates the entire gamut of issues our nation is experiencing today, especially the invisible fences that have become a way and part of the survival of every Indian's existence.



In India, political, economic, and social changes are driven by educational inequity. People with higher levels of education get the maximum benefits out of the system, and they are in a position to demand even more concessions from those in power. This tendency is prevalent and has deep roots in every part of our lives, and the education sector is no exception. Its ubiquity can be seen in our society's abundance and varied socioeconomic levels. Inequality in access to quality education is a by-product of all other types of discrimination, such as social, economic, gender, caste, class, demographic, and so on.

The discourse about the country's financial inequality and a few others has been going on for a long time, but there has been very little acknowledgment of its true source – inequality of access to a world-class education. The recently announced NEP 2020 has pushed education's relevance into the limelight, and brought attention to how it affects the overall panorama of inequality.

Despite the efforts of the government, the private sector, and non-governmental entities, only a small percentage of our population can attend quality schools, afford tutors, pursue novel hobbies, and gain admittance to prestigious national and international universities driven by economic and geographic advantages. This rift continues to expand by the day.

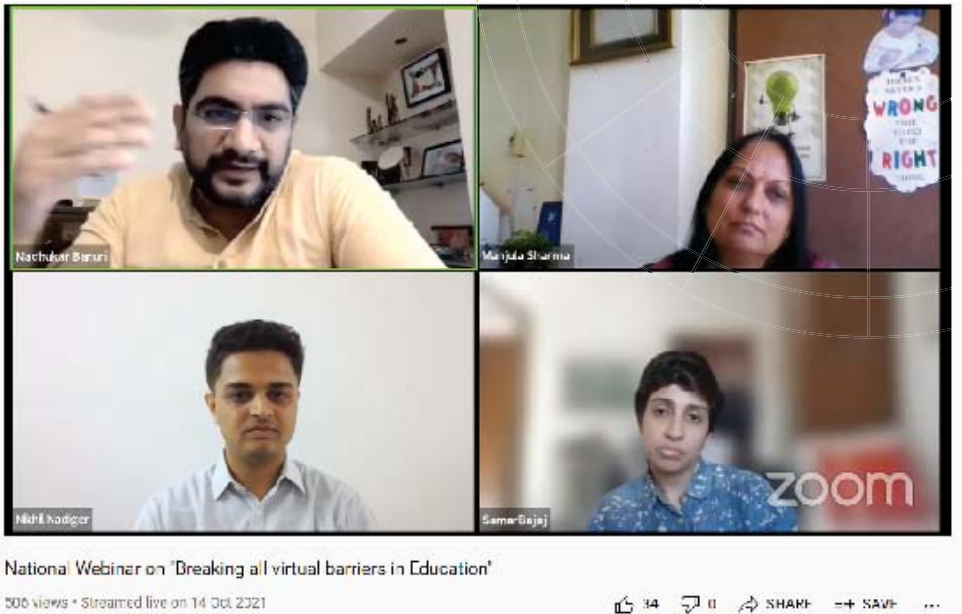
This stark contrast between rich and poor, educated and illiterate, serves as a sobering reminder of India's level of inequality. And it is a situation that many of the country's best brains are working hard to alter as they join the frenzied dash up the professional and social class ladders.

We may eventually see an end to such discrepancies as a result of the advent of education technology (EdTech).

However, it is difficult to succeed in this endeavour without considering the country's large learning gap. The EdTech sector is seeing the introduction of a wide range of digital solutions. Nonetheless, these solutions are not reaching a large number of students in rural India who, arguably, require them more than their urban counterparts because of low digital and internet penetration in India's rural and remote areas.

ETNB <> KAS National Webinar 2021

Key Learnings from Panel-3



- Giving opportunities to every child to ensure the child's success is the main principle of education. So that equality in opportunity is given. Those opportunities should be adjusted to the needs of children as to where equity comes in.
- India is huge, with a diverse population of 240 million school-going children. 24 per cent of these school-going children belong to scheduled tribes, 28 per cent are BPL, and the female child literacy rate is 54 per cent.
- If equality is the investment then equity is the return on the investment. Equality is ensuring that the resources we are providing to our kids are equally distributed. Schools, classrooms, teachers, and all the learning materials should be available for every child.
- The government attempts to achieve equality by making policies that regulates for resources to be equally distributed among the people but that is not the equity perspective.

- Every student learns in their way. Some from the visuals, some from the activities, and some from lectures but as a teacher we should not equally disburse the content in the classroom. We should figure out who is learning from what and provide the resources accordingly.
- Sarv Sikhsha Abhiyan and Right to Education are a matter of equality. Today when children are stepping into schools actively, we have to think about what to do for them. The quality of education we are providing should be reshaped and that cannot happen in an equal manner; it should be done equitably. Equity as a word has too much weight behind it.
- Link of the webinar: (<https://www.youtube.com/watch?v=Zc0GZSXQBmg>).

5. New Actors in Education

The new actors in education typically refer to those who are associated with the welfare and success of a school and its students. They may also be collective entities, such as local businesses, organisations, committees, media outlets, etc.

Franchisors should understand the importance of stakeholders as they can take leadership responsibilities, or lend their voices to ideas, opinions, and perspectives. They should understand that the role of every stakeholder is crucial for the development of an education empire.

Today, EdTech is working most efficiently in re-shaping the education system in India. EdTech is certainly transforming the way the world learns, thanks to an improved experience that works more swiftly and effectively. It is not just for K-12 or Test Prep, but also for Higher Education and Continuing Education, where the influence on India's Gross Enrolment Ratio will be tremendous and actually revolutionise the country.



Source: (https://www.peplematters.in/site/interstitial?return_t1o=%2Farticle%2Ftechnology%2Femerging-trends-in-edtech-a-look-at-the-edtech-landscape-19411).

Owing to rapid internet penetration and online courses providing low-cost alternatives to offline learning, India's EdTech business is expected to not only develop but also have a bright future. The worldwide pandemic accelerated some major changes that were already taking place in the global economy. It compelled most of the businesses we know to go to the digital platform. The EdTech industry is currently booming as all educational institutions, small or big, are adopting a hybrid approach to learning. The influence of AI and machine learning in EdTech is predicted to grow by more than 47 per cent in 2021. According to a report, India's EdTech industry is poised to become \$30 billion in size over the next ten years.



India To Witness 3.7X Growth In Edtech Market Size In The Next Five Years



Note: The market size is calculated as (number of users)* average basket size of payment). Paid subscriptions are calculated using KPMG calculations for the same as the base.
Source: Inc42 Plus

- K-12 learning solution will account for 47% of the total edtech market size by 2025.
- The market size of K-12 learning solutions is estimated to surge 3.7x between 2020 and 2025.
- 11.8Mn could be the total number of paid users in the K-12 learning solutions space by 2025.
- Skill development is one of the most lucrative market opportunities in the K-12 space. Coding and other STEM-related skills are currently witnessing a massive adoption.

Source: (<https://inc42.com/reports/the-future-of-edtech-in-india-decoding-the-10-bn-market-opportunity-report-2020/>).

With the capability of these technologies to automate even the most basic activities like grading, communication, queries, feedback, evaluation, and progress, the overall user experience improves. EdTech is also enriching the classroom experience by consistently delivering high-quality audio-visual, interactive content that may supplement the teacher's knowledge and effectively capture students' attention.

School administrators, who supervise the implementation of the curriculum, play a vital role in structuring and developing schools and students. Furthermore, they are responsible for purchasing learning materials, which are essential for curriculum implementation. They are usually informed by teachers, students, and community members about the success of their curriculum. They can also make use of professional services to evaluate the performance of the curriculum.

In today's ever-changing technology landscape, parents have been found to play a vital role in monitoring their children's curriculum, filling in the gap between their children and the school administration by providing resources not available at the school. Teachers often accept the help of parents in monitoring a student's social and behavioural development, especially for special educational needs.

Social workers are known for their contributions to special schools and their students. These experts provide useful options when dealing with children of foreign origin or those who have disabilities. Often acting as members of school boards, community members are usually seen contributing various resources which are not found at school premises.

The government and the professional regulation commission are other stakeholders providing a license to graduates of different universities and colleges.

The multi-stakeholder approach is required to transform India's education system. In order to address this, and to improve the education system of India, the Ministry of Human Resource Development (MHRD) has launched the Integrated Teachers Training Programme, NISHTHA, National Initiative for School Heads and Teachers' Holistic Advancement.



Conclusion

EdTech has matured since the onset of the Covid-19 pandemic and this trend is expected to continue in the future as well. There are numerous possibilities for this as it is very much less expensive than traditional education (schools and colleges). There are various e-learning platforms available for students to receive high-quality education at the lowest possible cost. Because of the cost element, students from all economic levels and social classes may receive high-quality education with appealing graphics and knowledgeable professors.

According to a study, the industry is anticipated to experience a 6 per cent CAGR in student enrolment, bringing the market to over 53 million in FY25. The online lifelong learning industry will grow as well since the pandemic has mandated e-learning.

The government of India is doing its best to promote online learning through initiatives like the SWAYAM programme and DIKSHA. The NEP2020 has also emphasised the use of technology in education.

Adoption of better technological solutions enables the modern classroom to add various elements, such as a live-streaming camera, allowing schools to reach out to students who are geographically distant.

References

- Azim Premji Foundation. 2021. Education in India – The Context. (<https://azimpremjifoundation.org/content/education-india-%E2%80%93-context>).
- British Council. 2020. India's New Education Policy 2020: Highlights and opportunities. (<https://education-services.britishcouncil.org/insights-blog/india%E2%80%99s-new-education-policy-2020-highlights-and-opportunities>).
- Chakrabarty, Roshni. 2020. From 10+2 to 5+3+3+4: What does NEP's big shift in school education mean? India Today. ([https://www.indiatoday.in/education-today/featurephilia/story/from-10-2-to-5-3-3-4-what-does-nep-s-big-shift-in-school-education-mean-1713346-2020-08-20#:~:text=20%3A30%20IST,India's%20new%20National%20Education%20Policy%20\(NEP\)%202020%20is%20set%20to,3%2B3%2B4%20system](https://www.indiatoday.in/education-today/featurephilia/story/from-10-2-to-5-3-3-4-what-does-nep-s-big-shift-in-school-education-mean-1713346-2020-08-20#:~:text=20%3A30%20IST,India's%20new%20National%20Education%20Policy%20(NEP)%202020%20is%20set%20to,3%2B3%2B4%20system)).
- Chopra, Ritika. July 2020. Explained: India's National Education Policy, 2020. Indian Express. (<https://indianexpress.com/article/explained/reading-new-education-policy-india-schools-colleges-6531603/>).
- India Census. 2021. Literacy rate of India. (<https://www.indiacensus.net/literacy-rate.php>).
- Kaul, Anviksha. 2020. Impact of COVID-19 on School Education in India. Actionaid. (<https://www.actionaidindia.org/blog/impact-of-covid-19-on-school-education-in-india/>).
- Kumar, V. Sasi. 2021. The Education System in India. gnu.org. (<https://www.gnu.org/education/edu-system-india.en.html>).
- Kundu, Protiva and Sonawane, Shivani. 2020. Impact of COVID-19 on School Education in India: What are the Budgetary Implications? cbgaindia.org. (<https://www.cbgaindia.org/policy-brief/impact-covid-19-school-education-india-budgetary-implications/>).
- Ministry of Education. 2021. Education. (<https://www.education.gov.in/en>).
- Ministry of Human Resource Development. 2020. National Education Policy 2020. (https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf).

Mint. 2021. Covid-19 impact: School lockdowns have robbed a generation of upward mobility. (<https://www.livemint.com/news/india/covid19-impact-school-lockdowns-have-robbed-a-generation-of-upward-mobility-11631058490533.html>).

Nandini. July 2020. New Education Policy 2020 Highlights: School and higher education to see major changes. Hindustan Times. (<https://www.hindustantimes.com/education/new-education-policy-2020-live-updates-important-takeaways/story-yYm1QaeNyFW4uTTU3g9bjO.html>).

O'Neill, Aaron. 3 August 2021. Literacy rate in India 2018 by Gender Source. Statista.com. (<https://www.statista.com/statistics/271335/literacy-rate-in-india/>).

Pothula, Vijaya Mary. 2021. COVID-19's impact on education in India: It's not all bad news. globalsistersreport.org. (<https://www.globalsistersreport.org/news/ministry/column/covid-19s-impact-education-india-its-not-all-bad-news>).

TOI. July 2021. How the school and college education change after National Education Policy 2020. (<https://timesofindia.indiatimes.com/home/education/news/how-the-school-and-college-education-change-after-national-education-policy-2020/articleshow/77262107.cms>).

Transforming India. 31 July 2020. Achieve universal foundational literacy and numeracy in primary school by 2025. (<https://transformingindia.mygov.in/all-infographics/page/51/?lang=en§or=education-skills>).

Trines, Stefan. 13 September 2018. Education in India. WENR. (<https://wenr.wes.org/2018/09/education-in-india>).

UNICEF. 2021. Every girl and boy in school and learning. (<https://www.unicef.org/india/what-do/education>).

Vegas, Emiliana Vegas, Lee Sunhwa, and Shrestha, Unika. 2021. How has education technology impacted student learning in India during COVID-19? Brookings.edu. (<https://www.brookings.edu/blog/education-plus-development/2021/08/23/how-has-education-technology-impacted-student-learning-in-india-during-covid-19/>).

Appendix

ETNB <> KAS National Webinar 2021/Stats

REGISTRATIONS	YOUTUBE VIEWS	IMPRESSIONS
Zoom : 332	1,000 (Approx)	280,000 (Approx)
Linkedin Events : 240		







Indonesia

Paramadina Institute for Education Reform



Executive Summary

The government of Indonesia and its society highly recognise the key role of education in national development. The preamble of the 1945 Constitution states explicitly that educating the life of the people is one of the major goals of the state. In response to the Covid-19 crisis, the government has changed its policy in education. Government authorities issued the Joint Ministerial Decree (SKB) of Four Ministers on learning guidelines in yellow and green zones. Consequently, learning was conducted remotely in the red and orange zones, and in blended or face-to-face format in schools in the yellow and green zones.¹

In providing education during the pandemic, schools in Indonesia were grouped into three categories. The first category comprises schools that struggle to survive in providing education due to inadequate infrastructure and teachers' difficulties in using technology. The second comprises schools that survive in providing distance learning because their digital infrastructure is quite decent and the majority of their teachers are relatively literate in digital learning tools. The last comprises schools that thrive quite well in providing education.

To ensure continuity of learning at home, education authorities and institutions have joined forces with corporates and social organisations. Best practices and innovations shared by the participants include remote learning through radio broad-

¹ Zoning Color Descriptions: green zone is for neighborhoods without cases of Covid-19; yellow zone is for neighborhoods with one to two positive cases of Covid-19 over the last seven days; orange zone is for neighborhoods with three to five positive cases of Covid-19 over the last seven days; and red zone is for an area with more than five positive cases of Covid-19 over the last seven days. See <https://corona.jakarta.go.id/> for more detailed information.

casting, learning without internet quota programme, mobile learning service, mobile parenting, and learning through smart city/area infrastructures.

It is believed that ensuring learning continuity for every Indonesian child during the Covid-19 crisis requires a collaborative effort from all stakeholders in education. Thus, all actors in education at different levels should continue to work together to develop educational infrastructures and enhance teacher competency for quality education for all. It is essential to assist the most vulnerable groups of students and provide the necessary tools to families, teachers and schools to enable remote learning. In spite of the unprecedented uncertainty, we hope the pandemic will end soon so that children can return to school.

I. Introduction and Overview of Education in Indonesia

The government of Indonesia and its society highly recognise the key role of education in national development. The preamble of the 1945 Constitution states explicitly that educating the life of the people is one of the major goals of the state.

Article 31 of the Constitution further states that (1) every citizen shall be entitled to acquire education, (2) every citizen shall follow basic education and the government shall finance it, (3) the government shall undertake and shall conduct one national educational system, which shall enhance faith and piety as well as noble character in the frame of educating the life of the nation, and which shall be regu-



lated by laws, and (4) the state shall prioritise the education budget by allocating at least twenty percent of the state budget of income and expenditure.

In the law on the National Education System (No. 20/2003), education in Indonesia is formulated as “a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential in order to possess religious spiritual strength, self-control, personality, intelligence, noble character, as well as the skills needed by themselves, society, nation and state.” Thus, Indonesia is one of the few countries that have a detailed formulation of education in the preamble of its constitution.

However, the manifestation of the constitutional commitment to education is still far from ideal. Education is how we invest in the future of our nation and democracy and it calls for sincere political will, good policy and measured action. Education should be seen as an anchor, not as a sideline to development policy. The following data show that education in Indonesia is facing big challenges:

1. The Programme for International Student Assessment (PISA) Report

Since 2000, Indonesia has participated in education quality studies conducted every three years by PISA. The PISA results all show that Indonesia always ranks at the lower end. The newest PISA report released in 2019 showed that students in Indonesia scored lower than the OECD average in reading, science, and mathematics, and, thus, Indonesia ranked 74th out of 79 countries.²

Table 1: Indonesia’s Ranking in Programme for International Students Assessment (PISA).

Year	Indonesia’s Rank	Number of Participating Country
2009	57	65 Countries
2012	64	65 Countries
2015	64	72 Countries
2018	74	79 Countries

Source: OECD, 2019.

² Programme for International Student Assessment results from PISA, Organisation for Economic Co-operation and Development, 2019.

2. Low Funding in Education

The Ministry of Education and Culture (MOEC) considers that the twenty percent of the state budget of income and expenditure allocated for spending on education is still too low compared to the education budgets of the Organisation for Economic Co-operation and Development (OECD) countries. This is due to the fact that this twenty percent of the budget still has to be distributed to several ministries. So, the real budget for education spending is still relatively low. Even before, the twenty percent funds were also for salary expenses for educators and staff.

3. Inequality in Infrastructure Development and Human Resources in Education

Some regions have inadequate educational infrastructure, not enough qualified teachers, and an inequitable distribution of educators and staff. Many schools, especially in rural areas, are in great need of teachers, while schools in urban areas have a surplus of teachers.

Despite the challenges, the commitment of the government of Indonesia to educating whole persons for lifelong growth as mandated by the constitution remains high. Indonesia is one of the active countries supporting the agenda of education for all as promoted by the Sustainable Development Goals (SDGs) movement. To realise its contribution to the success of the education for all agenda, the Indonesian government, independently or in collaboration with international institutions such as UNICEF and UNESCO, continues to strive towards improving the quality of its education. Below are some of the programmes that have been conducted successfully:

1. Extending compulsory education to grade twelve, which is still ongoing.
2. Fulfilling allocating twenty percent of the state budget of income and expenditure for spending on education.
3. Involving the business community to support the education agenda through the Limited Liability Company Law, which, among other things, regulates Corporate Social Responsibility (CSR) funds.
4. Collaborating with UNICEF to develop the concept of a Community-Based Education Information System, the aim of which is to expand the distribution of and access to education.

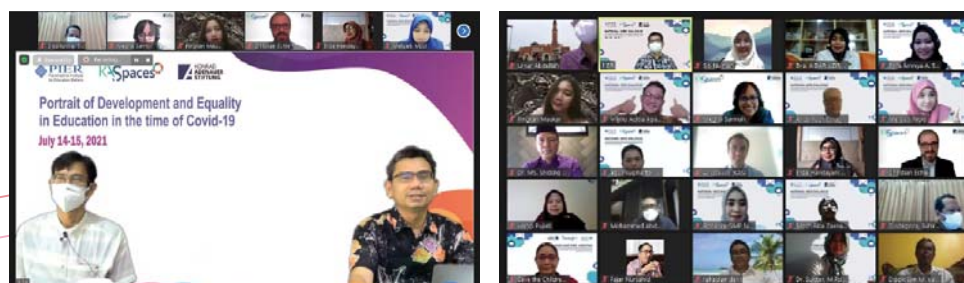
5. Collaborating with UNICEF to administer the *Creating Learning Communities for Children (CLCC)* programme, which is driven by the high rate of school dropout.
6. Eliminating child labour and returning children to school, which involves the Ministry of Social Affairs for the Family Hope Programme (PKH) and Ministry of Manpower for Reduction of Child Labour for the Family Hope Programme (PPA-PKH).

While good progress has been made towards the targets, quality education for all is still far from fulfilled in Indonesia. Inequality in infrastructure and lack of qualified teachers (in terms of quality, teachers in Indonesia ranked 14th out of 14 developing countries)³ remain unfinished problems. Unpredictable threats such as pandemics and natural disasters, which may occur in the future, will likely deepen the problems and in turn exacerbate inequalities in Indonesian education.

II. Impact of the Pandemic on Education

Coronavirus transmission (Covid-19) in Indonesia was first confirmed on 2 March 2020. President Joko Widodo announced that two patients from Depok West Java province had tested positive for Covid-19. Until the end of March 2020, life seemed relatively normal and concrete measures had not yet been taken by authorities to prevent the spread of Covid-19. After receiving a massive call for urgent and aggressive actions to combat the Covid-19 pandemic, including a country-wide lockdown, the government announced that Large-Scale Social Restrictions (PSBB), especially in the state capital, would come into effect on 15 April 2020. Since then, the state has changed its policies, including its policy on education.

Below are some of the impacts of the pandemic on education in Indonesia:



³ Global Monitoring Education Report. 2016. Education for people and planet: creating sustainable futures for all.

1. Policy Change in the Implementation of Education

In response to the pandemic, authorities have restricted interactions, including closure of public gathering spaces such as non-essential workplaces, schools and universities. To allow students to continue studying, the government issued the Joint Ministerial Decree (SKB) of Four Ministers on the learning implementation guidelines in yellow and green zones.

2. Change in Teaching and Learning Practices

The policy change has resulted in diverse teaching and learning practices across schools in Indonesia. By and large, the practices can be grouped into online, blended, and traditional face-to-face formats of learning. The first format took place in the red and orange zones such as Jakarta, Depok and Bekasi. The second was widely conducted in cities/districts in Java, rated as a yellow zone. The last was carried out in schools in green zones, including several districts in Papua, Kalimantan and East Nusa Tenggara provinces.

3. Change in Pedagogical Concepts and its Implementation

This can be seen, for example, in the implementation of the curriculum, the role of the teacher, the concept of a class, and the increasing number of actors directly involved in classroom instruction. In terms of curriculum, project- and task-based methods of teachings are believed to be more effective for remote learning. In distance learning, teachers play the role of guiding students through online learning activities and tasks using learning management systems and supported technological tools; learning can be done beyond the traditional classroom. Teachers are not the only “actor” that determines the success of learning; remote learning requires support from other stakeholders such as parents, the community and technological companies.

4. Increased Rate of School Dropout

The rate of children dropping out school has increased significantly during the Covid-19 crisis, and this is believed to be the direct impact of pandemic lay-offs. A UNICEF survey recorded that 1 percent or 938 children aged 7 to 18 years old in Indonesia had dropped out of school due to the impact of the Covid-19 pandemic. Of this number, 74 percent of the children dropped out of school due to financial problems because their parents were no longer working or did not have certain economic activities.⁴

III. Best Practices in Education during Pandemic

Despite the many challenges, there have been measured approaches and innovative actions by actors in education at different levels to ensure the continuity of learning for students during the pandemic. The following is a summary of experiences, best practices, and challenges shared by several provinces in Indonesia regarding the provision of education during the Covid-19 crisis, as shared by participants during the National Web Dialogue forum.

A. Infrastructure and Teacher Development

1. Government/Department of Education Policies

In fact, no local governments or education offices in Indonesia was fully prepared for effective remote learning. Conducting online learning was a spontaneous effort to ensure that learning continues to take place during the Covid-19 pandemic while ensuring that children are safe from virus infection. Therefore, when MOEC announced the implementation of education through online learning, school leaders responded to the call based on the existing infrastructure, which is far from adequate, and teaching staff, who are mostly not trained in online learning on digital platforms.

Local governments are also faced with budget limitations as budgets had been allocated long before the pandemic outbreak and proposing additional spending was

⁴ United Nations International Children's Emergency Fund (UNICEF). 2020. COVID-19 and children in Indonesia: An agenda for action to address socio-economic challenges.

not possible in the near future. In fact, several offices of education have received budget reductions for Covid-19 handling. In response to this situation, offices of education in cities and regencies across the country carried out their own strategies and policies to maximise their infrastructure and teacher development in order to keep up with the needs of remote learning. The policies and strategies include:

First, sharpening several policies that support education infrastructure that had been carried out before the pandemic outbreak. For example, MOEC has joined forces with the state-owned television network (TVRI) to broadcast the Learning from Home programme for early-childhood (PAUD), elementary, junior and senior high school students. Focusing on literacy, numeracy and character education, the programme is broadcasted from Monday to Friday with a three-hour duration per day: thirty minutes for PAUD, thirty minutes for grade 1 to 3 students, thirty minutes for grade 4 to 6 students, and thirty minutes each for junior and senior high school students. Local governments work in much the same way, i.e., utilising existing infrastructure to support education in their regions. For instance, before the Covid-19 outbreak, the mayor of Banjarmasin city, South Kalimantan, had launched the Banjarmasin as a Smart City Programme, the main emphasis of which was the development of more effective and efficient technology-based local government services. The Office of Education of Banjarmasin City used the budget and master-plan of the programme to support the development of educational infrastructure, which include free internet and Wi-Fi networks, e-libraries, and smart plazas.

Second, maximising the use of available funds for infrastructure investments and teaching staff development. This step was carried out by local education authorities across the country, e.g., Yogyakarta, Medan City, Bogor City, East Nusa Tenggara and other parts of Indonesia.

Third, making best use of the available budget while increasing the participation of the business community and socio-religious organisations. This step was taken by the Education Offices of Medan City, East Nusa Tenggara, DI Yogyakarta, and South Kalimantan, with various forms of activities.

Fourth, collaborating with other departments. For example, the Office of Education in Yogyakarta cooperated with the Office of Information and Communication, in the form of: fibre optic cable installation for remote learning, and increasing the quality of internet services through digital infrastructure development in 41 villages.

a. Infrastructure Investments Initiated by Local Governments

- Installation of a 300-kilometre fibre optic cable to connect Senior High Schools (SMA) and Vocational High Schools (SMK) in Yogyakarta to more stable internet services in order to support distance learning. This project was completed by the Yogyakarta Office of Communication and Information Technology to support the remote learning programme by the Yogyakarta Office of Education.
- Digital infrastructure development in 41 villages to improve the quality of 4G internet services in the province of DI Yogyakarta. This project was conducted by the Yogyakarta Office of Communication and Information Technology.

- Provision of Mobile Learning Service (MLS). This was an effort to solve online learning problems in remote areas with limited internet coverage. Educators and staff from the Education Office went to remote locations with cars equipped with servers, internet access, computer devices and other supporting tools to provide learning for students. The students accessed an education website (<http://www.jogjalearning.jogjaprov.go.id/>) that provides various educational contents. The MLS was provided by the Yogyakarta Office of Education.



- Designing and launching an online education website (<http://www.jogjalearning.jogjaprov.go.id/>). This was created by the Yogyakarta Office of Education to provide free and easy access to online learning.
- Utilisation of smart city infrastructures, including free internet and Wi-Fi networks, e-libraries, and smart city plazas, for remote learning on digital platforms in schools in the city of Banjarmasin.
- Provision of digital tools such as LCDs, laptops, tables, and Wi-Fi to schools by the Banjarmasin Office of Education in order to optimise smart infrastructure in schools.

- Provision of online learning through an education website (<https://www.basaruan.id/>) by the Banjarmasin Office of Education, similar to Yogyakarta and other areas.
- Different experiences and practices shared by the Education Office of East Nusa Tenggara. Rated as one of the least developed provinces in Indonesia, many areas in the province are still categorised as underdeveloped regions. Thus, accelerating infrastructure development in these regions during the pandemic was not possible. To ensure continuation of learning in these areas, the NTT Office of Education distributed laptops and computer servers, modems, and Wi-Fi access to schools, and provided pre-paid internet quota and tablets/smartphones for students in need.

b. Teacher Development Programme

- The Office of Education in each region has online programmes for teacher development. Pedagogical skills and knowledge of teachers were developed through programmes and contents available on the website managed by the Office of Education.
- The Office of Education in each region designed development and training programmes for teachers to enable them to use and integrate digital tools and platforms in their online classes. Digital literacy development programmes for teachers specifically focused on: developing the contents for online learning, designing online exam forms, use of Google Classroom, utilisation of online learning applications, and making interactive presentations.
- The development programmes also include designating teachers as a priority group for Covid-19 vaccinations (nationwide, out of 5.6 million teachers, about 1.7 million received the coronavirus vaccines by the end of June 2021)⁵.

2. School/Teacher Initiatives

The development of educational infrastructure and teachers was also carried out based on the initiative of schools and teachers. Private schools such as Lentera Harapan High School in Kupang, East Nusa Tenggara, and Darul Hikam High School in Bandung, West Java, developed their school infrastructures independently. These schools did not have problems with internet network and digital learning tools. Mostly from middle to upper socio-economic backgrounds, the students in these

schools easily adapted to the online learning model and platforms. The teachers in these schools were even able to develop Learning Management Systems (LMS), tailored to their class needs and lesson plans. Digital learning platforms such as Kahoot, Google Classroom, Microsoft Whiteboard, KineMaster, pen tablets, and others have become part of the teachers' and students' routine practices. To stimulate student motivation and achievement in remote learning, the teachers developed various learning innovations, such as videos for learning, quizzes, and online competitions.

While demanding a strong policy and reliable infrastructure support, teachers in public schools also worked hard to ensure the continuity of learning for their students. One participant, a senior high school (SMAN 1 Pajangan, Yogyakarta) teacher, shared how his school developed its educational infrastructure for online learning. SMAN 1 Pajangan contacted technological companies Microsoft and Google, and requested for technological support. Microsoft provided the school with software resources – Microsoft 365 accounts, which are needed for online learning through Microsoft Teams, Microsoft Sway, and others. Google, on the other hand, helped the school with free Google Suite accounts, which are for online learning through the Google Classroom platform.

3. Community Involvement

Community involvement may include the participation of business institutions, individuals, professional organisations, and community organisations. Two dialogue participants from North Sumatra province, the secretary of the Indonesian Teachers Association (PGRI) and the principal of SMPN (Junior High School) 38 Medan City, shared the active role of PGRI as a professional organisation in designing teacher professional development programmes to support distance learning during the pandemic. The programmes include teacher training aimed at: (1) changing teachers' mindsets and repositioning their role regarding the application of online learning, (2) upgrading teachers' knowledge in digital education, and (3) increasing teachers' skills in using the internet and digital tools for IoT-based learning.



In Jakarta, the Jala Samudera Mandiri Foundation, an NGO in education focusing on children's rights protection and on alternative education provision for out-of-school and street children, joined forces with the business community in Jakarta to mobilise CSR funds for education of out-of-school and street children in North Jakarta. The Jakarta International Container Terminal (JICT), one of the NGO's partners, provided internet-based educational infrastructure, including computers and servers. JICT also rented a site to serve as an administrative and learning control centre.

Save the Children (SC), an international NGO, was also involved actively in finding solutions and ensuring children's right to continue to receive an education. SC has initiated several programmes in West Java and East Nusa Tenggara, including the Distance Learning Programme without Internet Quota in West Java. In East Nusa Tenggara, SC promoted the use of radio-based instruction. The use of radio is an alternative and effective solution to provide distance learning for children living in the least developed and remote regions.

To sustain the education of children in remote areas, SC initiated a programme called "Teacher Visit." In this programme, trained volunteers in education and teachers were sent to remote areas where students live for home visits and to carry out face-to-face learning activities with a limited number of students, while complying with Covid-19 health protocols.

It is believed that ensuring learning continuity for every Indonesian child during the Covid-19 crisis requires a collaborative effort from all stakeholders in education. Thus, all actors in education at different levels should continue to work together to develop educational infrastructure and enhance teacher competency for quality education for all.

B. Inequality in Education

1. Inequality in Education: The General Facts

A good quality of education for all is the fourth goal of the 17 Sustainable Development Goals (SDGs) agenda. Has the pandemic affected inequalities in education? In fact, some children received a good quality of education, while others were excluded from quality education during the Covid-19 crisis. The dialogue participants acknowledged such inequalities in the education system. Below are some of the inequalities affected by the pandemic:

First, inequalities existed long before the pandemic due to gaps in development, as can be seen from the difference in quality of infrastructure between cities on the island of Java and cities on other islands. The difference is even wider when compared to the infrastructure investments in the eastern part of Indonesia, where most of the least developed regions are located.

Second, the infrastructure disparity has systemically contributed to the greater inequalities in the provision of education during the pandemic. The inequalities have even worsened in the least developed regions, due to inadequate infrastructure, a high poverty rate, and a low quality of education. When schools were forced to transit from face-to-face to online learning as a result of the Covid-19 outbreak in the regions, the education services were suspended and the continuity of education, online learning in particular, remained uncertain. As an illustration, several districts (e.g., Bengkulu, Muara Enim) in Sumatra Island, which are not classified as underdeveloped areas, may experience power outages several times a day with uncertain timing; some blackouts are short but others can stretch for hours or days. The situation is likely to be worse in the rural and least developed areas. How can online learning be effective?

Third, to a certain extent, disparity in development and economy does not only occur between Java and the other islands in Indonesia. For example, in Jakarta, the capital of Indonesia and the benchmark for economic growth in Indonesia, we can find a huge socio-economic disparity between the richest and the rest. Some city dwellers could earn 100 million rupiah per day, while many others strive hard just to get 50 thousand rupiah in daily earnings, which is barely enough to buy food for a day. This condition leads to the emergence of private schools, which offer certain



educational services and facilities. Some private schools equipped with excellent facilities and offering a high quality of education were built but only the richest can go there due to the high tuition fees. On the other hand, low-cost schools flourished in Jakarta because low-income parents chose to send their children to the schools. As low-cost educational institutions, the schools do not have good educational facilities and are often not managed professionally. Thus, many of the schools were not able to provide online learning effectively because their digital facilities were inadequate and most of their students had no gadgets to participate in online learning.

Three months into the pandemic outbreak, many companies announced lay-offs, running a business got harder, companies were closed, and so on. With increasing inequality in access to education, many children in Jakarta decided to quit schooling to help their parents survive and reduce expenses. One year after the first pandemic outbreak, the number of unemployed workers and the number of people struggling with their finances are rising rapidly (see data from UNICEF, UNDP, Prospera, and SMERU, 2021).⁶ The pandemic has profoundly deepened pre-existing economic disparities, which have in turn exacerbated inequalities in education in Indonesia.

2. School Category in Providing Education during the Pandemic

The forum revealed how schools in different parts of Indonesia ensure the continuity of learning for every Indonesian child during the pandemic. The schools fall into the categories as follows:

The first category comprises schools that struggle to survive in providing education due to severe limitations in infrastructure (technological tools, internet connectivity, electricity shortage) and teachers' digital literacy. These are the schools located in rural and remote areas. To cope with the situation, schools administered learning through:



⁶ UNICEF, UNDP, Prospera, and SMERU. 2021. Analysis of the Social and Economic Impacts of COVID-19 on Households and Strategic Policy Recommendations for Indonesia.

- a. Home visits: teachers and/or volunteers were sent to remote areas where students lived for home visits and to carry out face-to-face learning activities with a limited number of students, while complying with Covid-19 health protocols.
- b. Remote learning through radio broadcasting.

The second category comprises schools that survive in providing distance learning because their infrastructures are quite decent and the majority of their teachers are relatively literate in digital platforms. These are the schools located in cities and the more developed areas in Indonesia.

- a. Learning was mostly conducted remotely on digital platforms.
- b. To support online learning, education authorities provided an educational website that could be accessed by students from home.
- c. Some learning activities were conducted through Remote Learning without Internet Quota, using special devices and softwares that enable students to access teaching and learning materials. This mode of learning was aimed at helping students from low-income families.

The third category comprises schools that thrive quite well in providing education during the pandemic. These are top private schools and the best public schools, equipped with good teaching infrastructures and having high-quality teachers.

- a. Teaching was online; learning quality was maintained because schools, teachers and students own adequate digital learning tools and are literate in their use.
- b. The schools and their communities were also prepared for the blended learning format, with a good classroom management system coupled with strict social distancing and health protocols.

C. New Actors in Education

It is worth noting that one of the dialogue delegates from Jakarta criticised the use of the term *new actor* for technology or digital tools, which, to her, sounds not quite right. Technology has existed in the field of education for years. In fact, schools in Jakarta had already incorporated digital tools and learning platforms in their routine teaching practices before the pandemic. However, the role of technology is increasingly more crucial during the Covid-19 pandemic because gathering in public spaces, including in schools, were prohibited and education has transitioned to online learning on digital platforms.

Apart from that, exchanges during the dialogue indicate that several actors at different levels were actively involved in providing learning during the Covid-19 crisis. These actors are as follows:

1. Corporate



Business has already been involved in many aspects of public education for a long period of time; however, business participation in driving education change is often indirect. Distribution of Corporate Social Responsibility funds is among a company's indirect involvement in education. The Sustainable Development Goals have called for corporates to play a more active role in achieving the 17 SDGs in Indonesia.

Jala Samudera Mandiri, an NGO in education, is a partner for companies in Jakarta that mobilises the distribution of CSR funds for school building renovations, computer and language laboratory assistance, and school greening programmes.

Meanwhile, other technological companies were directly involved with online learning in schools. For example, Google and Microsoft support schools with free accounts for several of their products that facilitate remote learning. Google Classroom and Microsoft 365 are two digital tools widely used in distance learning during the pandemic.

2. Social Organisation

In Indonesia, there were many social and religious organisations that played an important role in supporting teachers to adapt to new teaching modalities and children's education during the crisis. The involvement of the organisations is usu-

ally indirect. For example, PGRI in Medan organised teacher training and development for online teaching. The Indonesian Teachers Association (IGI) hosted online teacher development programmes on the use and application of digital tools and platforms in remote teaching.

In other cities, non-profit social organisations were also actively involved in providing financial aids and scholarship to children whose parents were laid off due to the pandemic. These institutions included *BAZNAZ*, *Lembaga Amil Zakat Nasional*, and *Dompot Dhuafa*. *BAZNAS* stands for Indonesia's National Zakat Agency, which is the alms (*zakat*) management body formed by the Indonesian government. *Lembaga Amil Zakat Nasional* is very similar to *BAZNAZ* but it is formed and managed by social organisations of Islamic communities. *Dompot Dhuafa* is a non-profit organisation that raises the social dignity of the poor through *Zakat*, *Infaq*, Almsgiving, Waqf, and other clean legal funds.

3. Digital Learning Platforms

Digital learning platforms have become an important factor in distance learning during the Covid-19 emergency as most remote learning, both online and offline, relied heavily on digital platforms. Teachers in the dialogue pointed out the crucial role of digital platforms in supporting distance learning, especially in schools equipped with stable internet networks and adequate infrastructure. Most of the teachers were able to transition to the new teaching modalities without significant obstacles; many of them had in fact already used the tools in their routine teaching practices before the pandemic.

The forum further chronicled how the participants viewed the emergence of digital learning platforms in their daily teaching practices. The views are summarised below:

a. Digital Learning Platform as an Essential Instructional Tool

The participants viewed the existence of digital learning platforms as important instructional tools that no longer limit learning only to the classroom, and allow teachers and students to access learning resources from wherever they are and whenever they choose. Digital learning platforms enhance teacher knowledge and creativity, allow reciprocal interaction between teacher and students and among students, and motivate students to study independently and generate curiosity about knowing things. Considering the possible threat of pandemics and disasters in the future, delegates from West Java province recommended the use of blended

learning as the standard learning format in the Indonesian education system after the pandemic.

b. Selective Attitudes in the Use of Digital Learning Platforms

Schools and teachers must be selective in using digital platforms, with regard to user privacy, security and data protection in particular. Schools must take serious measures to support teachers and students so that they are able to engage with digital learning platforms in a safe and responsible way. When collaborating with technological companies that offer their learning platforms, schools must ensure that the platforms are in line with instructional goals, student needs, and school characteristics. Schools should not be trapped by the business interests of digital platform developers.

c. Strengthening Teachers as Role Models

Education is much more than a transfer of knowledge; it is values and character building. Cultivation of values and character is a fundamental part of learning activities. One of the effective ways to promote values and character development is through a teacher's daily conduct in class and beyond. Therefore, teachers must strive to strengthen their position as role models for their students.

IV. Conclusion

The Covid-19 pandemic has disrupted the education system in Indonesia. In line with the experts' analysis, the dialogue participants voiced concerns about the learning-loss generation. Some children faced learning difficulties due to unequal access to technology, connectivity and digital resources. Consequently, they received a poor quality of education and acquired little knowledge.

Meanwhile, some schools in urban areas that were able to provide good remote learning were faced with the situation that the children were tired of online learning and parents were in a state of anxiety about their children spending too much time with digital gadgets. Importantly, education analysts expressed concern that online learning can only transfer knowledge but cannot nurture the values and character of students.

It is essential to assist the most vulnerable groups of students and provide the necessary tools to families, teachers and schools to enable remote learning. In spite of the unprecedented uncertainty, we hope that the pandemic will end soon so that children can return to school.

Below are the important points concluded from the national dialogue:

1. Despite serious challenges and disparities in quality, efforts have been taken by actors in education at different levels (authorities, schools, teachers, and communities) to ensure the continuity of learning for every Indonesian child during the pandemic.
2. In providing learning during the pandemic, schools in Indonesia can be categorised as follows:
 - Schools that struggle to survive in providing education due to severe limitations in infrastructure (technological tools, internet connectivity, electricity shortage) and teachers' digital literacy. These are the schools located in rural and remote areas. To cope with the situation, schools administered learning through home visits.
 - Schools that survive in providing distance learning because their infrastructures are quite decent and the majority of their teachers are literate in digital platforms. These are the schools located in cities and in the more developed areas in Indonesia. Learning was mostly conducted remotely on digital platforms.
 - Schools that thrive quite well in providing education during the pandemic. These are top private schools and the best public schools, equipped with good teaching infrastructures and having high-quality teachers. Teaching was online.
3. Education authorities and institutions have joined forces with corporates and social organisations to ensure that learning at home during the pandemic continues effectively. Below are the collaborative efforts:
 - The authorities of Jakarta collaborated with internet providers in supplying free and affordable internet quota.
 - The state-owned television network (TVRI) joined forces with MOEC to broadcast the Learning from Home programme for early-childhood (PAUD), elementary, junior and senior high school students, which covers literacy, numeracy and character education.

- PGRI in Medan teamed up with local education authorities to host teacher development programmes.
4. Best practices and innovations shared by the participants through the forum include:
 - Providing remote learning through radio broadcasting (East Nusa Tenggara Timur - NTT province).
 - Providing learning without internet quota programme, using special devices and softwares that enable students to access teaching and learning materials (West Java province).
 - Hosting mobile parenting - NGOs in education reached out to parents and trained them on how to help their kids learn from home (East Nusa Tenggara Timur - NTT province).
 - Creating smart city/area (Banjarmasin city, Kalimantan Selatan province)
 - Providing mobile learning service (Yogyakarta province).
 5. Education in Indonesia is facing serious challenges, including unequal access to infrastructure, increased rate of school dropout due to pandemic lay-offs, and a low quality of teachers; all of which are difficult to solve in the near term and will likely intensify inequalities in education in Indonesia.
 6. However, we are hopeful of significant progress in the future that would help ease the above-mentioned challenges for the following reasons:
 - The government is committed to accelerating progress in education, as reflected in the steady increase of the education budget.
 - Public awareness and engagement in education have increased significantly.
 - The government through its policy has stipulated the least developed regions as the priority area of development.



- The government has increased teacher salaries and incentives to boost teacher performance and improve the quality of education.
- The number of internet users in Indonesia is growing rapidly (196.7 million users as per Q2 of 2020)⁷ and network coverage is larger.

⁷ Laporan Survey Internet 2019 – 2020 [Q2], APJII, 2020.

References

- APJJ. 28 July 2021. *Laporan survey internet 2019 – 2020 [Q2]*. <https://apjii.or.id/survei>.
- Global Monitoring Education Report. 2016. *Education for people and planet: creating sustainable futures for all*. <https://unesdoc.unesco.org/ark:/48223/pf0000245752>.
- OECD. 2019. *Programme for international student assessment (PISA) results from PISA*. https://www.oecd.org/pisa/publications/PISA2018_CN_IDN.pdf.
- Putri, S. 20 May 2021. *How to check Covid-19 red zones in Jakarta*. <https://corona.jakarta.go.id/en/artikel/ini-cara-mengetahui-zona-merah-covid-19-di-jakarta>.
- UNICEF. 2020. *COVID-19 and children in Indonesia: An agenda for action to address socio-economic challenges*. https://www.unicef.org/indonesia/sites/unicef.org/indonesia/files/2020-05/COVID-19-and-Children-in-Indonesia-2020_0.pdf.
- UNICEF, UNDP, Prospera, & SMERU. 2021. *Analysis of the Social and Economic Impacts of COVID-19 on Households and Strategic Policy Recommendations for Indonesia*. Jakarta.
- Widyanuratikah, I. 8 June 2021. Jumlah guru yang sudah di vaksin 1,7 Juta. *Republika*. <https://www.republika.co.id/berita/qudtpk384/jumlah-guru-yang-sudah-divaksin-17-juta>.







Japan

Tokai University
CSO Network Japan



1. Overview of Education in Japan¹

The education system in Japan is compulsory, with six years of primary school and three years of junior high school. The enrolment in high school is 95.5 per cent (98.8 per cent if correspondence courses are included). The Ministry of Education, Culture, Sports, Science and Technology (MEXT) determines the curriculum guidelines, which are applied in primary and secondary schools. The textbooks for elementary through secondary schools are subject to certification by the Ministry of Education.

University enrolment has risen significantly through high economic growth from 1955 to 1972. The percentage of students entering university or college was the highest ever, at 58.6 per cent, in 2020, according to the MEXT's Basic School Survey.

Japan is facing an ageing society and a declining population, with the population of 18-year-olds peaking in 1992 and declining ever since, to 1.14 million in 2021. The decline is particularly significant in the north of Japan: the three prefectures of Aomori, Akita and Fukushima. In addition, parents in city areas choose to send their children to more expensive private schools, with 25 per cent of children in Tokyo attending private secondary schools. Altogether 7.4 per cent of all secondary school students attend a private secondary school. The disparity between megacities and rural areas is increasing. The MEXT is promoting inclusive education; however, the number of students (primary and secondary students) who are studying in special schools in 2018 was 143,379.

The education of students from multiple cultural backgrounds is an essential issue in Japanese society today. Students are expected to study at a school in the mu-

¹ Kyoko Ichikawa, Junior associate professor, School of Health Studies, Tokai University.

nicipality where they are resident. However, boards of education might not have accurate data about the number of children who have immigrated to Japan. The quality education for all children, including migrants, also presents a big challenge for Japanese society.

Framework of Symposium

How Can We Create Inclusive and Equitable Quality Education in Japan?

The symposium was addressed through three phases and frameworks. During the first phase, we discussed the increasing disparities and the poverty of children in Japanese society. More economically deprived families were also more affected by the Covid-19 pandemic and have less access to Information and Communications Technology (ICT). In the next phase, we facilitated a discussion on how equitable and inclusive education could be created in schools. We also discussed how the Sustainable Development Goals (SDGs) should be instilled in school education. The implementation of ICT in schools and teacher development were also discussed concerning the Global and Innovation Gateway for All (GIGA) school policies.

The third phase focused on community engagement for a more equitable and higher quality education system and the role of new actors in education, including non-profit organisations (NPOs). In light of the current discussions under these three frameworks, the symposium promoted a discussion on social policies and how education and the welfare system can collaborate to reduce inequalities for children.



Figure 1: Three phases of concept.



The symposium was presented by a diverse stakeholder group working with children, including school teachers, the board of education, actors of social education, academics with scholarships and non-profit organisations.

2. Impact of the Pandemic on Education²

At the end of February 2020, in response to the prime minister's request, the Ministry of Education, Culture, Sports, Science and Technology asked elementary and secondary schools to close. Most school boards followed this request, while others explored alternatives. Nationwide closures continued for about three months. Schools made efforts not to stop students' learning, such as distributing handouts and worksheets, creating videos, and teaching online using e-meeting services.

However, only a limited number of schools could provide students with sufficient and effective online learning opportunities. According to the OECD's 2018 Programme for International Student Assessment (PISA), about 80 per cent of 15-year-old students in Japan had never used digital devices in school lessons³. Thus, most schools were far from ready to implement online teaching. This resulted in the acceleration of the Global and Innovation Gateway for All (GIGA) programme, the policy for providing PCs/tablets to students, and the installation of high-speed internet connections in schools nationwide.

² Yuichi Furuta, Associate professor, Department of Life Design, Osaka International College.

³ National Institute for Educational Policy Research. 2019. Key Features of OECD Programme for International Student Assessment 2018 (PISA 2018). (https://www.nier.go.jp/kokusai/pisa/pdf/2018/01_point-eng.pdf).

The pandemic also revealed other irreplaceable roles that schools played in the society. Schools provide students with a space for personal and social connections; when students were shut out of school, they lost a core place to meet with their peers and talk with teachers. Teachers tried to connect with students online, contact them by phone, or make home visits.

After months of closure, schools finally resumed, but with restrictions and challenges. Japanese schools have non-subject special activities (known as *tokkatsu*), but during the coronavirus crisis, some activities such as sports festivals, chorus contests, and field trips were ceased or greatly restricted. Teachers also needed to make up for delays in learning. The underlying problem is the so-called “crowded curriculum,” – that is, there is too much content to cover.

Looking at higher education, many universities and colleges have introduced remote classes. While these may have been at least partially successful, students had little chance to interact with peers on campus, engage in hands-on experiences, or participate in extracurricular activities.

The pandemic has shed light on the multiple roles and aspects of schools, as well as the characteristics and challenges of Japanese education systems.



3. Best Practices

I. Infrastructure and Teacher Development⁴

The Covid-19 pandemic has led to school closures in many countries around the world, and Japan is undergoing major changes in education, including the implementation of the new Courses of Study and the GIGA school concept. In this context, the focus on improving the capacity of educators, which is one of the priorities for achieving inclusive and equitable education in a post-coronavirus society, is significant. Furthermore, based on the international trend of “Build Back Better”, it is important to link the areas of priority, such as the transformation of the learning environment, the empowerment of young people, and the improvement of teachers’ abilities. Furthermore, when we examine the role of education in the creation of society, we need to reconsider the role of teachers.

Considering these circumstances, this session will discuss the role of teachers in the post-coronavirus society from the three standpoints of teachers, boards of education, and social education under the theme of “Education and ICT utilisation for the SDGs”, focusing on the following points based on case studies:

- (a) Roles of teachers, school boards, and social education for the SDGs
- (b) Formation of the qualities and competencies of “teachers” in implementing the new Courses of Study and realising the GIGA school concept.

A. Challenges in Niigata⁵

Mr. Motegi, Chief Guidance Officer, Niigata City Board of Education, Niigata Prefecture, presented a topic of concern from the perspective of educational administration: the necessity of changing teachers’ views on education due to the revision of the Courses of Study, and the educational reform efforts implemented by Niigata using ICT as a proposal for the future.

With the revision of the Courses of Study, new initiatives have started in schools all over Japan, with full implementation in elementary schools from last year and in junior high schools from this year. In the past, the guidelines were based on the principles of “knowledge, virtue, and body” and emphasised content, but the

⁴ Sayaka Matsukura, Teacher, Inagakuen Junior High School.

⁵ Tomohiro Motegi, Supervisor of school education, School Support Division, Niigata City Board of Education.

revised guidelines now emphasise the qualities and abilities of “what to learn, how to learn, and what to be able to do”. In addition, to realise curricula that are open to society, schools and society are required to share issues and aim to realise a better society through education.

On the other hand, it is undeniable that the reorganisation and implementation of curricula has increased the burden on and conflicts of instructors, especially schoolteachers. To realise a sustainable society in today's rapidly changing society, it is necessary for the government, schools, parents, communities, and children to change their traditional views on education and foster a growth mindset. To this end, Niigata has taken on the challenge of “changing the mindset within the organisation”. With strong support from both the leadership and bottom-up, the city has been able to shift to a growth mindset by verbalising each person's dreams and hopes.

As a concrete measure, we reorganised and coordinated the departments related to the Board of Education, aiming to break away from the vertically divided administration model. In addition, as overseas travel is difficult due to the Covid-19 situation, we have launched an international exchange programme using an online platform, and are conducting exchanges with eight cities in five countries as an online exchange programme for youth. As part of the class reforms in line with the implementation of the new Courses of Study, on-demand delivery, web delivery, and online training have been introduced in addition to face-to-face training, and the city's shared cloud has been used to share teaching materials so that teachers can choose how and when to participate in training.

B. Education for SDGs⁶

Ms Eno Nakamura, Executive Director of Development Education Association and Resource Center (DEAR), gave a presentation on how to interpret the SDGs, how to proceed with SDGs learning, and the necessity of facilitation as a proposal for the future. In recent years, with the increasing recognition of SDGs, many learning programmes dealing with SDGs have been developed in various situations, such as schools, companies, and local governments. To understand the “SDGs” when promoting the study of them, she focused on the preamble of the UN document “Transforming our world”, which includes the SDGs, and stated the necessity of focusing on the two key phrases “leave no one behind” and “transformation” in the

⁶ Eno Nakamura, Executive Director, Development Education Association and Resource Center (DEAR).

agenda, based on the current unsustainable situation of the earth as described in “The World Today”.

Considering this, it was stated that a step towards change would be to question what is wrong with today’s education, how to change it, who education is for, and the structure of education itself, while at the same time asking whether people (teachers) who have been raised and taught under the values of an unsustainable society can actually teach about a “sustainable society”.

As a suggestion for the future of SDGs learning, she suggested that teachers should put the dignity of children first, and nurture the concept of inclusion, which is to create an environment where diverse opinions can be shared, and solutions can be found through dialogue. Furthermore, teachers should play a role in encouraging children to become “citizens” and take action to change society.

The role of teachers requires “facilitation”. It was also proposed that teachers themselves need to share social issues and aim for social participation and social transformation as citizens.

C. Role of Teachers for Realising the Sustainable Development Society⁷

Ms Sayaka Matsukura, an English teacher working at a public school in Japan, introduced a case study of a junior high school that implemented a whole-of-school approach to learning about the SDGs and working towards the realisation of a sustainable society.

In the case study of global citizenship education, each student was allowed to take responsibility for their own learning by leaving the decision concerning the content and method of learning to the students, such as what to focus on and how to proceed. As a result, the teachers were able to change their traditional views of education and entrust learning to the students. She also cited cases where the use of ICT made it possible for children to take the initiative in learning and to develop their own learning attitude.

Many teachers carefully plan their lessons and make necessary preparations with the best of intentions. However, the more they plan, the more they end up with plans that do not match the reality of the children, and the more they end up with

⁷ Sayaka Matsukura, Teacher, Inagakuen Junior High School.

teacher-led classes. These concerns can be seen in many aspects of school education, and they also hinder child-centred classes.

Therefore, it was suggested that in future educational activities, teachers should also take the perspective of learners who learn, worry, and think, and create a curriculum together with the children. In doing so, it would be effective to share issues with society and create learning, rather than confining learning to the school, and there are expectations that learning will be based on the idea of creating a better society through education. In this case, the role of the teacher is not only that of a teacher or instructor, teaching new knowledge, but also that of a facilitator, drawing out and connecting learning. They are also supporters of students' learning and researchers in the research of teaching materials. She suggested that we need to re-examine what and how we should change in the education system to realise a sustainable society.

II. Inequality in education⁸

To achieve the "quality education for all" SDG, it is necessary to address educational and social inequalities in Japan. In her keynote speech, Dr. Abe clarified the disparities in the circumstances among children in Japan, and highlighted that vulnerable children and families are more affected by the Covid-19 outbreak. She also emphasised that poverty and inequality among children should be eliminated so as to achieve quality education for all. In a presentation and the subsequent discussion at the symposium, Dr. Minoru Sawada described how equitable education for all could be implemented and shared the visions of education and teacher development.

Mr. Touru Nagase and high school students described how they managed school closures in the face of a sudden pandemic. Additionally, high school students engaging with their communities and enabling their ideas to be realised is filling in for some of the losses resulting from the pandemic. Mr. Taira Suzuki revealed that both vulnerable children as well as teachers and social workers who provide support often face the issue of isolation. Therefore, practitioners must collaborate beyond their respective fields and co-create to ensure that no one is left behind.

A. Effects of Covid-19 on Children in the Era of Inequality⁹

Context

Contrary to the popular image, Japan is not an equal society. Its relative poverty rate is 15.4 per cent for the whole population and 13.5 per cent for children under 18.¹⁰ The child poverty rate increased from 10.9 per cent in 1985 to 16.3 per cent in 2012, and then decreased until 2018, aided by an unusually long economic boom. However, it is expected to rise again after the Covid-19 outbreak in 2020. The latest figures have not yet been released, but numerous reports indicate that the Covid-19 crisis had more severe effects on families in the low economic strata compared to those in the middle to high economic strata. Some of these findings are presented in section 3 of this report.

Inequality in Education

Poverty is associated with various problems that children may encounter, including low academic performance, low interpersonal skills, low self-esteem, and risky behaviours such as absenteeism and delinquency. In a survey of more than 8,000 students aged 10-11, 14-15, and 16-17 in four districts in Tokyo conducted in 2016, for students belonging to the households in the lowest economic standing (constituting about 7 per cent of the sample), as much as 30 per cent of 10-11 year olds and 50 per cent of 14-15 year olds responded that they did not understand classes often, mostly, or never.¹¹ More than 30 per cent of 14-15 year olds who responded that they did not understand classes said that they had started to lag behind during elementary school.

Among students from low economic standing, the survey also found a large deficit in educational resources such as studying desks, places to do homework at home, and a personal computer connected to the internet. In short, even before the Covid-19 crisis, there was a considerable inequality of educational resources and, consequently, a disparity in the academic performance of children according to their economic status. However, schools were not able to reduce this inequality or even

⁹ Aya Abe, Professor, Department of Behavioral Social Sciences, Graduate School of Humanities, Tokyo Metropolitan University & Director of Research Center for Child and Adolescent Poverty.

¹⁰ The definition of poverty rate is the share of the population whose equivalent household disposable income is below the poverty threshold, which is defined as 50 per cent of the national median of equivalent household disposable income. Ministry of Health, Labor, and Welfare. 2020. 2019nen Kokumin Seikatu Jittai Chousa Kekka no Gaiyo. (<https://www.mhlw.go.jp/toukei/saikin/hw/k-tyosa/k-tyosa19/index.html>).

¹¹ Tokyo Metropolitan University. 2017. Kodomo no Seikatsu Jittai Chousa Houkokusho. (<https://www.fukushihoken.metro.tokyo.lg.jp/joho/soshiki/syoushi/syoushi/oshirase/kodomoseikatsujittaityousakekka.html>).

to address this issue, as apparent from the fact that students who could not keep up with classes in elementary school were left unattended to even when they were in junior high school.

Effects of Covid-19

In response to the outbreak of the Covid-19 pandemic in March 2020, Japan, as in most other countries, declared a national emergency and most schools were closed from March to May 2020. Even though classes were resumed after a few months, the closure of schools for such a long duration was unprecedented, and its impact on children is mostly unknown. Schools are not only a place to study, but also a place where children interact with other children and society in general. The initial report from a survey of 10-11 year olds in Tokyo found that the impact of school closures was also unequal. First, economic impacts, such as loss of income and job, decreases in work hours, and changes in work hours and place, were all experienced by poor households more often than non-poor households.¹² Moreover, the survey also found that the psychological and behavioural impacts of school closures were also more severe among poor children than among non-poor children.¹³ For example, poor children were more likely to be left alone at home, more likely to spend too much time on games and smartphones, and more likely to be depressed and feeling lonely¹⁴ than their non-poor peers.

However, the government policy response to Covid-19 has been mostly in the areas of economic assistance, and very little has been done in the areas of behavioural and psychological follow-up of children. It is likely that another pandemic will strike in the future and it is critical to formulate policy responses with the understanding that measures such as school closures may have negative side effects on children and that it is not only important to protect children from the disease, but also from these negative impacts.

¹² Ohta-ku. 2021. Reiwa 1 nen Kodomo no seikatsu jittai ni kansuru anke-to chousa Houkokusho. (https://www.city.ota.tokyo.jp/kuseijoho/ota_plan/kobetsu_plan/fukushi/kodomo_seikatsu_plan/kodomojittai_20210517145614116.html).

¹³ Ibid.

¹⁴ Ibid.

B. Toward Socially Just Education: The Semantic of “Looseness” in Education¹⁵

In this short article, I aim to clarify the practice of schools which conduct socially just education in late modernity by reinterpreting the three politics of recognition, redistribution, and representation according to the theory of social justice by Nancy Frazer.

The politics of recognition lie in the cultural dimension of social justice, that is, upwardly revaluing disrespected identities and the cultural products of the maligned groups or recognising and positively valorising cultural diversity. This can be interpreted as the idea that the existence of various minorities shall be affirmed, and their human rights shall be guaranteed.

The politics of redistribution lie in the economic dimension of social justice, which refers to the political dynamics and strategies concerning economic redistribution in redressing the unfairness of economic inequity. This includes the redistribution of income, the reorganisation of the division of labour, and the subjecting of investments to democratic decision-making processes.

The politics of representation lie in the political dimension of social justice, which indicates the politics of guaranteeing the right to a voice in collective decision-making. In this context, globalisation is forcing us to reconsider the notion of the nation and to guarantee the political voice of “the voiceless”. Immigrants and refugees best exemplify this group, but other categories of diverse minorities should not be overlooked.

How can we arrange this theoretical framework so that it can be applied in the context of public education policy and educational practices in each school?

The politics of recognition can be reinterpreted as implying that we should aim to build educational systems and school organisations that explicitly include children and young people with diverse attributes and backgrounds. The keyword “inclusion” could be applied to its conception. This education approach would aim to be inclusive not only concerning disabilities, but also in terms of socioeconomic status, race and ethnicity, gender, sexuality, and other attributes and backgrounds.

Regarding the politics of redistribution, it is important to provide support for economic capital through school subsidies and scholarships. Meanwhile, we should

¹⁵ Minoru Sawada, Professor, Faculty of Human Sciences, Sophia University.

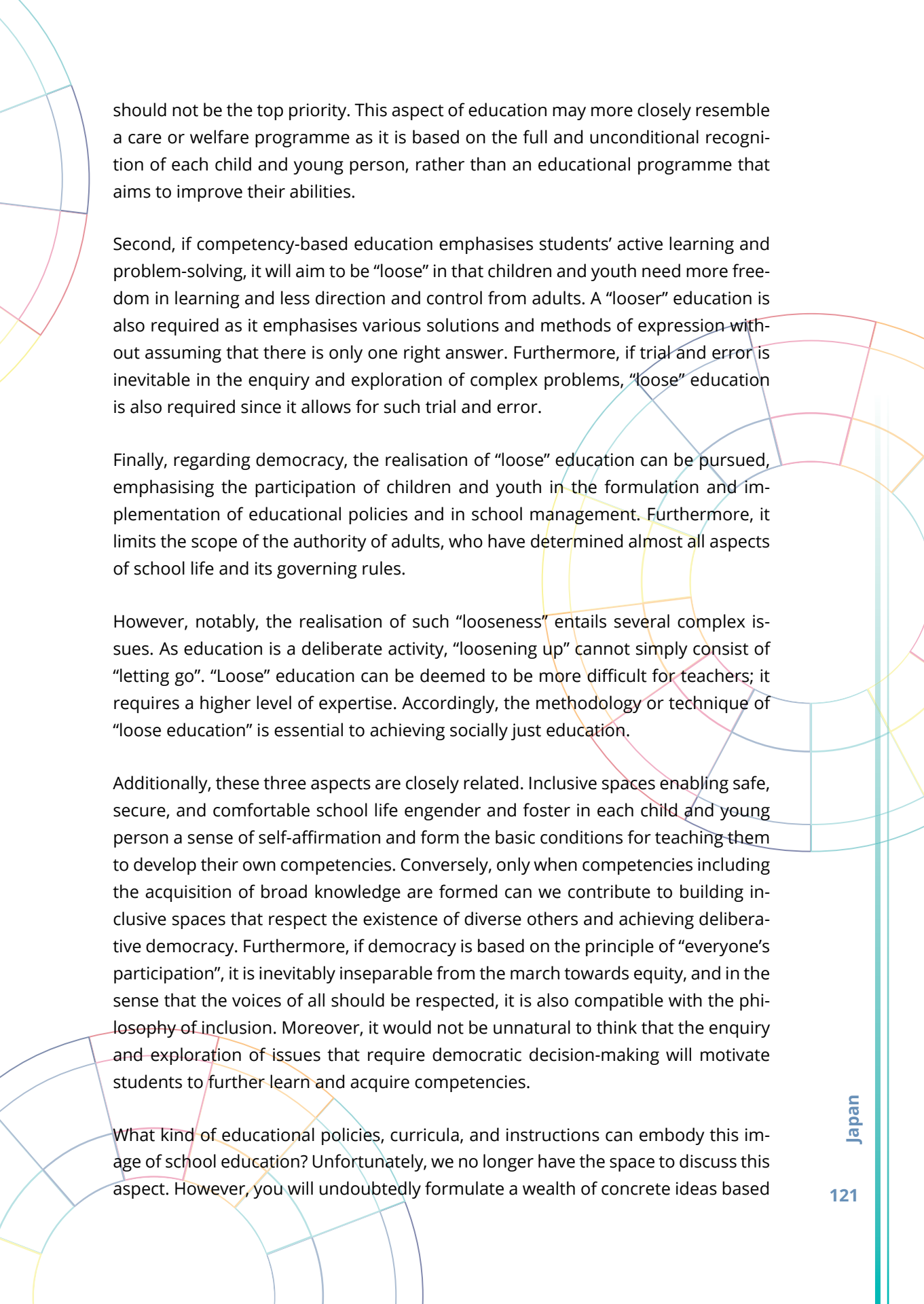
focus on the formation and guarantee of academic skills as cultural capital, considering the primary mission of educational institutions. The politics of redistribution, therefore, can be reinterpreted as a strategy to correct the disparities and inequalities in the acquisition of skills that are considered important and effective in the society concerned. Furthermore, they attempt to systematically provide children and youth from more disadvantaged backgrounds with the appropriate educational support to acquire the necessary skills in our society. In the 21st century, the ability to tackle the sustainable development goals and other ambiguous or grey-area issues for which there is no simple right or wrong solution is becoming essential for all citizens. Thus, it can be said that the ability to tackle such complex challenges is becoming essential for all citizens. It will then be necessary for all schools to develop applied, cross-curricular, cross-disciplinary, interdisciplinary, transferable, transversal, noncognitive, and soft skills. I aspire to apply the keyword “competency” to the idea hereby emphasised.

The politics of representation can be reinterpreted as a strategy to ensure that the voices of all children and young people, who used to be voiceless in various decisions regarding the content and methods of school education, are reflected in those decisions, and the keyword “democracy” can be applied to the philosophy hereby emphasised. This would enable children and youth to participate in the decision-making process of school education and express their opinions through deliberation.

If Fraser’s vision of a just society based on the politics of recognition, redistribution, and representation can be adapted to the theory of school education as described above, then such education can be called “socially just education” rather than “education for social justice.” “Education for social justice” may imply that education is a means to achieve social justice. However, schooling that embodies the principles of inclusion, competency, and democracy, in the sense described above, not only contributes to the realisation of social justice, but can also be regarded as being itself socially just.

How can we depict the reality of a socially just education that embodies the three principles mentioned above? Let us briefly summarise what each of the three principles refer to in educational policies and practices. Their common and key concept is “loose”.

First, inclusive education is “loose” in that it recognises and respects diverse ways of being that have not been included by conventional standards. It is a “loose” place in that the existence of each child and youth is affirmed on the premise that “it is okay even if you cannot do something”; that an ability such as academic skills



should not be the top priority. This aspect of education may more closely resemble a care or welfare programme as it is based on the full and unconditional recognition of each child and young person, rather than an educational programme that aims to improve their abilities.

Second, if competency-based education emphasises students' active learning and problem-solving, it will aim to be "loose" in that children and youth need more freedom in learning and less direction and control from adults. A "looser" education is also required as it emphasises various solutions and methods of expression without assuming that there is only one right answer. Furthermore, if trial and error is inevitable in the enquiry and exploration of complex problems, "loose" education is also required since it allows for such trial and error.

Finally, regarding democracy, the realisation of "loose" education can be pursued, emphasising the participation of children and youth in the formulation and implementation of educational policies and in school management. Furthermore, it limits the scope of the authority of adults, who have determined almost all aspects of school life and its governing rules.

However, notably, the realisation of such "looseness" entails several complex issues. As education is a deliberate activity, "loosening up" cannot simply consist of "letting go". "Loose" education can be deemed to be more difficult for teachers; it requires a higher level of expertise. Accordingly, the methodology or technique of "loose education" is essential to achieving socially just education.

Additionally, these three aspects are closely related. Inclusive spaces enabling safe, secure, and comfortable school life engender and foster in each child and young person a sense of self-affirmation and form the basic conditions for teaching them to develop their own competencies. Conversely, only when competencies including the acquisition of broad knowledge are formed can we contribute to building inclusive spaces that respect the existence of diverse others and achieving deliberative democracy. Furthermore, if democracy is based on the principle of "everyone's participation", it is inevitably inseparable from the march towards equity, and in the sense that the voices of all should be respected, it is also compatible with the philosophy of inclusion. Moreover, it would not be unnatural to think that the enquiry and exploration of issues that require democratic decision-making will motivate students to further learn and acquire competencies.

What kind of educational policies, curricula, and instructions can embody this image of school education? Unfortunately, we no longer have the space to discuss this aspect. However, you will undoubtedly formulate a wealth of concrete ideas based

on your own context. As a writer, I would be most grateful if you could utilise this article to share your ideas with those around you, and to engage in lively discussions and trial and error to realise them.



III. Inequality in Education and New Actors: The Role of Civil Society in Education for Respect for Diversity and Human Rights¹⁶

The purpose of this session was to consider the current situation of children and youth in Japan from the perspective of “Equity in Education” and to discuss the expected role of new actors in public education.

First, Dr. Yukiko Furuya of CSO Network Japan discussed the need for respect for human rights and diversity so as to realise “Equity in Education”. Next, Ms Iki Tanaka of YSC Global School introduced an educational support programme for children with overseas roots and outlined what the government and citizens should do. Mr. Noriaki Koshiba of the Kurobe City Social Welfare Council then introduced another case study of a community welfare education programme at a local high school, where students think and work together on issues of diversity in the community.

Based on the three presentations, Dr. Minoru Sawada, Professor, Faculty of Human Sciences, Sophia University gave his comments. During the Q&A session with the audience, it was confirmed that “Equity in Education” needs to be addressed by society as a whole, and that new actors are expected to play a role as a bridge between social issues and public education. The moderator was Dr. Masako Hasegawa, Executive Director of CSO Network Japan.

A. Realising Equity in Education in the Entire Society¹⁷

Ensuring “equity in education” is essential for realising a fair society. “Equity in education” means that each individual should be able to enjoy quality learning and be provided with sufficient opportunities to complete the educational process. In fact, it is estimated that 170 million people could be lifted out of poverty if all students in low-income countries graduated from school with basic academic skills.

There are people with disabilities and children and youth in conflict and disaster situations who are at risk of not being able to access education. Respecting the human rights of these people is important for ensuring “equity in education”. The basic human rights are “those without which a human being cannot live as a human being” and are rights common to every person, regardless of race, ethnicity, or gender. The right to education is one such right. In addition, human rights need to be considered in the context of society and in relation to others, and it is necessary to understand that such rights of oneself and others are mutually influential. As a result, we should recognise and respect each other’s differences, which will enable us to achieve “equity in education”.

There are two possible approaches to achieving “equity in education”. The first is the compassionate approach, which is a method to spread the idea of respect for human rights through people’s “compassion”. The second is the rights approach, in which the vulnerable claim equality as a right and others respect it, thereby ensuring “equity in education”. Although “compassion” is necessary, the “rights approach” is also essential, considering how human rights have been acquired. Specifically, given that what the vulnerable fought for to restore their humanity is “right”, the “rights approach” should also be adopted in ensuring “equity in education”.

¹⁷ Yukiko Furuya, Chairperson, CSO Network Japan.

In the field of human rights education, are we sufficiently taught the background of the concept of human rights and actual discriminations? It is necessary to convey the history of the acquisition of human rights while examining the discriminations that occur in reality. In addition, since “equity in education” is a social issue, society as a whole needs to take action to empower individuals and teachers.

B. Practice of YSC Global School¹⁸: Educational Support Project for Children with Overseas Roots¹⁹

YSC Global School provides Japanese language teaching and learning support for children with overseas roots, that is, children of any nationality whose parents or one of their parents is from overseas, so that they can learn Japanese with confidence. It also provides educational support so that they can go to school with peace of mind and choose their own career path.

Learning support is essential for children with overseas roots to prevent them from falling into a negative cycle. If neglected, children who cannot understand Japanese may not be able to keep up with their studies at school and may end up not attending school or losing educational opportunities. Furthermore, if they do not acquire their mother tongue ability sufficiently, they may have difficulty in abstract thinking and may become desperate because of the difficulty in having dialogues with others.

To break this negative cycle, there is a need for support for children with overseas roots, such as learning support. However, such support is currently insufficient. In fact, as of 2018, 10,000 of the 51,000 children enrolled in public schools who need Japanese language instruction do not receive any support. Moreover, there is a disparity in the level of support for children with foreign roots among regions. For example, in areas where there are many foreign residents, support such as Japanese language classes and multilingual information is sufficiently provided, while in areas where there are few foreign residents, such systems are not sufficiently in place.

The right of children with overseas roots to receive the same education as Japanese children is also not sufficiently guaranteed. The Ministry of Education, Culture, Sports, Science and Technology states that, “while foreign children are not obliged to attend compulsory education, if they wish to attend public compulsory

¹⁸ YSC Global School is an educational support programme for children with overseas roots, run by the NPO Youth Support Center.

¹⁹ Iki Tanaka, Director of the Division of Immigrant Support, NPO Youth Support Center.

education schools, they will be accepted free of charge, just like Japanese children, and will be guaranteed the same opportunities to receive education as Japanese children". Nevertheless, in reality, the rate of children with overseas roots who do not attend school is high, and the rate of those who enter high school is low. In addition, as of 2019, there were as many as 19,000 children of compulsory-education age with foreign nationalities whose school attendance status has not been confirmed by local governments.

Although the Japanese government has been working to improve the Japanese language teaching system in schools, there is a high dependence on support from volunteers, non-governmental organisations (NGOs), and NPOs. In recent years, it has also become difficult to continue these activities due to the ageing of volunteers and financial difficulties.

In addition, children with overseas roots face emotional barriers between themselves and Japan. They are hurt by discriminatory words such as "go back to your country" or "you are good at using chopsticks", which, even if they are not meant to discriminate, do make them feel the barrier.

In Japan, the percentage of the population with overseas roots is expected to reach 12 per cent by 2065, and it is essential to realise "equity in education" for children with such roots. To do so, it is important not only for the government to implement initiatives, but also for citizens to increase the number of "allies" who understand children with overseas roots and support them with concrete actions.

C. Community Welfare Education Based on Community Development that Supports Diversity²⁰

The Council of Social Welfare aims to continue discussing and thinking about the happiness of society as a whole. The Kurobe Council of Social Welfare is working to involve various sectors in its activities. By utilising data and ICT, it is working to make its activities easily understood by many people in the community. Even though there are multiple projects, by making them visible, citizens' awareness may be raised and the hurdle for participation may be lowered. The project aims to encourage people to engage in activities with a sense of community unity.

²⁰ Noriaki Koshiba, Director of Management Strategy Section, General Affairs Division, Kurobe City Social Welfare Council.

Some of the specific initiatives are as follows:

(a) Change meetings to be participatory

Regional planning meetings were previously formal approval meetings, and the participants were mainly elderly men (representatives of organisations and groups). These meetings have been transformed into workshop-type discussion forums where people of various generations and genders could participate.

(b) Presenting community plans to citizens in a simple and understandable way

The “Activity Plan for Improving Welfare in Kurobe” was previously a long and difficult-to-understand plan. It has been compiled into a colourful and easy-to-understand summary pamphlet with an ingenious design. In addition, a dashboard has been created to visualise indicators based on data, creating a system that allows all citizens to check changes in the community.

(c) Efforts to incorporate the opinions of people of all ages through the use of ICT

A programme has been implemented to learn about regional problem-solving in the classes of Sakurai High School in Toyama Prefecture, and workshops are being conducted to visualise regional issues and to think about what the region will be like ten years from now.

Online classes using Zoom are being conducted with high school students who have difficulty coming to the meetings due to Covid-19. Now that the workshops are online, instructors and companies in distant locations can also participate, so that there are more opportunities for learning. In addition, the students are less tense, so they are able to express their opinions frankly in a relaxed atmosphere.

4. Conclusion²¹

Education in the VUCA society

Today's world is in a situation of VUCA (Volatility, Uncertainty, Complexity and Ambiguity). That is why we are faced with the importance of educational reform. The Board of Education (BOE) is currently implementing various transformations. First, the BOE is in the process of moving from content-based education to competency-based education. Second, schoolteachers are promoting curriculum management. Third, schoolteachers are involved in active learning. Finally, schools are being linked with their local communities.

The achievement of the symposium

Throughout the symposium, we achieved several horizons. First, we must explore what the SDGs' aims are in classes from a critical thinking perspective. The concept of the SDGs and the development history of the SDGs should be continually and critically examined. The framing of the SDGs requires scrutiny to ensure that they are sympathetic to minorities and vulnerable groups. Second, individualised and collaborative learning are essential to actualised learning outcomes. This means exploring how learning could be optimised on an individual basis, rather than through the acquisition of common content. Schoolteachers should further develop their abilities so as to enhance their capacity to provide authentic learning to their students. Third, in order to ensure quality education and sharing for all, it is essential to reduce the disparities in Japanese society. As Dr. Abe has identified, almost one out of every seven children in Japanese society is living in a situation of relative poverty. The Japanese government faces an urgent necessity to not only focus on investing in and creating new policies for education, but also to develop a comprehensive social policy for equity education. The Japanese government is currently preparing to create a Children's Ministry, although it should be carefully observed to ensure that it is not just a decoration but a truly transformative instrument. Forth, collaboration among boards of education, schools, community organisations and residents should be prioritised to address the disparity of education of children. Co-creation through cross-disciplinary partnerships is essential for the resolving of issues affecting children.

²¹ Kyoko Ichikawa, Junior associate professor, School of Health Studies, Tokai University.





Malaysia

Penang Institute



Executive Summary

While leaps have been made in national education, Malaysia remains acutely aware of the need to improve its education system. As a result of the Covid-19 pandemic, deep-rooted challenges in education have only intensified, and will continue to, due to school closures and poor access to remote learning.

The Beyond National Education Conference, held on 29 and 30 September 2021, brought together education stakeholders to identify issues, discuss best practices, and construct a shared vision for education.

Best practices identified from the conference are:

1. Embed social-emotional skills in teachers' training.
2. Invest in excellent pedagogical training.
3. Equip teachers as coaches.
4. Recognise and develop affordable micro-credentialing courses.
5. Equip households with key enablers for learning to take place.
6. Form partnerships to address broad challenges.

These best practices are being implemented by non-state local actors, who have emerged as trailblazers and champions of educations in Malaysia:

1. Institutions offering micro-credentials.
2. Civil society organisations and social enterprises.

In particular, the Finnish experience also highlighted the importance of decentralisation in education. It showed that local authorities and schools can play pivotal roles in creating quality education, if empowered with the necessary skills and given sufficient autonomy to organise their resources.

Introduction to Education in Malaysia

Malaysia is one of the largest investors in education. For the past 10 years, the country has been spending upwards of 16 per cent of total government expenditure on education. The average of upper middle income countries is 14.2 per cent.¹

The progress of national education in Malaysia has been remarkable. At the time of its independence in 1957, only 8 per cent of Malaysians had attained secondary-level schooling or higher, and 56 per cent had not had schooling. By 2010, the tables had turned. Malaysians without formal schooling were 9 per cent of the population. Those with secondary education or above were 76 per cent.²

According to the National Education Philosophy for Malaysia (1988), the school curriculum “is committed to developing the child holistically”, and this includes intellectual, spiritual, emotional and physical aspects. The national school system pushes these forward through mandatory participation in at least one sport, one club and one uniformed body activity in secondary school. Moral Education or Islamic Education is also compulsory for all students.

However, gaps remain to be addressed. Education inequality is high. Undocumented children in Malaysia do not have access to formal education. Gaps in education access and quality continue to exist between rural and urban households, as well as between high- and low-income families. Employers also lament a serious skills gap issue, and a workforce that has no interest in continued learning. These are symptomatic of unresolved root issues, and stall the progress of human development.

¹ The World Bank. 2019. Government expenditure on education. (https://data.worldbank.org/indicator/SE.XPD.TOTL.GB.ZS?most_recent_value_desc=false).

² Ministry of Education. 2013. Malaysia Education Blueprint 2013-2015.

Beyond National Education Conference

While leaps have been made in national education, Malaysia remains acutely aware of the need to improve its education system. The Beyond National Education Conference, held on 29 and 30 September 2021, brought together education stakeholders to identify issues, discuss best practices, and construct a shared vision for education.

A total of 60 participants and 17 panellists were part of the conference. The learnings are captured in this report, and organised as follows:

- a. Impact of the pandemic on education.
- b. Best practices:
 - i. Infrastructure and teachers' development.
 - ii. Inequality in education.
 - iii. New actors in education.

Impact of the Pandemic on Education

The learning crisis had already been going on before Covid-19. Every two minutes, one student drops out in Malaysia. Given that 86.8 per cent of occupations in Malaysia require *Sijil Pelajaran Malaysia* (SPM) as a minimum qualification, effectively, 40,000 Malaysian students annually will be shut out from the overwhelming majority of jobs in the country, thereby creating socio-economic risks and perpetuating poverty³.

The learning crisis and inequalities in education have only intensified, and will continue to, as a result of the pandemic, due to school closures and poor access to remote learning.

³ UNICEF. 2021. Slides presented at Beyond National Conference.

Learning loss

Learning loss is one of the most visible impacts of the pandemic on education. It is the combined effect of school closures and poor learning infrastructure at home.

In total, Malaysia has had 37 weeks of full school closures and 11 partial closures, one of the longest in the world⁴. As of May 2021, parents want their children to return to school, instead of attending online classes (82.5 per cent), mainly due to the lack of study spaces at home (49 per cent), and an inability to supervise their children's learning (43 per cent).⁵

Households, whether urban or rural, were ill-equipped for online learning when the pandemic struck. According to Universiti Malaya, nearly half of national secondary school students in Malaysia attended classes intermittently or not at all.⁶ This means that almost half of the country's students lost a year of education. Official surveys by the Ministry of Education show similar results.⁷

On-the-ground experience from panellists also showed that poorer families did not expect school closures to last when initially announced, and held off the purchase of digital devices for learning. When it became clear that the pandemic had taken a turn for the worse in Malaysia, families purchased smartphones, but siblings were forced to share them, and more often than not, the eldest children sitting for important examinations were prioritised at the cost of their younger siblings' education.

Greater education inequality

The issue is complicated by the fact that the more deprived a child is, the harder it is for them to return to school. Children are generally more exposed to social risks, such as crime, teenage pregnancy, and malnutrition, while out of school. They also receive fewer essential resources since schools provide much more than education alone. The experience of UNICEF showed that students had less nutrition and opportunities to develop social skills as a result of school closures.

⁴ UNESCO. 2021. Global monitoring of school closures. (<https://en.unesco.org/covid19/educationresponse#du-rationschoolclosures>).

⁵ UNICEF. 2021. Families on the Edge (Issue 4).

⁶ The Star. 2021. PdPR: How effective is it?

⁷ The Edge. 2021. Effectiveness of PdPR method at moderate level, says MOE. (<https://www.theedgemarkets.com/article/effectiveness-pdpr-method-moderate-level-says-moe>).

The impact of the pandemic has hit the vulnerable segments of society especially hard. Female-led households, which have always had lower standards of living, were most affected by school closures. Children from those families were more likely to lose interest in their studies due to long periods of lockdown (65 per cent of female-led households versus 61 per cent of total households).⁸ Parents of lower-income households also were at a loss as to where they can find learning content for children, and needed help understanding the national curriculum.

In response, UNICEF has emphasised the need for countries like Malaysia to:

- a. Bring all children back to schools safely.
- b. Develop cohesive policies to remedy learning loss.
- c. Empower teachers.



It will be an uphill battle. It entails correcting the current trajectory of children who have dropped out of school entirely or attended intermittently, addressing insufficient education budgets, and making large shifts in education policy. Nonetheless, the conference made it clear that change can begin at the local level, led by

⁸ UNICEF. 2021. Families on the Edge (Issue 4).

non-governmental actors such as community leaders, social enterprises and corporates.

Best Practices

Three key themes raised during the Beyond National Education Conference were:

1. Infrastructure and teachers' development.
2. Inequality in education.
3. New actors in education.

The following sections detail best practices and insights relevant to each theme. These are based on real-world examples presented in the conference by social enterprises, non-profit organisations, and educators.

Infrastructure and teachers' development

Students were not the only ones to struggle during the pandemic. Teachers found themselves ill-equipped to transition to digital learning. Digital illiteracy, previously a minor nuisance in a world with physical classrooms, is now a tall wall that stands between teachers and their students in a virtual classroom.

Panellists also highlighted long-standing issues such as teachers' classroom management skills, pedagogy, social-emotional skills, and autonomy. Discussions of these topics were distinctively shaped by the collective observation that teachers' roles have evolved. In an age where data is freely available, no longer are teachers deliverers of information, but curators of it and coaches. As their roles change, so do skills required in a classroom.

Embed social-emotional skills in teachers' training

Students who find it challenging to learn are typically those who have a bad relationship with learning. Due to past experiences, they judge themselves as bad at learning (low self-efficacy), and are unwilling to try again.

Social-emotional skills are crucial in any classroom setting, whether it is online or offline, because teachers mediate students' relationship with learning by first connecting with students, and establishing good teacher-student relationships.

Further, teachers are best placed to become the first point of contact whenever students experience emotional issues, and to create a safe space for them to process their feelings.

Despite the importance of social-emotional skills in the classroom, teachers are ill-equipped to manage emotions in the classroom, whether these are positive or negative ones.

Case study: Teach for Malaysia

Teach For Malaysia (TFM), an independent, non-profit organisation that works with the Ministry of Education to develop leaders in education, has been gradually incorporating more self-development modules for teachers in their training in relation to social-emotional skills. Teachers are taught the importance of managing their own emotions and their students', as well as methods to do this. To crystallise the training, TFM has developed a guidebook for teachers specifically on social-emotional skills.

As an example, TFM teachers conduct a temperature check during the first few minutes of classes to assess students' well-being. The activity also conveys the message that it is acceptable to express and talk about feelings in a healthy way, especially in Asian contexts where emotions are normally hidden from public view.

Invest in excellent pedagogical training

Case study: Finnish education system

Recognising that all educators share the same goal, to develop the child holistically, the Finnish education system develops better teaching performance by trusting its teachers to teach in ways that are best for their students.

As a result of the trust afforded to them, teachers are not expected to submit reports for regulation on a frequent basis, and have a large amount of control over what goes on in their classrooms. School inspections were removed in the 1990s⁹. This is in contrast to teachers in Malaysia who spend close to 30 per cent of their time on administrative work and reporting, at the expense of lesson-planning or teaching¹⁰.

Crucially, the basis for this trust is the amount of learning teachers in Finland are put through. Equipped with high levels of training, even new teachers are given a lot of trust to choose appropriate methods for their classrooms. The education system recognises that students learn in different ways. Therefore teachers need to be flexible and discerning enough to identify suitable learning methods for their students. To be able to do this, teachers have to understand the different pedagogical tools, which include design thinking, flipped learning, spaced learning, play-based learning, digital tools, and gamification, amongst many others.

Teachers are also trained to adopt teaching methods based on research and evidence. Experimentation is what drives the Finnish education system forward. Successful methods are shared and implemented in other classrooms and schools.

The decision to decentralise decision-making in education plays a key role in enabling effective teaching. Reforms in the 1990s empowered local municipalities, teachers and principals to take the best course of action for their students.

⁹ Centre for Public Impact. 2019. Education reform in Finland and the comprehensive school system. (<https://www.centreforpublicimpact.org/case-study/education-policy-in-finland>).

¹⁰ Malay Mail. 2014. Malaysian teachers spend 29pc of their time on admin work, says study. (<https://www.malaymail.com/news/malaysia/2014/06/26/malaysian-teachers-spend-29pc-of-their-time-on-admin-work-says-study/694769>).

Equip teachers as coaches



The massive amount of information on the internet means that teachers are increasingly required to teach students *how* to learn, and to deliver information in curated, engaging ways.

One of the concerns of Malaysian society is that its citizens lack a desire to pursue lifelong learning. Massive Open Online Courses (MOOCs) are frequently touted as the technology that will finally democratise education and make it available to anyone, anywhere, at accessible prices. But they may fall short of expectations because of the lack of lifelong learners.

The process of building a learning society begins as soon as the child starts to learn, and teachers play key roles. Lifelong learning requires a high level of discipline, and the ability to self-direct the learning process. These are skills that need to be taught by teachers.

Case study 1: Finnish education system

The Finnish education system places emphasis on classes being student-led. Teachers are expected to teach students to take ownership of their own learning. This is so that students would become lifelong learners, able to self-direct their learning after formal education has ended.

Case study 2: Arus Academy

Arus Academy is a social enterprise that wants to “empower today’s problem-solvers to create a brighter future for themselves and everyone else around them”¹¹. The organisation creates content that prompts students to think about who they are, and how individuals are interconnected. It emphasises the importance of purposeful teaching that helps students appreciate the subject matter, arouse their curiosity, and inject meaning into what they are learning.

One of the ways it has done this is through project-based learning. The Global Citizenship Education Projects, created together with the Ministry of Education Malaysia and UNICEF Malaysia, ties school syllabus to current events and the Sustainable Development Goals. This allows students to see how classroom content helps them understand the world around them, and the impact their solutions can make.

¹¹ Arus Academy. (<https://arusacademy.org.my/>).

Box 1: **Creating Engaging Digital Content: What's Important?**

Interactivity

The content must require input from students.

Educational

The content should be clearly mapped to the syllabus.

Students need to understand what they are learning, and the purpose behind it.

Meaningful

Students should be able to see relevance in the content, and be able to relate to it.

Example: Voices of the Covid Generation

(Taken from Arus Academy's website)¹²

"Voices of the Covid Generation (VOCG) was a response to the lack of avenues for our children to process and make sense of the new normal. The learning journey aims to alleviate confusion about the pandemic by taking students through an educational experience to understand the different elements of Covid-19; its origin, spread, science and its effect on the way we live. Beyond that, students get to explore how Covid-19 affect countries, communities and individuals differently and explore the role they can play collectively in facing the global crisis to galvanise positive changes.

VOCG is a programme that uses a project-based approach using Covid-19 as the central theme with learning objectives aligned to 4 subjects within Malaysia's national curriculum and Global Citizenship Education (GCED).

VOCG wants to make meaningful remote learning by having both online and offline programme delivery for students across the nation. The online version is a website (self-learning platform) and the offline version is a physical VOCG Box via postage. The outcome of the programme aims to empower students to find strength and a role in adversity and to build advocacy around giving space to children to express thoughts and ideas even in times of emergencies.

The current cohort involves 19 VOCG Leaders (teachers) and 200 students from all over Malaysia and the programme is inclusive of all types of students to participate; those with tech access and without, special needs children and students from community centres.

Students' responses in the form of reflections and ideas are curated and showcased on World's Children Day through a virtual interactive exhibition on our platform. The programme aims to bring out 6 different voices namely Hopeful, Reflective, Empathy, Leader, Innovative and Creative voices to help them express emotions, ideas and reflections in regards to the global pandemic."

¹² Arus Academy. 2021. Voices of the Covid Generation. (<https://arusacademy.org.my/web/voices-of-covid-generation-vocg/>).

Inequality in education

In Malaysia, the vulnerable segments of society have always been most affected by negative shocks. Although all Malaysian households were affected by school closures, the poorest and most deprived were the least able to shield themselves from its negative effects. For example, children from female-led households were more likely to lose interest in their studies due to long periods of lockdown (65 per cent of female-led households compared to 61 per cent of all households)¹³.

The issue is complicated by the fact that the more deprived a child is, the harder it is for them to return to school¹⁴. Children are generally more exposed to social risks, such as crime, teenage pregnancy, and malnutrition, while out of school. They also receive fewer essential resources such as shelter, food, or medical attention, and lack opportunities to develop social skills since schools provide much more than education alone. Deprived households depend on these ancillary resources far more than others.

School closures have widened not only the education gap, but also the welfare gap, both now and in the future, as childhood education shapes the trajectory of life outcomes. This too will have implications for the long-term growth of a country.

Furthermore, inequality in education is growing because of the changing nature of the job market. Individuals are increasingly required to possess tertiary qualifications and technological skills. The pandemic has quickened the shift towards digitalisation, and displaced workers find themselves ill-equipped to adapt.

Recognise and develop affordable micro-credentialing courses

Micro-credentialing, short-term and targeted courses are one possible solution to reskilling and upskilling the workforce. These are often suitable for adults because they can be taken outside of work hours, and owing to their shorter duration, are affordable too. Short-term courses are particularly well-placed to support those transitioning from school to the workplace, or the unemployed, to reduce frictions in the labour force.

¹³ UNICEF. 2021. Families on the Edge (Issue 4).

¹⁴ UNESCO. 2020. How many children are at risk of not returning to school?

Large scale recognition of these courses at workplaces will help increase interest in micro-credentials. However, this is still a work-in-progress in Malaysia.

Care should be taken that these courses remain a viable option for low-income households; otherwise, micro-credentials may only serve to exacerbate the ongoing inequalities.

Case study: Forward School

Forward School is a local institution offering online and on-campus training for digital skills. Its founder, Howie Chang, aims to make education accessible to anyone, anywhere.

To achieve this, the school is mindful about scaling appropriately. Over the course of the pandemic, course recordings were made available online so that students can revise anywhere.

However, it recognises that quality education also needs to retain the human touch through student-teacher interactions, something that is not scalable. The school intentionally allocates sufficient office hours to provide this.

The duration of courses range from two months, for a specific skill such as data science, to two years, for a full-time software engineering course. To accommodate working adults' commitments, some of the courses take place during weekends.

Forward School makes its courses affordable by:

- a. Working together with the Human Resource Development Corporation, a government body that subsidises corporate trainings.
- b. Offering various scholarships, some of which are made possible through partnerships with corporate funders.

The school curates course content in tight collaboration with local and regional industry partners, and deploys experienced instructors, so that study outcomes are relevant to the local job market. The school also actively connects students and alumni to employers to address structural challenges in the labour market.

Equip households with key enablers for learning to take place

One of the effects of the pandemic was to alert us to the necessity of infrastructure. The abrupt loss of the physical school, and along with it, its classrooms, canteens, exercise books, whiteboards etc., have forced upon everyone a rethinking of the essential enablers of education.

The experience of panellists at the conference shows that both urban and rural households in Malaysia face immense challenges with virtual classes because of the lack of study spaces, internet access and devices. At the same time, families experience income drops that can result in intense emotional stress and poorer health, both of which affect learning outcomes too.

Case study 1: Yayasan Generasi Gemilang

Yayasan Generasi Gemilang is a charity organisation that seeks to meet the educational needs of the most vulnerable in society. Before the pandemic, it offered tutoring classes in person. This changed with Covid-19 lockdowns, however. In the early stages of the pandemic, Yayasan Generasi Gemilang made the quick decision to pivot onto a virtual platform.

The charity conducted a needs-assessment survey with its existing students and families during its planning. The survey revealed that devices and internet connectivity were large hurdles.

In addition, it also showed subtle inequalities happening within households and non-infrastructure constraints:

- a. In households with several children but limited devices, younger siblings were deprived of education because older siblings had upcoming national level examinations. Their classes and usage of devices were thus prioritised.
- b. Households were under immense stress because of income loss. Children were affected through poorer nutrition and the ongoing emotional stress that other family members experienced.

Yayasan Generasi Gemilang acted swiftly by providing devices with internet connectivity. More crucially, it also dealt with intra-household education inequalities by creating more tutoring time slots.

The charity recognised that malnutrition and stress at home affected learning too, and that children could not study effectively if their most basic needs were not met. It was necessary to address these issues alongside the obvious lack of access to education.

To overcome these challenges, Yayasan Generasi Gemilang provided grocery packs for a total of 428 families for 15 weeks. They alleviated family stress and helped contribute to a better family environment at home. They also reduced the desperation to take just any paying job and allowed parents to make decisions that were in the best interests of their families. This is aligned with UNICEF's call for a wider social protection framework, so that families can make healthier decisions for themselves.

In addition, to create a sense of normalcy for children, the charity also provided students with offline learning packs.

The experience of Yayasan Generasi Gemilang shows how education involves the whole family. Tackling the emotional stress of family members is just as important as providing students with the necessary infrastructure.

Form partnerships to address broad challenges

Many of the conference panellists highlighted the importance of breaking silos, in order to tackle issues that involve multiple stakeholders.

Case study 1: YTL Foundation

YTL Foundation is a good example of how good partnerships can bridge gaps. Over the course of the pandemic, the charity worked in tandem with a broad range of stakeholders to overcome infrastructural gaps in education in Malaysia.

It partnered with FrogAsia, an edtech, to develop a mobile app for learning. App content is gamified to engage young learners effectively. Content creation was done together with Teach For Malaysia, MyReaders and other education providers.

To overcome device and internet access issues, YTL sponsored mobile phones and collaborated with Yes, a network provider. In total, the initiative gave more than 100,000 mobile devices and 450,000 data sim cards to students and teachers.

The effort resulted in students in marginalised communities, such as undocumented children, refugees, and those from low-income households, being able to continue with education even during school closures.

New actors in education

Conference panellists shared their experiences and best practices, highlighting new actors and new roles that existing actors can take on to improve education. Below are new roles or actors changing the landscape of education:

Institutions offering micro-credentials

As explained earlier, micro-credentials play an important part in developing lifelong learners and levelling the playing field by addressing structural challenges in the labour market.

To supply these short-term courses, institutions such as Forward School have emerged. They provide individuals with options to reskill or upskill at any point in their lives, are typically privately run, and respond quickly to market needs. Existing education providers, such as universities and colleges, have also started to explore micro-credentialing.

Crucially, the leaders of institutions are a key player in this nascent effort to promote micro-credentials. They are responsible for identifying trends, acting as thought leaders within their sphere of influence to:

- a. Develop the case and narrative for micro-credentialing.
- b. Experiment with innovative forms of education and encourage implementation.

See *Inequality in Education*, Point 1, for a case study on Forward School.

Local authorities and schools

Beneficiaries of education – parents, students, society at large – have diverse needs and aspirations that differ by locality.

Therefore, it is necessary to have sufficient decentralisation such that local authorities can organise resources according to each locality's needs.

Case study: Finnish education system

Decentralised decision-making is a key feature of the Finnish education system. The Ministry of Education and Culture draws out the broad strategy and general policies for education, and oversees education services tied to the state budget.

The Finnish National Agency for Education sits within the Ministry. It is responsible for developing curriculum and policy, based on independent research. Though funded by the government, it is steered by key stakeholders such as the teachers' union, industry associations, local and regional authorities, welfare specialists, and student unions.

Independent units exist within the National Agency for Education. These are responsible for the evaluation of education and training, and the administration of the matriculation examination for upper secondary students.

Municipalities on the other hand organise basic education. Funding is derived from a combination of municipality income tax revenue and targeted grants from the Ministry of Education. Held accountable to both the ministry and local taxpayers, municipalities are incentivised to provide services that local households require.

Further, although curriculum and education strategy is set by the National Agency for Education, schools and teachers have considerable autonomy in deciding what happens in their classrooms¹⁵.

Civil society organisations (CSOs), social enterprises

The experience of conference panellists clearly highlighted how CSOs and education social enterprises are leading change in Malaysia. Local non-state actors are often nimbler, face fewer bureaucratic hurdles, and have a smaller geographical focus. These characteristics make it easier for them to respond swiftly to new changes within their localities.

¹⁵ Finnish National Agency for Education. N.d. About Us. (<https://www.oph.fi/en/about-us>).

For example, when the pandemic started in early 2020, organisations such as Yayasan Generasi Gemilang and YTL Foundation were able to mobilise resources to carry out surveys and temperature checks to assess the immediate needs of students and families. Importantly, they were able to act on evidence quickly as well. See Inequality in Education, Points 2 and 3 for case studies on the organisations.

The following is another example of how the private sector can drive institutional reform in Malaysia:

Case study 1: Edvolution Enterprise

Edvolution is a social enterprise working to develop leadership at different levels of the education system, by applying business leadership and management principles.

The organisation builds capacity in state and district education offices, through consulting and its flagship three-year leadership development programme – Teacher Empowerment for School Transformation (TEST).

The programme aims to develop collaborative environments in schools by empowering educators to lead change, thus improving teacher quality and ultimately impacting students' learning and leadership competencies.

TEST uses the following framework to bring about school and community-level change:

- a. District Education Officers are coached to empower schools as catalysts of change and as peer-mentors. School Leaders are taught how data can be turned into action.
- b. District Education Officers and schools are supported by skills learned through TEST to improve whole school outcomes – strategic planning, data analysis, coaching teams, change management and community management.
- c. District and School Leaders form a pipeline of educators who are competent instructional leaders, able to transform their communities.

TEST is currently being carried out in more than twenty schools in northern Peninsular Malaysia. The programme reduced teachers' absenteeism rates by 6 per cent

within five months, and increased teachers' social-emotional engagement rates with students by 54 per cent¹⁶.

Conclusion

There are clear linkages between the best practices. Several of them affect more than one theme. For example, investing in pedagogical training for teachers, recognising and developing affordable micro-credentialing courses, and equipping households with key learning enablers address both infrastructure and teachers' development as well as inequality in education. This also reveals how teaching quality and infrastructure are important issues to be resolved, in order to tackle inequality.

Another key takeaway from the conference was that reforms in the education sector do not necessarily have to come from top-down governmental directives. The initiatives and best practices detailed in the case studies did not come from the public sector, and yet, brought forth lasting impact. However, there is a nuance to this. While the Ministry of Education was not an initiator or leader in the case study projects, it was a key partner in a few of them, and its endorsement enabled these projects to scale.



¹⁶ Edvolution Enterprise. N.d. Programme. (<https://myedvolution.com/programme/>).

Going forward, policy reforms are necessary for progress to take place. On one hand, the existence of education solutions from the private sector reveals that there are large, urgent gaps in the existing system. On the other hand, an unintended consequence from this is that policymakers now have a range of methods to be studied, replicated and scaled across Malaysia. There is no better time than now to create change.







Nepal

National College, Kathmandu University
Centre for South Asian Studies



Overview of Education

Education is a prerequisite for the development of any country. Adequate economic development requires the provision of quality education that is accessible to all individuals, irrespective of their socio-economic background and status. Article 26 of the Universal Declaration of Human Rights identifies Right to Education as a fundamental right, and as one of its signatories, Nepal has acknowledged education as a basic right in the Constitution of Nepal (2015). The country has been making active strides towards educational growth and accessibility, particularly for the disadvantaged groups and communities – provisions guaranteeing free education for all children up to secondary level and free education for all poor and disabled children up to tertiary level have been implemented.

Education has furthermore been prioritised in the country's development plans and policies, with one of the most notable examples being the current five-year development plan – the 15th Five Year Development Plan (2019/20 – 2023/24). The educational plan aims to develop human resources through expansion and equitable accessibility to high-quality, technology-friendly, inclusive, innovative, and employment-oriented education and vocational skills development. Upon its completion, Nepal expects to increase the literacy rate for people above 15 years of age from 58 percent to 95 percent; increase youth literacy rate from 92 percent to 99 percent; increase net enrolment rate at the primary level from 93 percent to 99 percent; increase net enrolment rate at the secondary level from 46 percent to 65 percent; and increase the ratio of female teachers at the primary level to at least 50 percent.

Nepal has also shown commitment towards achieving the Sustainable Development Goals (SDGs) and has set ambitious targets for SDG 4: Quality Education.

These include accomplishing 99.5 percent net enrolment and completion of primary education; 99 percent gross enrolment in secondary education; eliminating gender disparities in education and ensuring equitable access for the vulnerable; increasing scholarship coverage from 38 percent to 42 percent; and providing access by 99 percent of schools to internet and wash facilities. Most of the development projects have been focused on providing different scholarships and incentive mechanisms, particularly in the rural areas. Despite efforts made, the progress in achieving the educational goals has been moderate.

The National Planning Commission (NPC) has highlighted some key challenges that have been impeding Nepal's educational development, including making education accessible to children out-of-school, particularly to those from underprivileged and marginalised communities living in remote areas; reducing dropout rates; providing practical and life-learning education needed to address the current needs; and improving both software infrastructure – viz., quality of teachers, administrative management, etc. – and hardware infrastructure – viz., access to facilities and services like buildings, drinking water, etc. – in primary schools. In improving primary and secondary level education, the local governments have an important role to play but these governments, under the federal system, were formed only three years ago. Consequently, the infancy of the local governments has caused challenges in terms of capacity building and service delivery, which have been hindering educational progress from the grassroots levels.

The SDG Needs Assessment Costing and Finance Strategy prepared by the NPC, in collaboration with the UNDP, estimated that Nepal requires a total of USD90 billion annually to achieve the targets it has set out for all the 17 SDGs. Out of the total estimate, 15 percent of the budget has to be sanctioned for the accomplishment of the educational targets. Presently, the government of Nepal has been spending roughly 12 percent of the national budget on education and although the spending has been sizable, it is still inadequate. In order to achieve the educational goals by 2030, Nepal requires a total of USD791 billion. However, of the total current investment in education, governmental investment comprises 72 percent while the private sector's investment comprises only roughly 17 percent – that is, there is a 60 percent gap in investment, principally from the private sector in education. If the country wants adequate educational progress and transformation, it has become imperative to build an incentivised environment that will attract and allow the private sector to increase their investment in the education sector.

Impact of Covid-19 on Education

In an attempt to curb the rapid spread of Covid-19, Nepal enforced the first nationwide lockdown on 24 March 2020, followed by multiple subsequent lockdowns. Consequent to Covid-19, educational institutions were closed for more than a year, affecting students' learning process. Globally, 1.6 billion children and youth have been estimated to be out of school and in low human development countries like Nepal, around 86 percent of children have been unable to receive education.¹

In Nepal, prior to the pandemic, accessibility to education was already a challenge, particularly for those children that lived in remote areas and belonged to socially disadvantaged groups – 70 percent of the children were already dropping out of the school system before even appearing for their Secondary Education Examination (SEE); and only 14.5 percent of secondary level graduates enrolled into higher education. Amidst the already existing challenges, accessibility to education has further been adversely affected by the pandemic. Currently, 9 million children in Nepal are out of school and in many cases out of learning as well – 11 percent of the affected students were at the pre-primary level; 28 percent at the primary level; 39 percent at the secondary level; and five percent at the tertiary educational level (UNESCO report).

With all school children out of school for over a year, the government of Nepal decided to adopt online learning mechanisms to ensure the continuation of education. Rapid technological progress in the country over the past few years has facilitated the relatively smoother shift to digital mechanisms for education and learning. However, despite the ICT development, the digital divide between the rural and urban areas continue to be significant. In Nepal, only 56 percent of the total population, predominantly concentrated in the urban areas, has access to internet services and facilities. Likewise, only 35 percent of the schools across the country have internet access but despite having ICT resources, only 13 percent of them are able to provide online classes to its students.

The difficult geographical terrain, large rural population, and poor ICT infrastructure has impeded education transformation and has instead exposed rampant disparities in the educational sector, enhancing the already existing “Great Education Divide”. Moreover, educational institutions' lack of experience with e-learning platforms in the past has further obstructed efficient and effective delivery of education services. Consequent to the technological divide, youths have been facing

¹ UNESCO Institute for Statistics, 2020.

a disconnect and deprivation from a good educational environment, resulting in a “knowledge gap” which will be the main issue that the educational sector will have to mitigate as we move forward.

Promotion of Education during Pandemic

To promote the continuity of learning, the government of Nepal prioritised devising guidelines and directives that define the roles of different institutions and stakeholders and mandated for alternative arrangements; developing structural strategies and learning resources both in the digital and printed forms; mobilising the media for continuity of learning – viz., using online and offline learning, using radio and TVs for educational broadcasting, and promoting the usage of self-learning type of printed supplementary learning materials; and mobilising teachers in possible geographical regions to support small groups of children with their learning.

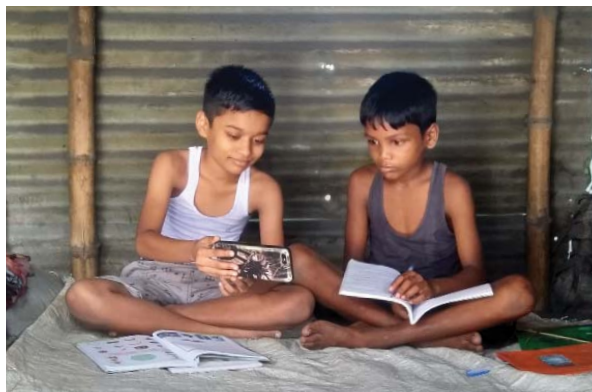
University Grants Commissions also developed “Guidelines for Facilitating Alternative Mode of Learning in Higher Education”, which was implemented by higher educational institutions across Nepal. The guidelines highlighted certain expectations regarding e-learning and its effective implementation. It emphasised that online learning should not be considered as a substitute but rather as a complementary mode to learning. It also asserted that when employing online learning mechanisms, structural design should be considered and the mechanism has to be adapted according to the nature of the subject of study. Other expectations put forth by the guidelines include mixing alternative learning modes with conventional modes to broaden the scope of learning and to customise it to make it more student- and technology-friendly; maximising ICT tools and making use of synchronous and asynchronous learning models; abiding by the legal provisions, particularly that of the cyber security laws and the code of conduct for professional norms and ethics; and fully demonstrating respect to health protocols for the safety of teachers and students.

Institutional-level Challenges and Best Practices

In the absence of regular student-teacher communication, technology-assisted instructions and self-study was the only viable mode for education. However, there were various factors that affected the effectiveness of this mode: maturity of the learners; access to internet facilities, which was difficult to obtain in rural areas;

availability of other tools and infrastructures – viz., laptops, mobile phones, whiteboards, etc.; possibility of seeking support and feedback from teachers; and opportunity to collaborate with other colleagues and co-learners.

Research indicates that even a short period of missed classes has negative consequences on skill development while face-to-face instruction has a significant positive impact on test scores. It has been quite challenging for educational institutions to make online pedagogy effective. Outside



of the main cities like Kathmandu and Pokhara, not every institution has digitally competent human resources. The general lack of IT skills and knowledge has made it difficult for both the teachers as well as the students to accommodate the rapid changes happening around them – less than 1 percent of public school teachers do not have adequate skills and knowledge needed for e-learning; and with a literacy rate of just 66 percent, computer illiteracy is widespread. Consequently, there have been a lot of trials and errors in terms of implementing e-learning, which has greatly affected its efficiency.

Pressures from political parties and actors and most particularly from neighbouring schools and colleges forced many educational institutions to temporarily stop the re-operation of education through virtual means. Eviction notices from local governments were politically issued for the closure of such institutions, which shows how the pandemic has been used for politically vested interests. Educational institutions also faced tremendous pressures from parents and guardians, particularly in terms of fee payments. With a significant portion of the working population becoming unemployed as a result of the pandemic, education has become a luxury for many children. Despite the institutions reducing tuition fees and making payment deadlines flexible, some parents and guardians – in spite of having the purchasing capacity – showed reluctance in tuition payment, making it difficult for the institutions to run properly. Consequently, the distribution of teachers' and other administrative staffs' salaries was disrupted, which negatively affected their purchasing power as well as their morale. Teachers were furthermore affected economically since they had to purchase the necessary technologies and study materials to make their classes more effective.


Irrespective of the unprecedented situation that the educational sector had to tackle, higher educational institutions like Kathmandu University and Tribhuvan University have been successful in completing their academic cycle in time. Larger educational institutions have also been reimbursing their teachers for the necessary purchases of teaching materials and internet data packages. Upon the completion of online examinations, not much difference was seen in terms of examination results in higher education before and during the pandemic. However, this alone cannot be used to conclusively decide that e-learning has been effective.

Educational institutions have also been actively training their teachers, students, and staff alike to make online pedagogy technology- and student-friendly. Secondary level educations have been conducting recreational activities – viz., storytelling, poem-writing, orating videos, drawing competitions, etc. – to keep young children engaged in learning. Mobile phone applications for schools have also been developed individually, and these have been promoting immediate connection with the students. Consequent to the application's notifications and alerts, students have become more attentive and sensitive towards timely completion and submission of assignments. Parents-teachers conferences have been held virtually, making it easier for the parents to adequately discuss their child's educational progress and to make the necessary interventions. Consequently, e-learning has made institutions, teachers, and parents more responsible towards the students.

The pandemic has also promoted an understanding between teachers and students regarding the personal challenges and mental health challenges – a topic previously considered to be taboo – that the students have been facing. Assignment submission has been made flexible and the students are relatively less pressurised about their grades. That is, a healthier educational environment is being promoted for students, which is imperative for enhancing quality learning. The use of online learning platforms has also enabled inter-border learning – which would have otherwise been costly and inaccessible to many – which has allowed students in Nepal to build their capacity by learning from those living in other countries.

Ensuring Equity and Equality in Education

Despite the necessary interventions being carried out, online learning has not yet been completely effective, especially for those students belonging to lower socio-economic classes. The inability of these groups to access the necessary technological services has consequently affected them adversely and has widened the “knowledge-gap”. To mitigate this, the government and educational institutions have developed “catch-up programmes”, which enables disadvantaged students,



particularly those living in remote areas, to bridge the knowledge divide they have been facing as a result of the pandemic. Moreover, the temporary closing of schools also has implications on health and well-being, particularly of those children that had been relying on the mid-day school meals as their nutritional source. Hence, the disruption of education has adverse consequences in the physical, economical, and social development of those children belonging to disadvantaged groups and communities. More effort needs to be made to address the needs of these disadvantaged groups of students.

In terms of accessibility to information technologies, the largest group of people has access to mobile phones with either limited internet connectivity or no connectivity at all. Students belonging to this group have had to utilise internet data packages from telephone services companies like NTC and Ncell to attend their classes. To ensure educational connectivity, NTC and NCell have created education data packages – e-Shikshya packages – which have been offering students and teachers large internet data packs at highly subsidised costs. Large educational institutions have also been reimbursing the cost of data packs for those students that belong to economically disadvantaged groups. In terms of the e-learning platforms used, in primary and secondary level institutions, not all classes were conducted via Zoom, Teams, or Google Meet. One of the participating institutions in the programme has been conducting virtual classes on Facebook Messenger for grade one to three students since it was easier to connect with these groups of student via their parents' Facebook accounts. Using Zoom has also been a bit of a hassle since not all institutions have the capacity to afford to purchase the software for daily use. As a result, in a class running for more than 40 minutes, students and teachers have had to leave and join a new link after the expiration of the first link; a disturbance, although minor, in the learning process.


Although the majority of the students in higher education have been able to attend online classes, their participation has mostly been passive due to the unfavourable learning environment at home. Since most only have access to mobile phones, it has become difficult for the students to complete their assignments and examinations through their phones. In such situations, students have been given flexibility in terms of submitting either a computer-typed assignment or a handwritten one that is scanned using the mobile phones and submitted. Consequently, students' progress and grades have not been negatively affected much.

Not every student, especially those that are younger, has access to personal mobile phones, as a result of which they have had to use other family members' mobile phones to attend online classes. In terms of accessibility to mobile phones in such scenarios, gender disparities were much more prevalent. In households



where only one mobile phone could be used for online classes, it was observed that the male child's access to education was often given preference over that of the female child's. Likewise, as female students migrated back to rural villages, they were expected to take care of younger sibling(s) and engage in domestic activities even in between their classes. As a result, female students have had a difficult time concentrating on their educational progress in such an environment. Moreover, with the reduction in purchasing capacity of the rural households, it is feared that a significant number of female students will drop out as the pandemic progresses. In an attempt to abate such a possibility, educational institutions, particularly those that have primary and secondary levels, have been mobilising their administrative and teaching staffs actively. In instances where young students, especially those belonging to disadvantaged groups and communities, have been missing classes and assignment deadlines, the institutions have been directly calling the concerned parents or guardians to understand the reasons behind the tardiness. Staffs have been extending a helping hand and providing extra attention to those students that have been struggling due to difficult familial and environmental conditions as a result of the pandemic.

Gender disparities have also been disproportionately affecting the female teachers. As education becomes virtual, female teachers have had added expectations of being engaged in domestic chores since they have been working from home. Moreover, with the operation of online learning for pre-primary, primary, and secondary levels, female working professionals are principally expected to adequately participate in their child's learning progress. The enhanced expectations coupled with the professional workload have been negatively affecting female working professionals' physical, mental, and emotional well-being. Necessary interventions need to be prioritised to alleviate gender disparities in terms of accessing and actively participating in education if Nepal wants to make its education gender-inclusive.



Accessibility to education in the rural areas of Nepal has always been a challenge. To ensure adequate accessibility, innovative school models need to be promoted and established that addresses various structural factors – viz., poverty, unemployment of parents, etc. – that have been impeding a child’s access to education. Maya Universe Academy, located in Byas, Tanahu district of Nepal, has employed a social enterprise model that aims to provide affordable and quality education to the children in rural areas where the public school systems have failed to deliver acceptable results. Children from disadvantaged groups and communities are all given equal opportunity to access high educational standards. Parents and guardians have been actively engaged in the growth of the institution through participation in social enterprises – viz., Maya’s Country Chicken, Crafts by Maya Universe, and Maya Travel Education Experience. These social enterprises have been community-driven, with the parents and guardians of the school children being provided with income-generating opportunities that has been improving their livelihoods. International as well as national volunteer services have also been established where volunteers can get involved in teaching, agriculture, construction, or administrative duties. The institution aims to generate self-sustainability – the profits generated from the micro-enterprises have been used to procure quality education resources for the students and teachers, and to maintain and generate employment opportunities for the rural poor.

Drawing from the success of Maya Universe Academy, employing similar innovative education models, particularly in the remote areas of Nepal, will not only ensure accessibility to quality education for the poor and disadvantaged groups and communities, but will also assist in abating the challenges of unemployment, environmental degradation, food insecurity, poverty, and more.

Infrastructural Development in Education

Availability of and access to high speed internet and provision of necessary tools to maximise the internet services are important at both institutional and household levels for students as well as teachers. The onset of the pandemic resulted in reverse migration of working professionals and students from urban areas back to rural areas. Consequently, there has been a high demand for internet services and facilities in the rural and remote geographical areas in Nepal.

Although ICT service providers like NTC and NCell have the capacity to improve the low quality of ICT infrastructures – background infrastructure and access infrastructure – in rural areas, the lack of clarity in governmental policies has been impeding rural people’s access to stable and accessible ICT services. Moreover,

the internet service providers (ISPs) in the country have to buy internet bandwidth from India and China, increasing their input cost. However, despite the challenges faced by the ISPs in terms of policies and geographical connectivity, they have been providing the Nepali consumer market with internet at one of the cheapest rates in the world. This affordability has consequently made it possible for even those in rural areas to get access to various internet services.

With the gaps highlighted in ICT services and accessibility, private ISPs like Subisu have partnered up with the local governments and NTC to provide affordable and stable internet connection at ward levels – broadband services of ten Mbps, which will be increased to forty Mbps next year, will be used to connect all ward offices, schools, and health clinics. Likewise, through the national budget for FY 2078/79, the government has provided subsidies to address the inability of people to procure the necessary technologies to get internet access – up to NPR75,000, at 1 percent interest rate, will be provided for the purchase of laptops. However, some disadvantaged groups and communities cannot even afford to pay off the 1 percent interest, making it imperative for the necessary interventions to be made to facilitate equitable access to technologies for such groups and communities. The government also plans on establishing at least one computer lab, with stable internet connectivity, in every primary and secondary level public school.

With the rapid integration of internet services across all socio-economic sectors, there is an urgent need to strengthen cyber security laws to prevent the misuse of information about educational institutions and their students and staffs. Copyright laws have to be enforced seriously, particularly by educational institutions, to prevent plagiarism by students and, in some cases, teachers as well. The government will also need to rapidly increase the number of computer literacy programmes so that individuals can learn to protect themselves from information security threats – viz., theft, hacking, computer virus, etc.

KASpaces

KASpaces, one of the segments in the programme, provided a platform for the participants – students and teachers – to share their experiences and establish a healthy dialogue. Discussions were principally based on the challenges faced by and the concerns of the students, particularly of those pursuing higher education, regarding the efficacy of online classes, recommendations for improving the current model of e-learning and possible barriers in entering the job market as a result of the unprecedented change in the educational structure during the pandemic.

The inadequate ICT infrastructures, in both urban and rural areas but especially in the rural areas, resulted in technical glitches during online classes and examinations. Due to poor connectivity, students as well as teachers were unable to properly grasp what was being taught and discussed in the class. Consequent to connectivity issues, participants, especially those attending classes with a large number of students, were unable to turn on their videos – a practice observed to have been made mandatory for active participation during online classes in developed countries. Subsequently, passiveness among students – due to a lack of accountability in terms of attentiveness in class – was observed, which not only affected their own learning process but also affected the morale of the teachers, directly impacting the quality of teaching. Moreover, these factors, in many cases, were also coupled with an unfavourable learning environment due to distractions resulting from construction noises, familial environments, mobile phones, and more.

The attendance issue has been identified as one of the biggest challenges in making online classes effective in Nepal. The poor management of the health crisis by the government as well as questionable individual behaviours resulted in the rapid spread of the Covid-19 virus. Many students and teachers were infected, affecting their academic participation. Moreover, infection observed in family members and close ones created a stressful environment where even the healthy students and teachers were not able to adequately participate in academic activities. In some unfortunate cases, a few of the teachers passed away due to Covid-19, halting the learning process and affecting the students' mental well-being. Given the urgency to keep up with the academic calendar, in such cases, students were not provided with sufficient space to process the unfortunate situation and were expected to immediately continue their learning process with a completely new teacher.

On a positive note, the shift to e-learning ignited a new energy in some students, particularly those that had been passive during physical classes. Getting to attend classes in the comfort of your own room – your own home – helped to give such students more confidence in asking questions and actively participating in classes. Virtual classes not only helped introverted students but also those that had been struggling to cope with social anxiety. However, such a change was observed to be short-lived. As classes progressed, given the factors already elucidated above, interactive classroom participation slowly started becoming limited to only a handful of students. Consequently, the classes started getting increasingly monotonous, which affected even the motivation of the active students.

Concerns from students were also raised on the gap between the job market and the academic industry, particularly because of the pandemic. Compared to the past, students have been participating in “zoom universities”, which has caused

many students to miss out on learning skills and knowledge that would have normally been developed during in-person classes, interactions, and working experiences. There have been concerns among graduates and soon-to-be-graduates regarding whether possessing a “zoom university degree” will adversely affect their status of employability.

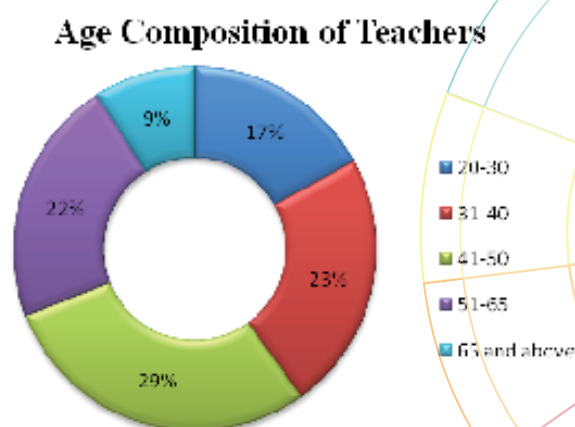
Prior to the pandemic, a candidate that had attended in-person classes would have had an advantage over another equally competent candidate who had an online university certificate instead. It is imperative to understand that the pandemic did not occur in a vacuum; thus, potential recruiters and employers do understand that graduating online was a necessity rather than a choice for the fresh graduates entering the job market. Participants affiliated to various organisations and companies asserted that irrespective of whether one graduated from a “physical university” or from a “zoom university”, the job market will have a level playing field. Rather, it is expected that the future job market will require digital skills and literacy as a prerequisite for many positions, thus benefiting the students that are attaining or have attained education through e-learning platforms. However, there still exist some concerns regarding the job market, particularly in specific professional fields like broadcast journalism. Employers have, naturally, been more sceptical towards employing online graduates in such fields since they have been deprived of the opportunity to gain first-hand experience as a result of the pandemic. The limited capacity of some higher educational institutions have also affected students’ access to state-of-the-art technologies and resources that make e-learning more effective and efficient. Consequently, inequality in knowledge and skills attainment is expected to increase as the pandemic forces the institutions to conduct virtual classes.

Increasingly, higher educational institutions in Nepal have also been gradually partnering up with companies and organisations that provide employment opportunities to appropriate students of the partnering institutions. Regarding the concerns about employability, educational institutions will need to actively facilitate in bridging the probable pandemic-induced gap between the students and the job market. Moving forward, every educational institution in the country will need to provide job placement opportunities to make employment relatively easier for its graduates in the cut-throat competitive job market.

The educational institutions also need to be increasingly sensitive towards revising their academic curriculum and course structures to meet the requirements of the market. Some institutions have been actively involved in taking feedback from both the students and teachers to measure the relevancy as well as the effectiveness of

the course contents being taught. While certain modifications are being done in the courses taught, there is still a disconnect due to the teaching models adopted by some teachers. Tertiary level institutions principally have teachers and professors that have had adequate experience in their fields of expertise, which has allowed them to impart adequate skills and knowledge upon their students in the past. However, most of such senior teachers have been largely disconnected from the present market conditions, as a result of which the skills and knowledge being passed onto the current students have often not been in line with the principal demands of the current job market.

Figure: Age composition of teachers at one of the participating higher educational institutions. Given figures are taken from the presentation slides.



Because of the seniority of the teachers, some of the teaching faculty members have been adopting the traditional teaching mechanism where the students are spoon-fed the information and are not required to conduct critical analysis. Moreover, consequent to the seniority and rich experiences possessed, some of the teachers are inflexible and refuse to adapt according to the needs of the students, adding on to the disconnect between the teachers and the students, and between the students and the job market. In addressing such a gap, educational institutions need to introduce workshops and training sessions that the students can use to build up the soft and hard skills that are demanded of them by their potential recruiters.

From the teachers' perspective, ensuring fairness in real-time assessment of students, while taking into account all the challenges faced by students in virtual classes, has been rather difficult. To ensure adequate evaluation of the students, teachers have been assigning assignments that require more critical analysis – a practice that was uncommon in the Nepali educational system before. Students have had to consult a wide variety of literature for a single assignment, which has been en-


hancing their knowledge exponentially, benefiting them. Since teachers have also been employing plagiarism-detecting software when assessing assignments and examination papers, students have become increasingly more sensitive towards plagiarism, thus drastically enhancing their academic integrity.

For those teachers taking classes abroad, the teaching experience has been quite different. The technological advancement and availability of various interactive teaching materials – viz., audios, visuals, etc. – have made it relatively easier for both the students and teachers to have an interactive class and to conduct effective real-time assessment. Educational institutions in Nepal need to urgently develop and incorporate similar e-learning interactive resources if they want to create capable human resources even during the pandemic.

On a positive note, online classes have provided flexibility to both the students and the teachers and have saved time that would have otherwise been wasted on commuting back and forth from school to home. This has allowed individuals to invest the time saved in some other activities. While some students have been fortunate enough to invest this time in attending and engaging in new productive activities, such skill- and knowledge-enhancing opportunities have been limited to a privileged few. Consequently, employers might be expecting potential employees to have utilised the pandemic to enhance their skillsets, but this has not been possible for the majority of the students. This might translate negatively in their employment evaluation. As a result, such expectations from recruiters as well as from academic institutions have the possibility of further widening the “knowledge gap” and increasing the very inequality that the country has been attempting to abate.

Conclusion

Despite the onset of the unprecedented health crisis that has paralysed the educational sector for more than a year, government agencies, private companies, and educational institutions have made effective progress towards mitigating potential adversities in the educational sector. The education sector had to transition from its traditional in-person learning practice to virtual learning without having prior experience with online learning mechanisms. Consequent to this, existing and new gaps in terms of educational accessibility have been highlighted, making it imperative for Nepal to actively intervene to bridge these gaps in order to achieve the educational targets it has set out in its development plans and policies.



Education during and after the pandemic cannot and should not be the same as that before the pandemic. Curriculum needs to be revisited and restructured because applying the same traditional modality of in-person education to online platforms will not be viable. However, the current educational structure has merely been accommodating the same structure. With the current students being or turning into “digital natives”, educational institutions have a new role to fulfil. Students no longer expect teachers to be merely content experts since adequate content is available on the internet. The new demand requires teachers to be “context experts” who can help the students understand the “why” and the “how” instead of just the “what”.

Education in Nepal has to be redefined in order to equip the students with knowledge that will allow them to address new challenges and make them capable of creating as well as grabbing the opportunities in their lives. For this, certain skills – viz., adaptability, self-learning, un-learning, and lifelong learning – have to be inculcated and integrated into the education system. The education system needs to prioritise “creating a digital ecosystem to empower the digital natives for the digital economy and the pandemic”.

The educational sector can be rapidly accelerated using technologies but not all can facilitate positive transformation; adoption of technologies needs to be region-specific and contextual. Nepal needs to shift its focus from online learning and needs to instead prioritise on strengthening distance learning. The difficult geographical terrain and the deeply rooted socio-economic disparities have historically limited quality education to the privileged groups and communities. The promotion and strengthening of distance learning gives individuals, particularly those in rural areas, the opportunities to enrol in a degree or a specialised course programme even if they are from difficult geographical locations. Hence, Covid-19 comes as an opportunity in disguise that the country can utilise to completely reform its educational curriculum and structure to make quality education more accessible and inclusive for all. With or without Covid-19, if higher education wants to be sustained and flourish, it will need to change and adapt according to the situation and the emerging needs of the students.





Pakistan

Forman Christian College University

1. Introduction and Overview of Education in Pakistan¹

The Islamic Republic of Pakistan is a culturally and linguistically diverse South Asian country bordered with Afghanistan and Iran to the north and west, China to the northeast, India to the east and the Arabian Sea to the south. Pakistan came into being in 1947 after the partition of former British India and was established in its current form after the subsequent secession of Bangladesh, formerly known as East Pakistan, in 1971. Pakistan is characterised by having one of the highest population growth rates worldwide outside of Africa, and has a current population of over 200 million people.

Quality education is crucial for Pakistan's socio-economic development now more than ever because of a high percentage of youth in the country's population; Pakistan is the home for the world's second highest youth population². Failure to integrate the country's legions of youngsters into the education system and the labour market is likely to destabilise the commitment to the Sustainable Development Goals in the region.

A close examination of the education landscape in Pakistan highlights deeply entrenched inequalities that place catastrophic pressure on the local job market. Despite the endemic challenges of access, poor academic quality, compromised infrastructure, and deeply entrenched inequalities, the 18th Amendment in 2010 enshrined basic education³ as a fundamental human right under Article 25A of

¹ The author of this report is Dr. Mehwish Raza, Dean Faculty of Education, Forman Christian College University, Lahore.

² 65 per cent of Pakistan's national citizens are under the age of 30 years (Hunter, 2020).

³ Basic education up through grade 10, or what is referred to as "matriculation" in Pakistan.

the 1973 constitution of Pakistan. However, about 22.8 million children⁴ are out of school, making Pakistan the country with the second highest population of out-of-school children in the world.

The education system prevalent in Pakistan is an active marketplace with a range of schools vying for students. Pakistani parents, irrespective of their socio-economic strata, are highly motivated to invest in their children's education and can make their choices from the assortment of public schools, private schools, and Islamic seminaries commonly known as the Madrassah System⁵. Private schooling is a significant feature of the educational landscape in Pakistan and has taken up to 42 per cent of the total student enrolment⁶ in the country. The last two decades have seen a meteoric rise in private schools' participation at the primary education level owing to the statistically backed belief that private schools outperform public schools (Bau and Das, 2016). Public schools are widespread in the country, taking up to 58 per cent of students' enrolment. The earliest enrolment age in formal public schools is five years and above. Early childhood education (ECE) for children between the ages of three and four has historically been given little attention in the public sector and about one third of children between the ages of three and four participate in formal early childhood education supported by the private education sector. Both the federal and provincial governments are seeking to increase ECE participation rates, but progress is slow.

The academic calendar in elementary and secondary schools follows two models: from February to January and September to May. All public and private school observe a summer break from June to August. There are more than 70 languages spoken in Pakistan, including the widely spoken provincial languages Punjabi, Pashto, Sindhi and Balochi; the country's official languages are Urdu and English. The predominant language of instruction in private schools since colonial times has been English whereas Urdu is increasingly used as the primary language of instruction at public schools.

Pakistan has a relatively young higher education sector. At the time of partition, the country had only one university, which had less than 1,000 students enrolled

⁴ Pakistan Education Statistics 2016- 2017.

⁵ In recent years, policy makers have expressed growing concern about Pakistan's religious schools. The moderate enrolment at Madrassahs (2 per cent) may be attributed to unconfirmed reasons which can sway between either an increasing preference for religious schooling among families or a lack of other viable schooling options for the household. Unfortunately, there is an acute deficiency of publicly available data sources to confirm the reasons for preference of Madrassahs over mainstream schooling.

⁶ Of the 47.5 million school-going children in Pakistan, 19.9 million students are enrolled in registered private schools. Of 317,323 K-12 schools in the country, 38 per cent are private schools. From 1990 to 2016 there has been a 50 per cent increase in the number of private schools in the country (Qureshi and Razzaque, 2021).

– the University of the Punjab in Lahore. There are currently over two hundred recognised degree-awarding institutions (DAIs), with the highest concentration of Higher Educational Institutions (HEIs) in Punjab. The credit system stipulated by the Higher Education Commission (HEC) and used by most HEIs is a US-style system. One credit hour is equivalent to 50 minutes of classroom instruction each week throughout a semester of 16 to 18 weeks' duration⁷.

The Ministry of Federal Education and Professional Training (MoFEPT), established in July 2011 in the wake of the 18th Amendment, oversees the educational operations in the country through its sub-divisions and related autonomous bodies of Higher Education Commission (HEC), National Vocational and Training Commission (NVTC), Boards of Intermediate and Secondary Education (BISE), Private Educational Institutions Regulatory Authority (PEIRA), School Education Departments (SED) for public schools management and Directorate General of Religious Education (DGRE)⁸. While Pakistan had a comparatively centralised system of government throughout much of its history, there has been a trend toward decentralisation since the early 2000s, notably in education. While matters like development of instructional content and resources used to be a shared responsibility of the federal and provincial governments, many of these responsibilities have now been delegated to the provinces. Within the provinces themselves, the administration of education largely shifted from provincial governments to local district governments (Hunter, 2020).



⁷ A four-year bachelor's degree requires the completion of 124 to 136 credit units, whereas a master's degree typically requires 30 credits.

⁸ Established in 2019, DGRE operates through 16 regional offices in the country to facilitate educational and administrative matters at 35,000 registered Madaris (plural of Madrassah).

Public financing for education remains dismally low, especially when compared to adjoining territories and regions in South Asia. The government reserved 2.5 per cent of GDP within the fiscal year 2020-21 annual budget for education, 0.2 per cent more than the previous fiscal year. This is an alarming figure for a country that has 22.8 million out-of-school children (OOSC) and the budget allocation is not anywhere close to the international benchmarks set by UNESCO⁹.

2. Impact of Covid-19 on Education in Pakistan

National borders have not been able to filter the coronavirus, thus allowing the permeation of the Covid-19 coronavirus across borders, affecting people regardless of nationality, socio-economic strata, and gender. The lockdown and consequent restrictions on social activities in response to Covid-19 interrupted several day-to-day activities including conventional educational operations. Nearly 1.5 billion students, accounting for up to 87 per cent of the world's student population, are affected by Covid-19 school closures (Vegas, 2020). Pakistan was among the first few countries in the region to institute nationwide school closures to curtail the spread of Covid-19 in the year 2020. Covid-19-induced school closures first began with the province of Sindh in February 2020, followed by Baluchistan, Punjab and Khyber Pakhtunkhan¹⁰ shutting down all educational institutions a month later.

An exceptional growth in e-learning solutions was seen during the pandemic as most countries responded quickly to the disaster by harnessing technology to establish remote teaching systems for minimising learning losses. However, in developing countries, access to technology was not affordable for all and in March 2020 it was expected that up to 72 per cent of K-12 students in Pakistan would remain deprived of access to the basic infrastructure of computers and internet (Hunter, 2020). As access to basic education was already a challenge in Pakistan and with the burden of having the second highest ratio of out-of-school children, the coronavirus outbreak brutally exposed Pakistan's deeply entrenched inequities and increased the risk of dropouts due to inability to access remote learning. Outside urban areas, a broadband service is not only expensive but in some geographic regions nonexistent while the smartphone penetration rate stood at 51 per cent

⁹ UNESCO recommends allocating a minimum of 4 per cent of the total GDP for development of education in Pakistan (ADB, 2020).

¹⁰ Over 300,000 educational institutions around Pakistan were closed for an indefinite period of time starting from the weekend of 14 March 2020.

during the year 2020. Only one million school-age children were estimated to have regular access to digital devices and bandwidth (PTA, 2021). Compared to individual computers, an estimated 62.5 percent of the population¹¹ had access to television, justifying the government's choice to tele-broadcast coronavirus distance learning programmes for K-12 through the national TV channel.

Pakistan Institute of Development Economics (PIDE) used data on school closures, remote learning effectiveness, children attendance and household income to quantify the long-term impact of school closures amid the pandemic. The report concludes a startling difference of 4.8 years in Expected Years of Schooling (EYS) and Learning Adjusted Years of Schooling (LAYS)¹².

The World Bank anticipates that Pakistan will endure an increase in learning poverty¹³ from 75 to 79 per cent. Approximately a million students are at risk of not returning to schools due to economic losses faced by their families¹⁴ (Donnelly, Patrinos, and Gresham, 2021).

The mandatory shift to online instruction within a fortnight of the country-wide lockdown was the quickest recorded response by the HEIs; however, an in-depth analysis highlights the dearth of effective online instruction, such as absence of a central policy for switching to online teaching, technology preparedness of faculties and students, non-availability of data to determine equity in access and participation in remote learning, deficiencies in available learning resources and non-conducive environment at homes for continuing formal education.



¹¹ 40 million children were noted to have access to televisions.

¹² Children in Pakistan can expect to complete 9.4 years of pre-primary, primary, and secondary school by age 18. However, when adjusted for quality of learning, it is only equivalent to 5.1 years: a learning gap of 4.8 years exhibits the impact of learning discontinuity and low learning quality during school closures (PIDE).

¹³ "Learning Poverty" is defined as the share of children who do not learn to read and understand a simple text by age 10.

¹⁴ The monthly income of 54 per cent of households in Pakistan have been severely impacted due to the consequences of measures taken to curtail the spread of the virus (Geven, Hasan, and Aedo, 2020).

Despite its tragic impact, the Covid-19 pandemic has taught numerous worthy lessons to re-imagine education for an overall system transformation. The greatest educational impact of the pandemic has been manifested in the symbiosis of information and communications technology (ICT) and pedagogical innovation that has catalysed the long-awaited shift in educational paradigm in a developing country like Pakistan. About 47 per cent of teachers in urban and rural areas reported teaching remotely through using a diverse range of available technology¹⁵.

The pandemic has rejuvenated a coalition of multi-stakeholders, organisations, and political leadership from the government at various levels to initiate projects like TeleSchool, the tele-broadcasting learning solution reaching thousands of households. The pandemic has also brought together public and private school networks to support the more vulnerable through the agility of sharing resources. In the last few decades, a shared sense of responsibility, ownership and struggle to accomplish common goals was missing from Pakistan's education landscape.

The Covid-19 pandemic posed a catastrophic setback to the hard-won gains of years in access and learning levels. The impact can only be washed out with collective efforts to safeguard the fundamental right to education of the youngest and most vulnerable members of society.

3. Overview of Best Practices

The massive and unprecedented educational disruptions engendered by the Covid-19 pandemic exacerbated the existing educational crisis in Pakistan. A sudden shift to a digital pedagogy ignored Pakistan's immense digital divide and posed significant challenges in terms of teachers' preparedness, students' digital competencies and access to infrastructure, and lack of provision of a national level policy to inform decisions. Mixed reactions and approaches were observed in response to the pandemic depending on a wide array of organisational and system-level conditions.

This section presents the cutting-edge leading solutions opted for by Pakistan in the unprecedented times of the global pandemic.

¹⁵ Whatsapp (17 per cent urban, 12 per cent rural), SMS (11 per cent urban, 18 per cent rural), online platforms (11 per cent urban, 8 per cent rural), remote learning packs (28 per cent urban, 38 per cent rural) – Data reported by UNICEF (Kalmthout and Cappell, 2020).

a. Infrastructure and Teacher Development

Research reveals that prior to the pandemic, K-12 public¹⁶ and private school teachers' pre-service education and in-service professional development in Pakistan on the pedagogical use of information and communications technology was limited to integration within traditional face-to-face instruction. Whether and how teachers integrate ICT into their classroom practice is influenced by several institutional factors, but the pandemic necessitated digitised teaching at all levels. This mandatory shift to fully online teaching exposed severe deficiencies¹⁷ in teachers' professional training and development programmes to use technology effectively for communication and teaching.

During the school closure, the launch of TeleSchool and Taleem Ghar¹⁸ within weeks of public schools closing illustrates a clear indication of the government's choice for emergent action. Little initiative was seen in terms of reaching out to a workforce of over 800,000 public school teachers to prepare them on the novel use of education technology (ET). The only example of integrating public teachers in deciding the state's response to the pandemic was the seeking of their input in determining the significant topics to design content for the national education channels launched by the Ministry of Federal Education and Professional Training. Many key decisions for schools that formed the state response to Covid-19, such as the timing of closing and reopening schools, the development of standard operating procedures (SOPs), and the adoption of a reduced syllabi for the academic year 2020-21, have been taken by state functionaries with limited or no input from the teachers who will eventually be responsible for implementing these decisions in Pakistan's public schools. The Sindh government displayed a better sense of inclusion for public school teachers by training teachers on the Sindh Education and Learning Department (SELD) Learning App¹⁹ designed in collaboration with industrial and development partners, including UNICEF, SABAQ Muse, Microsoft and Sabaq Foundation Trust. Partner organisations provided rigorous training to selected teachers²⁰ on integrating the SELD App across the elementary school curriculum.

¹⁶ A mandatory training on the educational use of ICT is a compulsory component of all pre-service teacher development programmes (NACTE, 2021).

¹⁷ Some deficiencies reported in research include rudimentary digital competencies restricted to instructional methods while ignoring assessment, feedback, social emotional development of students, etc.; limitations in curricula and tailored digitised teaching resources; and digital agency (Qureshi and Razzaque, 2021).

¹⁸ The two national educational television (TV) programming initiatives taken by the government of Pakistan as remote learning tools during the Covid-19 school closures.

¹⁹ Sindh Education and Learning Department (SELD) created an app for classroom delivery and remediation learning.

²⁰ SABAQ, in collaboration with Malala Fund and SELD, selected 87 teachers for training and participation in the pilot project of SELD Learning App.

Realising the vital gaps in teachers' digital competencies, some private schools responded to the situation by tailoring in-service training programmes for teachers on the use of education technology. There are many examples of tailored teacher development programmes at private schools that have an in-house teacher training department²¹. The highly vulnerable have been the low-cost private schools (LCPS),²² which have been not included in governmental crisis response measures and due to lack of diversified sources of finance and limited resources did not have in-house arrangements to prepare teachers for emergency teaching. Although non-governmental organisations (NGOs) like Kashaf Foundation²³, Care Foundation, Idara-e-Taleem-o-Agahi (Center of Education and Consciousness)²⁴ etc.

Another successful emergency assistance intervention and also pilot project for teachers' training was an Interactive Radio Instruction (IRI) initiative, by the name of Parhai Caro-Na²⁵, launched by POWER99 Foundation, in collaboration with its partner organisation, The Communicators (Pvt.) Limited, through a network of FM



²¹ Some examples from Punjab are: The Beaconhouse School System, The City School System, Roots International School, LACAS, Cornerstone School, Learning Alliance, Salamat School System, United Chartered School, and Lahore Garrison Education System. Some of these schools have a country-wide presence.

²² Private schools located in peri-urban and urban settings that cater to the underserved or marginalized communities. The monthly fee ranges from \$10 to \$35.

²³ Registered as a non-banking micro finance company, reaching out to up to one million students attending low-cost private schools.

²⁴ Established in 2000, ITA advocates and demonstrates universal access to quality learning and standard-setting in education. Amidst the Covid-19 pandemic, ITA has reached out to over 50,000 teachers in remote, distant, and underserved areas in Punjab and Sindh.

²⁵ Let's Learn!

radios in Pakistan. Carrying the aim “Broad Class – Listen to Learn”, Parahi Caro-Na was initiated as a twelve-weeks-long non-formal education programme for children aged 4-9 years who are not able to attend normal schools and are often in remote areas with limited to no internet access. The programme is based on active and cooperative learning activities, listening exercises, speaking activities, riddles, sound games and role-playing with music and stories. The pedagogical techniques promote social, linguistic, cognitive, and emotional competencies and the content of the programme is socially and culturally relevant to Pakistan. Data asserts that through the medium of radio, the approach reaches a ten-million shadow audience of community members, predominantly parents, whose understanding of their children’s education is enhanced, enabling them to better support their children and engage in a dialogue around improving education, especially for girls. Data also reveals that 60 per cent of the programme beneficiaries are girls and female educators (Hundred, 2021). The wide success of this initiative was extended into IRI for teachers’ training, although it is currently difficult to comment on the extension’s effectiveness due to deficiency of data. This initiative received much coverage in the international media and was documented as an example of innovative pedagogical approaches in early childhood care and education by the BBC, DW-News, and UNESCO²⁶.

A similar radio intervention was launched in five districts of the Balochistan province in Pakistan, namely Pishin, Qilla Abdullah, Noshki, Chaghi, and Kharan, by International Rescue Committee (IRC) through their programme Teach and Educate Adolescent Girls through Community Help (TEACH). 48 radio lessons, each approximately 20 minutes long and aligned with TEACH-established curricular content, were designed to be broadcasted daily. The IRI lessons focused on development of literacy, numeracy and life skills among students and several relevant pedagogies for K-12 teachers in Baluchistan to practise in their classrooms post-pandemic.

Punjab Higher Education Commission (PHEC) responded to the challenges of Covid-19 by first conducting a situation analysis to determine the provision of ET resources, accessibility rate, and training needs of the faculties of degree-awarding colleges and HEIs in Punjab. The Online Capacity Building Training Programme reached out to a record number of more than six thousand faculty members across the nine districts of Punjab. This novel, competence-driven online professional development programme comprising 35 unique topics to accomplish the desired objectives to expose teachers to emerging methods of modern pedagogical skills while ensuring an effective classroom environment, a positive relationship

²⁶ Featured in the United Nations paper presentation on Language, the Sustainable Development Goals, and Vulnerable Populations in the May 2021 symposium.

with students, and resilient teaching in emergencies. Ten experts from renowned HEIs and immanent educational organisations of Punjab advised PHEC on the training content, experiences, participants' assessment, and evaluation of the capacity building programme.

Pakistan's innovative response through the integration of emerging technologies in teacher education is in line with an earlier assertion by Onyema (2019) that digital solutions and ET is no longer a choice, but a necessity for all educators in order to adapt to a changing learning environment, demands for flexibility in methodology, and the need to enhance creativity and innovation in learning.

b. Inequalities in Education

Several communities in Pakistan experience vulnerability and marginalisation because of structural barriers such as economic inequality, racism, staunch gender norms, and numerous other socio-cultural intertwining factors. The Covid-19 pandemic exacerbated these challenges and exposed the deeply entrenched inequalities prevailing in our society. This section reports on the innovative remedial interventions taken amidst Covid-19 to reduce amplified inequalities among representatives of different gender groups and economic strata.

For millions of girls in low-income communities in Pakistan, missing out on school is not new. Currently, there are 22.8 million out-of-school children in Pakistan. Out of these, 53 per cent (13.4 million) are girls. The pandemic's impact on household finances is adverse and is likely to prevent even more girls from completing their education. Girls also have a harder time accessing devices at home (Geven, Hasan, and Aedo, 2020).

Siyani Saheeliyan,²⁷ Advancing Action for Adolescent Girls (A3G), is an innovative and timely intervention to advance action for out-of-school adolescent girls in three districts of South Punjab, namely Bahawalpur, Muzaffargarh, and Rahimyarkhan, through capacity building opportunities for learning gains, Technical and Vocational Education and Training (TVET), livelihoods and life skills. A3G was launched in 2018 with the slogan "Second Chance for Out-of-School Marginalised Adolescent Girls". The target audience are either school dropouts with little or no learning, or girls who have never had a chance to go to school due to financial constraints and family choices. So far, the programme has reached out to 11,000 girls and enabled 6,500 girls to complete their primary, middle and secondary education. During Cov-



id-19 the programme focused on four broad categories: academics, accelerated and second chance learning and assessments; creativity expression and healing; health and psychosocial support; and vocational skills. The Covid-19 response was built on a contextual analysis of available digital devices, accessibility rate and alternative home-based activities. Teachers were trained to use SMS and WhatsApp to disseminate learning material to 6,350 marginalised adolescent girls with a focus on lifeskills, ET, and health awareness education. 25 per cent of this group actively participated in income-generating opportunities such as design and preparation of handicraft goods, patchwork bedspreads, handmade laptop bags, customised safety masks, and stitching of customised garments. A3G gained popularity due to economic benefits for the participants and steady opportunities for income generation. When schools reopened in September 2020, the programme launched enrolment campaigns led by community activists across the targeted locations to safeguard the enrolment and retention of girls at risk of dropout. Almost 9,000 girls are currently in the process of completing their second-chance primary, middle and secondary education and 2,000 girls are being equipped with vocational skills to help them become economically empowered. A3G also focuses on enhancing participants' English proficiency, digital skills and awareness of social issues (Saeed, 2021). This year, under the EDGE²⁸ programme of the British Council, 300 participants of A3G will be selected for leadership skills, English language, and digital skills

²⁸ English and Digital for Girls' Education (EDGE).

development training in peer-led after-school clubs. Through this extension, girls will also be mentored and trained to become “Champions of Girls’ Education” and their stories will be published as case studies to support Girls Back to School campaigns and promote the global agenda to #LeaveNoGirlBehind.

Lack of access to any type of digital infrastructure exacerbated learning loss and added to the risk of dropping out of school for 2.85 million students in urban slums and rural areas (Donnelly, Patrinos, and Gresham, 2021). The Citizen Foundation (TCF)²⁹ operates 1,600 schools in the heart of urban slums, with the poorest and most vulnerable communities of the country, catering to two million students who do not have access to digital resources such as computers or the internet. They used two viable distance learning methods: a tele-broadcasting initiative with an estimated reach of one million registered students and an edutainment magazine fully penetrating the school community by the same name, *Ilm ka Aangan*³⁰. The fifty-minute-long episodes are based on interactive theme-based videos, hands-on learning activities, physical activity tips and a storytelling session by renowned TV actor Sania Saeed. The magazine supports two editions for primary and secondary students. These fortnightly published magazines include activities that aim to develop students’ literacy, numeracy, and socio-emotional skills. Concepts related to digital literacy are also being included in the secondary level edition.

Despite the overall challenging socio-economic context of Pakistan, the government of Pakistan has been generously assisting protracted Afghan refugees for the last forty years. Currently, there are 1.4 million registered Afghan refugees in Pakistan out of which 500,000 are children of school-going age. There are 146 schools in Refugee Villages (RVs) financed by United Nations Higher Commission for Refugees (UNHCR) and locally managed by the government of Pakistan. The government recognises the significance of investment in the human capital of the future generations of Afghan children and the preparation for their eventual safe and sustainable return to Afghanistan; however, the pandemic was a significant setback to the steady school routines and worsened the disproportional challenges of identity and social integration faced by refugee children comprising an indigenous population of the most vulnerable children living at the edge of our society. In this bleak situation, International Catholic Migration Commission (ICMC) committed to recover and rebuild the learning community within RVs by promising quality education

²⁹ The Citizens Foundation (TCF) is a professionally managed, non-profit organisation set up in 1995 by a group of citizens who intended to bring about positive social change through education. Currently, TCF is Pakistan’s leading organisations in the field of education for the marginalised and less privileged. TCF has a 100 per cent female employment ratio and equal student gender model.

³⁰ Education Courtyard.

to children enrolled in 62 RV schools in six districts³¹ of Khyber Pakhtun Khwa (KPK), Pakistan's only province densely populated with Afghan refugees and the gateway between RVs and other urban areas of the country. RV schools borrowed their curriculum from Afghanistan to culturally align academic knowledge with Afghanistan. The syllabi excluded the English and Urdu languages and the medium of instruction was Pashto, which consequently prohibited refugee children from integrating into the local education system after completing their school years. Covid-19 served as the black swan moment for RV schools and a change in curricula was inevitable not least to engage refugee children with technology-assisted learning practices. Data revealed that only 2 per cent of RV families had access to smartphones; therefore, SMS and the TeleSchool project were the only two viable options to continue the education of RV children. The aim was to address both access to education and the quality of education received. Daily SMS messages on a diverse range of topics and polls were sent out to the RV community. Students responded to the polls and exchanged views on a wide range of subjects tied together with the content of the national TeleSchool project. The intervention is delivered through basic mobile handsets via a user-friendly text message platform, without the need for internet connectivity. It enables students to access education materials for a range of subjects based closely on the KPK curriculum. The intervention cost approximately \$1.80 per student per month. The innovative use of SMS acted as an incentive to draw children to learning while ensuring their return to schools; ICMC reports a 100 per cent student return rate upon schools reopening in February 2021.

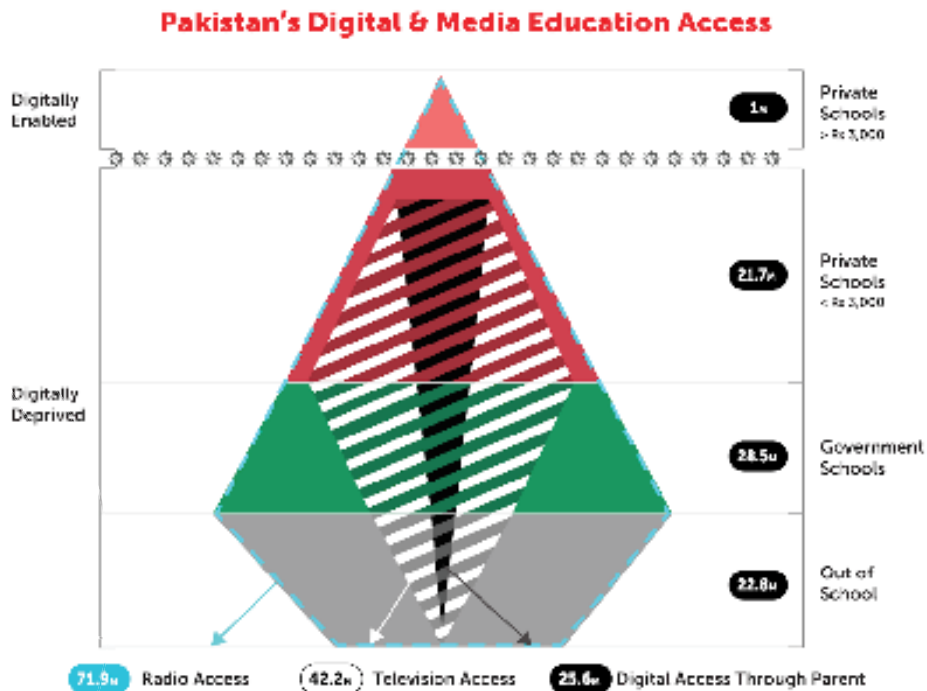
The Japan International Cooperation Agency (JICA), in collaboration with the Ministry of Federal Education and Professional Training, decided to respond to the Covid-19-exacerbated learning inequality challenges through the Remedial Education Programme (REP). REP was technically led and implemented by Centre for Economic Research in Pakistan (CERP). Teachers and head teachers of Federal Directorate of Education (FDE) also contributed to the Targeted Instruction (TI) Toolkit design and contents and provided invaluable feedback from the piloting of TI Toolkits. The implementation of the teacher-led, technology-supported and cost-effective TIP was launched at the system level at 20 public, 5 LCPS, and 16 NGO primary schools across Pakistan. With significant policy implications, this programme is the first attempt to implement the Targeted Instruction Model in Pakistan.

³¹ Swabi, Mardan, Timergirah, Chikdara and Haripur, and Mansehra.

c. New Actors in Education

The onset of the Covid-19 pandemic has led to a global reliance on digitised educational solutions. With schools and HEIs being closed, Pakistan also depended on technology-embedded learning solutions to avoid learning disruptions. While mobile access in Pakistan is growing dramatically, internet penetration rates are still quite low. Pakistan houses only 2.2 per cent of Asia's internet users; within the country the ratio is 36.2 per cent. Geographic location and economic strata are two defining factors in determining students' access to technology. There are only one million students with steady access to digital media and technology. With a pressing number of 51 million students who have either intermittent or no access to technology, a complete reliance on modern technology solutions was not a practical and sustainable practice amidst the Covid-19 crisis.

Figure 1: Digital and Media Accessibility Pattern in Pakistan (2020).



Some geographic regions in Pakistan are completely deprived of internet access; for example, out of 32 districts in the province of Baluchistan, nine do not have internet penetration at all. In other districts, internet access is poor due to the lack of proper fibre optic transmission lines. Similarly, only 5 per cent of the population in the province of KPK has access to broadband facilities.

In this situation the government of Pakistan responded to the pandemic-inflicted learning crisis by collaborating with UNICEF and the World Bank to launch a multi-front effort. This effort included three core operations:

Taking in account the deeply penetrated digital and media access through television³², a tele-broadcasting solution, TeleSchool and Taleem Ghar,³³ was used to disseminate educational content donated by educational institutions and content producers in Pakistan. This intervention reached out to up to 11 million students every day. The World Bank contributed \$5 million to this initiative. TeleSchool broadcasted educational programmes on mathematics, English, Urdu and science for grades 1-12, while Taleem Ghar broadcasted science-based subjects, mathematics and general knowledge for grades 1-10. The World Bank provided a \$5 million grant to support this educational channel.

Educational programmes were broadcasted on the radio for four hours every day through FM93, FM94 and FM101 transmitters. This initiative was the fruition of a MOU signed between MoFEPT and Radio Pakistan in March 2020. Every day a new lesson is broadcasted from 10:00 am to 12:00 noon and then as a repeat broadcast from 2:00 pm to 4:00 pm. Under the MoU, MoFEPT is responsible for providing the contents of the transmission to impart primary level education to children across Pakistan. Radio penetration in the country is reported to be higher than TV, at 98.8 per cent (Zacharia, 2021).

A digital content repository, eTaleem.gov.pk, was initiated. This is a converging platform for leading education technology players in the country, including Oredna³⁴, SABAQ³⁵, The Knowledge Platform³⁶, Noon Academy, and Sabaq Foundation³⁷.

Another missing piece of the final puzzle was the conception of an informed national implementation and monitoring policy on integrating education technology

³² Television reach in Pakistan stands at roughly 95 per cent of the population across Pakistan and roughly 90 per cent across the province of Punjab, which is much higher than the reach of any other mass media in the country, making television the most viable option for remote learning (Zacharia, 2021).

³³ Education at Home.

³⁴ Oredna is an Ed-Tech company with three different products. Taleemabad is a widely known educational app that services more than 1 million learners across Pakistan with their pre-primary and primary years instructional and assessment content. (<https://www.taleemabad.com/>).

³⁵ SABAQ provides children in Pakistan with access to high-quality educational content through their product MUSE App, which is widely used in the province of Sindh at LCPS and public schools. (<https://sabaq.edu.pk/>).

³⁶ TKP provides personalised digital education for grades 1 to 10 through several solutions, such as Learn Smart Pakistan, 1on1 Quiz, Factor Monsters, Ultrabot Prime and Educator's Edge. (<https://www.knowledgeplatform.com/>).

³⁷ A web platform that provides video lectures for K-12 grades. (<https://sabaq.pk/>).

across all levels of education in Pakistan. The federal Ministry of Education and Professional Training partnered with EdTech Hub³⁸ to draft the country's first comprehensive blended learning policy and to make it a part of the new National Education Policy. After an iterative process illustrated in Figure 2, EdTech Hub developed a monitoring and evaluation (M&E) framework for a blended learning pilot being deployed in the federal jurisdiction in Pakistan (Khalayleh, Baloch, Dele-Ajayi, and Kaye, 2021).

Figure 2: M&E Framework development process.



Covid-19 altered people's perception towards technology-embedded teaching and learning. It also catalysed a massive shift from rudimentary teaching approaches to innovative pedagogy. It also gives us hope to accomplish the ambitious goal of reaching out to nearly 20 million students who were already out of school before the pandemic hit. Initiatives like TeleSchool and Taleem Ghar promises access to education for marginalised and discriminated girls who are not permitted to enrol in schools because of socio-cultural patriarchy.

Through the support of the World Bank, MoFEPT has launched a \$200 million project for online content development to mature Pakistan's Ed-Tech Industry and to advance SDG4: quality education. Ed-Tech will constitute a core pillar of the future education policy of Pakistan.

³⁸ A global non-profit research organisation supported by UK-AID, World Bank and Bill & Melinda Foundation. EdTech Hub empowers governments to make evidence-based decisions about the application of technology in education on a large scale. They have a success precedent in Sierra Leone, Tanzania, Kenya. (<https://edtechhub.org>)

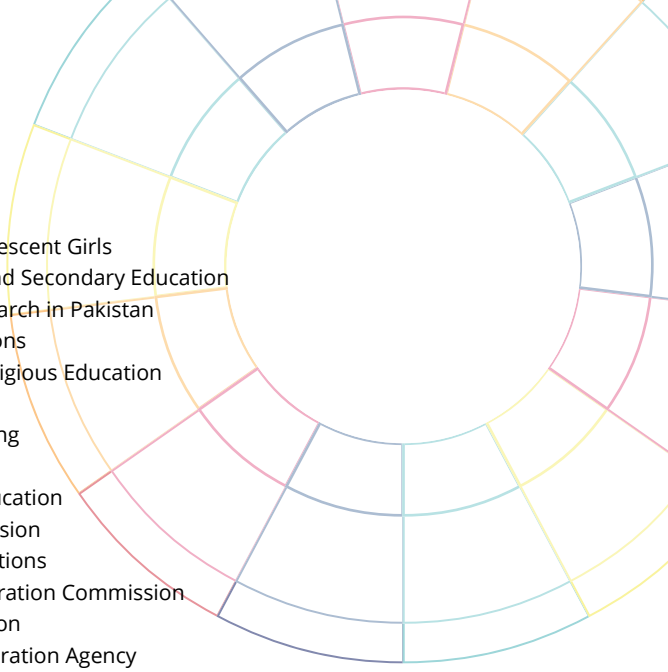
Conclusion

As the world continues to adapt to the changes induced by Covid-19, revisiting the standards of educational equity, quality and progression is imperative to advancing the sustainable development goals. The global health crisis magnified how precarious and interdependent our educational system is. In addition to exposing deeply entrenched inequalities and vulnerabilities, Covid-19 presented silver linings too by highlighting opportunities and rejuvenating approaches to enhance the accessibility of education for all. The threat to the continuity of education on a massive scale has been unprecedented and can be anticipated in future too on account of similar pandemics, and natural, political, economic, and environmental disorders. Any country's capacity to respond to such educational crises hinges on national preparedness, institutional foresight, and the personal competencies of educators.

The pandemic projected the resilience and strength of the educational sector in Pakistan and this has renewed her commitment to advance the Sustainable Development Goals through exploring different options and solutions on an ad-hoc basis while ensuring continuity in education. The legacy of exploring solutions for all through public-private partnerships, compelling the massive shift towards Ed-Tech and utilising under-explored resources such as television and radio instruction should continue with a more informed and coherent approach. The available resources should be fully utilised to address Pakistan's protracted education crisis.

The potential of vision, planning, and partnerships is the silver lining of Covid-19, likely to enable Pakistan to overcome the challenges of accessibility and equality of basic education for all.

Acronyms



A3G	Advancing Action for Adolescent Girls
BISE	Boards of Intermediate and Secondary Education
CERP	Centre for Economic Research in Pakistan
DAI	degree-awarding institutions
DGRE	Directorate General of Religious Education
ECE	Early childhood education
EYS	Expected Years of Schooling
ET	Education Technology
FDE	Federal Directorate of Education
HEC	Higher Education Commission
HEIs	Higher Educational Institutions
ICMC	International Catholic Migration Commission
IRI	Interactive Radio Instruction
JICA	Japan International Cooperation Agency
KPK	Khyber Pakhtun Khwa
LAYS	Learning Adjusted Years of Schooling
LCPS	low-cost private schools
MoFEPT	Ministry of Federal Education and Professional Training
NVTC	National Vocational and Training Commission
OOSC	out of school children
PEIRA	Private Educational Institutions Regulatory Authority
PHEC	Punjab Higher Education Commission
PIDE	Pakistan Institute of Development Economics
REP	Remedial Education Program
RV	Refugee Villages
SED	School Education Departments
SELD	Sindh Education and Learning Department
TCF	The Citizen Foundation
TI	Targeted Instruction
TVET	Technical and Vocational Education and Training
UNHCR	United Nations Higher Commission for Refugees

References

- ADB. 2020. Pakistan: Education Sector Assessment. Islamabad: Asian Development Bank. Retrieved 8 June 2021. (<https://www.adb.org/sites/default/files/evaluation-document/651706/files/tcrv-9207.pdf>).
- Bau, N., and Das, J. 2016. The Misallocation of Pay and Productivity in the Public Sector: Evidence from the Labor Market for Teachers. Washington: World Bank. (<http://hdl.handle.net/10986/26502>).
- Donnelly, R., Patrinos, H., and Gresham, J. 2021. The Impact of COVID-19 on Education – Recommendations and Opportunities. Islamabad: The World Bank.
- Geven, K., Hasan, A., and Aedo, C. 2020. Strengthening the fight against Pakistan's learning crisis. Islamabad: The World Bank. (<https://blogs.worldbank.org/end-povertyinsouthasia/strengthening-fight-against-pakistans-learning-crisis>).
- Hundred. 8 July 2021. Hundred. (<https://hundred.org/en/>: <https://hundred.org/en/innovations/broad-class-listen-to-learn-interactive-radio-instruction-program#3fa640d1>).
- Hunter, R. 2020. Education in Pakistan. Islamabad: World Education News & Reviews. (<https://wenr.wes.org/2020/02/education-in-pakistan>).
- Kalmthout, E., and Cappell, F. 2020. Brief on Learning Continuity Amidst COVID-19 School Closures in Pakistan. Islamabad: UNICEF. (<https://www.unicef.org/pakistan/media/3761/file/Pakistanpercent20Briefpercent20onpercent20learningpercent20continuitypercent20amidstpercent20COVID19.pdf>).
- Khalayleh, A., Baloch, I., Dele-Ajayi, O., and Kaye, T. 2021. A Monitoring and Evaluation Framework for Blended Learning: Pakistan Ministry of Federal Education and Professional Training. Cambridge: EdTech Hub. (<https://docs.edtechhub.org/lib/XBPZPS3P/download/V8W3V6F2/Khalaylehpercent20etpercent20al.percent20-percent202021percent20-percent20Apercent20Monitoringpercent20andpercent20Evaluationpercent20Frameworkpercent20forpercent20Blendedpercent20.pdf>).
- PTA. 2021. Pakistan Telecommunication Authority - 2020. Islamabad: PTA. (https://www.pta.gov.pk/assets/media/annual_report_2020_15012021.pdf).

- Qureshi, Z., and Razzaque, A. 2021. Busting the Myth that Private Schools are only for the Elite in Pakistan. Macro Pakistani. (<https://macropakistani.com/private-schools/>).
- Saeed, S. 2021. Case study: Siyani Sahelian Advancing Action for Adolescent Girls (A3G). Lahore: ITA. (<https://www.ungei.org/sites/default/files/2021-03/Siyani-Sahelian-A3G-case-study-covid-gender-edu-2021-eng.pdf>).
- Vegas, E. 2020. School Closures, Government Responses, and Learning Inequality around the World during COVID-19. Washington: The Brookings Institution. (<https://www.brookings.edu/research/school-closures-government-responses-and-learning-inequality-around-the-world-during-covid-19/>).
- Zacharia, S. 2021. Pakistan: TeleSchool and Taleem Ghar (Educational TV at Home). Islamabad: The World Bank. (<https://documents1.worldbank.org/curated/en/421821600058352361/pdf/Pakistan-TeleSchool-and-Taleem-Ghar-Educational-TV-at-Home.pdf>).







The Philippines

Synergeia Foundation

Introduction and Overview of Education in the Philippines

The Philippine education system is divided into three major stages. It begins with a seven-year primary and elementary programme, followed by six years of high school. After high school, a student can go to a college or university to earn a degree. They can take up a technical-vocational training course for a minimum of six months and earn a vocational certificate. Filipino students, thus, spend an average of twelve to sixteen years in school.

There are 26.2 million students who are enrolled in basic education. Nearly 90 per cent (87 per cent) are enrolled in public schools. The state guarantees universal education, and elementary and secondary education is provided for free. The government provides free tuition for students enrolled in state colleges and universities.

In 2018, Filipino students joined the Programme for International Student Assessment (PISA) for the first time. Unfortunately, the results confirmed the fear that the quality of Philippine education has been falling behind world standards for some time. Out of the seventy-nine countries that participated in the programme, the Philippines ranked seventy-ninth in mathematics and reading, and in science, it ranked seventy-eighth.

While the results have been disappointing, they do not reflect the many attempts of the government to strengthen the Philippine education system. The Aquino administration introduced the "Basic Education Act," which extended the basic education cycle from ten to thirteen years. Many lauded the move. However, concerns have been raised that the increase in the number of years of basic education made

education more inaccessible for the poor. It also did not address the problem of high dropouts in the primary grades.

The current administration introduced universal access to tertiary education through Republic Act 10931 in 2017. The law provides free tuition and other school fees in state universities and colleges, local universities and colleges, and state-run technical-vocational institutions. An Alternative Learning System Act was legislated to provide adequate support to meet the learning needs of out-of-school youth, especially members of cultural communities.

The reform that has had a significant impact on improving access to basic education was the Conditional Cash Transfer Programme for the poorest of the poor. Households receive cash grants if children stay in school, get regular health check-ups, have their growth monitored, and receive vaccines. The programme has achieved almost universal enrolment for elementary-school-age children of participating households. The completion rate was estimated at 96.6 per cent¹ in elementary schools. Because of its success, the programme has been continued despite changes in the leadership in the national government.

However, the completion rate is lower in secondary schools: 80.9 per cent in junior high school and 81.0 per cent in senior high school. Girls have an advantage over boys with a higher completion rate in elementary school of 95.5 per cent compared to 90.8 per cent for boys. The gender inequity is also observed in secondary schools, where 84.8 per cent of female students complete senior high school compared to only 77.2 per cent of male students.²

Mastery of basic skills in reading and mathematics remains a significant problem. Only 40.4 per cent of primary school children were assessed to have the minimum competencies in reading, whilst for mathematics, it was even lower at 34.8 per cent. The numbers for secondary school students are a bit higher: 46.0 per cent in reading and 37.3 per cent in mathematics.

The weaknesses of the basic education system affect the performance of students in tertiary education. The passing rate in the licensure examination for teachers remains low at 37.6 per cent.

¹ As of 2019.

² The statistics are from the Philippine Statistics Authority. (<https://psa.gov.ph/sdg/Philippines/baselinedata/4%20Quality%20Education>).

The Department of Education (DepEd) receives the highest budgetary allocation amongst government departments from the government. The 3.2 per cent of GDP ratio falls below the world's average of 3.7 per cent. The ratio is 4.2 per cent in Malaysia, 4.5 per cent in Korea, 4.1 per cent in Vietnam, and 4.4 per cent in Hong Kong.³

Shortages in classrooms and school buildings are a perennial problem in the country. DepEd estimates that there is a shortage of 110,954 classrooms throughout the country.⁴ When a new school year opens, the lack of classrooms greets many Filipino learners. In urban areas, the teacher to student ratio stands at 1:50, and there are schools with ratios reaching 1:60. In the provinces and remote areas, one can witness young children walking three to four hours a day to reach the nearest classroom in their locality.

Every year, an average of ten thousand new teachers become part of government-run schools. This number does not include the thousands who join private schools. Over the past years, poor student performance has eventually led to the questioning of the quality of teachers in the country. As a result, there have been efforts to upgrade their pedagogical skills. The government has sought to raise their salaries, although teacher groups believe that such a raise is not enough. Among the many complaints of teachers in public schools is that they are given plenty of administrative paperwork, thus pulling them away from their academic work.

The Department of Education is the largest government bureaucracy in the country. Education policies and strategies are often centre-based, giving little allowance for regional offices and local government units to take bold initiatives. But, local government units are starting to take a proactive stand towards education by empowering and expanding their local school boards. Business establishments and industries also recognise the need for industry-school partnerships to give students better learning opportunities.

³ The data are as of 2019. (<https://data.worldbank.org/indicator/SE.XPD.TOTL.GD.ZS>).

⁴ Manila Bulletin. 5 March 2021. DepEd:P1T needed to address classroom shortage in the next three years. (<https://mb.com.ph/2021/03/05/dep-ed-p1t-needed-to-address-classroom-shortage-in-the-next-3-years/>).

Impact of the Pandemic on Education

Philippine education under the Covid-19 pandemic is an exciting montage of lights and shadows.

The community lockdowns brought about by Covid-19 plunged the Philippines into the most extended school closure in the world. A year after the pandemic started, almost all primary and secondary schools remain closed, except for a few that received special permission to conduct limited face-to-face classes. The shift to online and modular learning caught everyone unprepared.

Many provinces in the country have poor internet connectivity. Moreover, learning gadgets, such as smartphones and tablets, are not even available to all. The Social Weather Station (SWS) showed that 42 per cent of students had no devices for distance learning, while 93,221 teachers across the country had no laptops.⁵ With schools closed, parents had to take on the task of tutoring their kids at home. Unfortunately, many parents were not prepared for such a task. Some had not even finished elementary school; thus, they had a hard time homeschooling their children.

With challenges such as these, it is no surprise that according to the World Bank, the Philippines, which already had a learning poverty level⁶ of 69.5 per cent before the pandemic, now has a learning poverty level of 90 per cent.⁷ The pandemic intensified the growing education crisis in the country by two-fold.

The crisis has also led to several private schools closing down due to the lack of enrollees. The Department of Education estimates that since the start of the pandemic, 680 private schools have had to close down or suspend their operations.

The pandemic also did not spare students and teachers at the tertiary level. Like their counterparts at the elementary and high school levels, college students went into blended learning. Many of them had a hard time adjusting to the new setup. Some colleges even requested an academic break, due to the stress that school work had caused to their students' mental health.

⁵ Gabriel Pabico Lalu. 2 March 2021. Philippine Daily Inquirer. 42% of school children do not use devices for distance learning. (<https://newsinfo.inquirer.net/1402187/42-of-school-age-filipinos-dont-use-devices-for-distance-learning-sws>).

⁶ Learning poverty level refers to the percentage of students who cannot read by the age of ten.

⁷ Alberto Muñoz-Najar et al. 2021. Remote Learning during Covid-19: Lessons from today, Principles for Tomorrow. World Bank Report, p. 36.

Nevertheless, there were also shining moments in Philippine education during the pandemic. Communities gathered together to support their children by providing an orderly way of bringing printed modules to students. In addition, volunteers gave their time to provide small group community tutorials. Many businesses and individuals raised funds to provide the learners with gadgets for learning. Teachers began upgrading their computer skills to keep up with the demand for online learning. Some trained themselves to become TV and radio broadcasters, in an effort to provide learning via TV and radio. There were some schools that designed technologies to adapt to blended learning.

Indeed, Philippine education under the Covid-19 pandemic has so far been an exciting montage of lights and shadows. We can only hope that the lights may truly outshine the shadows and the crisis that Covid-19 has brought to the country and the rest of the world.

Best Practices

I. Infrastructure and Teacher Development

1. The Triage in Education. “Triage” comes from the old French word *trier*, which means to sort, cull, or separate. It was adopted in World War I to sort the wounded according to the severity of their injuries – who among them would be taken to the operating room, and who does not need intensive care? In this pandemic, triage has been used to separate the positive from the negative, the symptomatic from the asymptomatic, and the seriously symptomatic from the not-too-serious patients. Fr. Jose Ramon Villarín, SJ explains that triage is more than just a medical term. Triage is useful in re-imagining education.

He notes that re-imagining education starts from reflecting on a double triage of choices that educators had confronted even before the pandemic. The first sorting is separating the “learned” from the “learning person”. And the second triage is about sorting the “destroyer” from the “builder”.

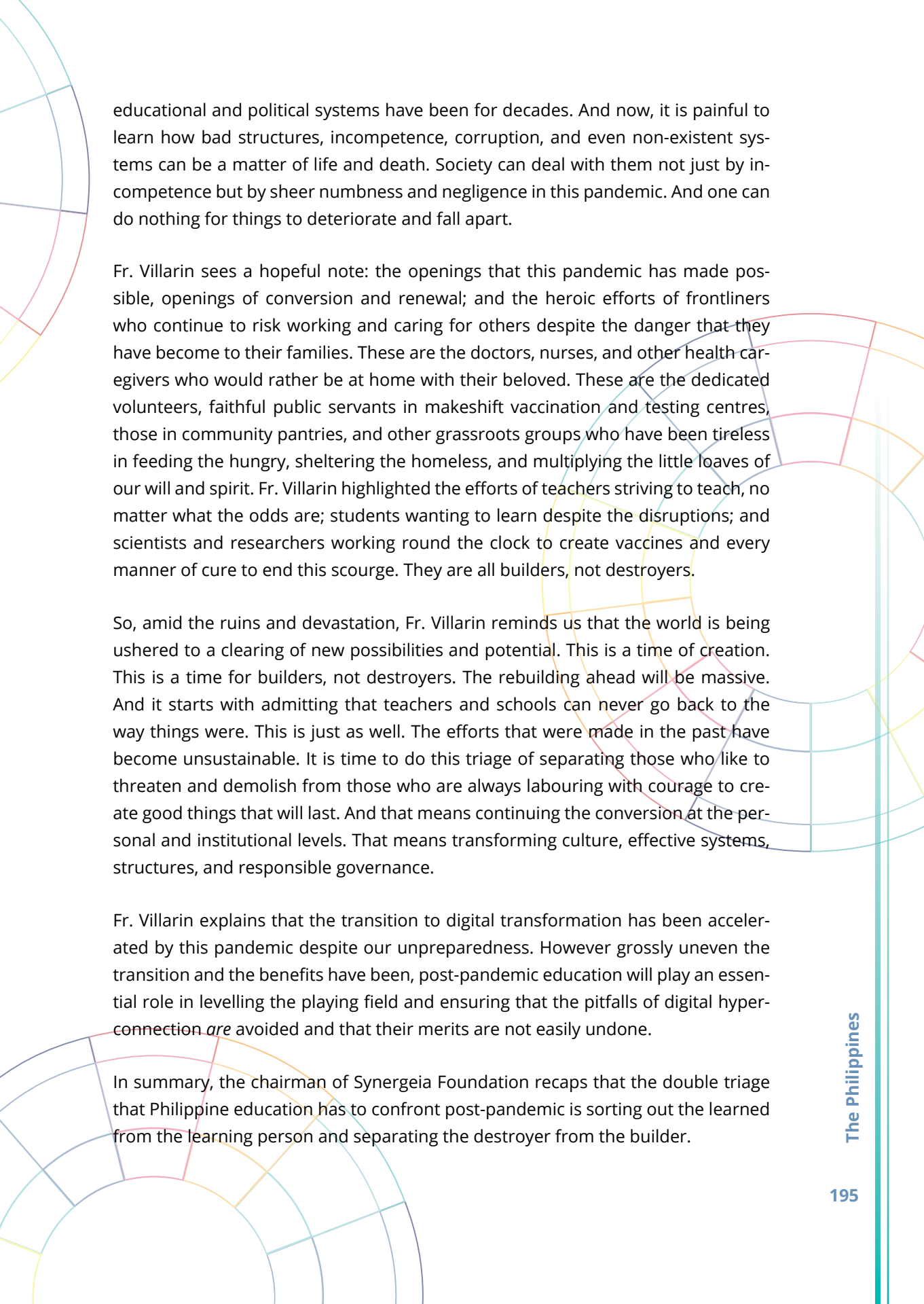
The first triage: separating the learned from the learning person. Fr. Villarín notes that the pandemic has uprooted so many things, education being one of them. Students most probably feel a heightened sense of insecurity, especially when they compare themselves to those taught and trained with the time-tested tools of conventional pedagogy. The students are probably insecure. They are probably thinking about how inadequate and unprepared they are for the tasks

ahead of them. They should be assured that no one is ever perfectly adequate. No one is ever fully prepared for a world that is always continually evolving. As the virus variants attest – alpha, beta, delta, lambda – the world is always in a state of flux. It is never still. And so, if education is to teach students and children anything, **it is for them to love learning – never to stop learning.** Fear stops learning, insecurity avoids learning, and pride spoils learning. The internet has gems of learning and wisdom, but it is also crammed with fly-by-night experts and know-it-alls who could not care less that their little knowledge is dangerous. Teachers and parents need to teach learners that they do not know everything. If they realise that they do not know everything, they will be humble. They will listen. They will learn to adjust and adapt, and they will even be bold enough to innovate and to create.

Fr. Villarín quotes Eric Hoffer that education can serve as a source of wisdom for students and teachers today or post-pandemic. Hoffer said, “The central task of education is to implant a will and a learning facility. It should produce not learned but learning people. The truly human society is a learning society where grandparents, parents, and children are students together.” In a time of drastic change, the learners will inherit the future. On the other hand, the learned will find themselves living in a world that no longer exists.

If learning is chosen over the learned, a bottom-up approach will be preferred to a top-down approach in teaching and learning and education governance. That means subsidiarity, which means empowerment that implies choosing localised approaches over centralised and uniform strategies in education. The choice should be a method, a process, and pedagogy over content; the “how” of learning over the “what” of learning, especially in basic education. Variety and diversity should not be considered as threats. Instead, teachers should leave their learned podiums and learn from those below and from those on the ground. They should continually adapt pedagogy and governance to the context that continuously evolves in a post-pandemic world.

The second triage has to do with separating those who would destroy from those who choose to build. The pandemic has put the country, and the world, in uncharted territory. While there might have been similar threats in past pandemics and plagues, this one is unprecedented in its reach and in what it threatens to destroy. This orientation is symptomatic of current times. This pandemic has exposed society’s vulnerabilities and weaknesses. Stress has a way of uncovering many aspects that were hidden before. Inequalities are starker than ever: between those who are homeless and those who are at home; between children who go hungry every day and those who do not; between those who can still catch school and those who are consigned to catch up. This pandemic has uncovered how impoverished the health,



educational and political systems have been for decades. And now, it is painful to learn how bad structures, incompetence, corruption, and even non-existent systems can be a matter of life and death. Society can deal with them not just by incompetence but by sheer numbness and negligence in this pandemic. And one can do nothing for things to deteriorate and fall apart.

Fr. Villarín sees a hopeful note: the openings that this pandemic has made possible, openings of conversion and renewal; and the heroic efforts of frontliners who continue to risk working and caring for others despite the danger that they have become to their families. These are the doctors, nurses, and other health caregivers who would rather be at home with their beloved. These are the dedicated volunteers, faithful public servants in makeshift vaccination and testing centres, those in community pantries, and other grassroots groups who have been tireless in feeding the hungry, sheltering the homeless, and multiplying the little loaves of our will and spirit. Fr. Villarín highlighted the efforts of teachers striving to teach, no matter what the odds are; students wanting to learn despite the disruptions; and scientists and researchers working round the clock to create vaccines and every manner of cure to end this scourge. They are all builders, not destroyers.

So, amid the ruins and devastation, Fr. Villarín reminds us that the world is being ushered to a clearing of new possibilities and potential. This is a time of creation. This is a time for builders, not destroyers. The rebuilding ahead will be massive. And it starts with admitting that teachers and schools can never go back to the way things were. This is just as well. The efforts that were made in the past have become unsustainable. It is time to do this triage of separating those who like to threaten and demolish from those who are always labouring with courage to create good things that will last. And that means continuing the conversion at the personal and institutional levels. That means transforming culture, effective systems, structures, and responsible governance.

Fr. Villarín explains that the transition to digital transformation has been accelerated by this pandemic despite our unpreparedness. However grossly uneven the transition and the benefits have been, post-pandemic education will play an essential role in levelling the playing field and ensuring that the pitfalls of digital hyper-connection *are* avoided and that their merits are not easily undone.

In summary, the chairman of Synergeia Foundation recaps that the double triage that Philippine education has to confront post-pandemic is sorting out the learned from the learning person and separating the destroyer from the builder.

Leaders are always doing triage, and they always have to choose. And when education comes to the room where a triage needs to be done, education should be considered as “seriously or severely injured.” Education should be high up in the priority list, along with health, livelihood, and community development. If nations talk about the climate emergency, the emergency in education is real. A cause for panic is if Filipino children were perennially confined to the hospital’s Intensive Care Unit (ICU). This situation should be a cause for alarm and worry. It does not take much to re-imagine that children are already confined in an educational ICU for life. They are there hurting, just as the Philippine nation has been for so long now. This pandemic has been such a pain, but it should also usher the country to a new clearing with real possibilities for conversion and renewal in Philippine education.

2. Listening to the Ground, Targeted Interventions, and Working with Local Governments. Fr. Bienvenido Nebres, SJ, former President, Ateneo de Manila University, recalled that previous educational reforms in the Philippines were led by foreign international experts who had ready-made solutions even before the problem of education was understood.

- The new mathematics curriculum was introduced by Peace Corps volunteers in the 1960s.
- The Programme for Decentralised Education (PRODED) and Secondary Education Improvement and Development Programme (SEDP) were developed by international experts from the World Bank and the Asian Development Bank.
- The most recent K to 12 Reforms were designed by academic experts.

Fr. Nebres explains that to solve a problem scientifically, substantial time needs to be spent in understanding the nature of the problem and defining its causes. An ill-defined or undefined problem does not lead to an effective solution.

He added that previous reforms centred on revising the intended curriculum: syllabus, scope, and sequence. The greatest amount of time was given to the development of textbooks and materials, as well as capacity building for higher-level trainers. The reforms were also initiated from the top, from the education experts from universities and from those from abroad. The least attended to are the actual target implementers of the reform, who are the classroom teachers. It is almost at the end of a World Bank or Asian Development project that the reform eventually gets to the teachers. The trainers may get six months of training, but the actual classroom teachers will only be trained for two to three weeks. The impact of these

reforms is similar to the effects of a flash flood, i.e., there is too much to absorb in too short a time. Since the classroom teachers get very little time for training, the intended reforms are not really learned. Fr. Nebres emphasises that learning happens in the classroom, in the **Implemented Curriculum**. For reforms to be



relevant and effective, it is crucial to “listen to the ground, develop targeted interventions and work with local government units.”

Fr. Nebres explains that the situations of Philippine schools are very diverse and that no one solution is possible. The problem in city schools is congestion, i.e., there are 70 to 80 students in a classroom. In contrast, the problem of children from rural areas is that they have to travel many kilometres to be able to get to school. He cites the findings of a nationwide study that the Ateneo de Manila University conducted. The study concluded that effective interventions come from two lines of engagement:

- Making existing institutions fulfil their functions; and,
- Enabling different actors and groups to interact with each other in new ways.

As an example of targeted interventions, Fr. Nebres cites the Teacher Guides in Mathematics that were the product of a partnership between teachers from public schools and the Ateneo de Manila. They drew from existing textbooks and best practices, and improved on them. An independent evaluation showed that an intervention that came from the ground significantly improved the performance of teachers and learners.

Another example is the programme to help children from Quezon City. Instead of a textbook problem, the children were found to be hungry, infested with worms, and suffering from poor eyesight. The children thought that they were incompetent because of poor reading skills. It turned out that all they needed were eyeglasses. The interventions that the Ateneo Centre for Educational Development introduced were targeted to address their difficulties: feeding, sanitation, and improved health.

Fr. Nebres cited how Synergeia influences mayors and local school boards to formulate local solutions to local problems. Challenges, difficulties, and proposed solutions are discussed in town hall meetings and focus group discussions with stakeholders. The result is an action programme which is collaboratively designed and owned by community members. These programmes include “Reading Camps”, “Feeding Programmes” and capacity-building workshops for teachers and parents. The one-size-fits-all rule is not followed in their designs. Assessments are done on training needs using tests and structured interviews. Results are then measured based on outcomes. For example, children utilise a rating scale to report on the traits and values that their parents practise. Children who are part of the feeding programme are weighed regularly. Studies are done to assess their academic progress.

Fr. Nebres is proud of the success of the feeding programme. It was pioneered by Jollibee Foundation and provided lunch for undernourished children in selected public schools. The programme was expanded by Ateneo de Manila in 2009 in Quezon City and by Gawad Kalinga in several other local governments. Before the pandemic, they were running central kitchens and providing lunch for over 150,000 children nationwide. A National Feeding Programme for malnourished children was passed into law in 2018.

Fr Nebres emphasised that the appropriate level of intervention in improving education should not be the national level but the division-district-school levels. The national government should be an **Enabler**, just like a good CEO. A good CEO creates an enabling environment so leaders closer to the ground can get the work done. His thoughts were echoed by academician Dr. Christopher Bernido in a paper presented before the Academy of Science and Technology. He says that a major part of the education problem is the mandated curriculum by DepEd. His recommendation is to decentralise curriculum implementation. “A friendly competition among DepEd divisions may help improve Philippine performance in international assessments instead of one wrong decision from the centre affecting all schools in the country.”

3. Re-imagining Teachers’ Professional Development. Mr. Joey Calios, an education supervisor from Pasig City, suggests that an effective teachers’ professional development programme should be goal-oriented, practical, collaborative, and sustainable. It should be: (a) individualised and school-based, (b) utilise coaching and follow-up procedures, (c) foster collaboration, and (d) enable practices to be

embedded into the daily tasks of teachers.⁸ From experience, he noted that teachers prefer to work with peers, and that they learn best practices through teaching demonstration and participation in Learning Action Cells (LAC) or Quality Circles. Teachers feel the need to rebuild and strengthen their sense of teamwork, which was lost due to the no-contact work policy during the pandemic.

Quality circles organised in the 1980s were the forerunners of LACs. They were designed to enable a group of workers engaged in similar work to meet regularly to identify, analyse and solve work-related problems. The Department of Education in the Philippines suggested the formation of LACs through DepEd Order No. 35, s. 2016. LAC sessions are intended to serve as a continuing professional development strategy to improve teaching and learning.

Studies showed that LAC sessions contribute to the development of ethics and professionalism among teachers. However, the sessions were lacking in research content and innovations. Teachers had difficulties identifying the relevance of LAC sessions to their day-to-day teaching experiences.⁹ Another study observed that there was no tool for evaluating the LACs, no success indicators, and no model that can serve as an example.¹⁰

Despite the noted weaknesses, Mr. Calios sees the great potential of LACs, especially because it strengthens teachers' morale through teamwork. He suggests using demonstration teaching because it provides teachers with opportunities to identify problems in the delivery of instruction that they can solve collaboratively. LACs can also benefit from how Quality Circles in Japan have contributed to the increase in the productivity of employees. LACs focus on quality control. LAC members have the authority to make and implement decisions that affect their work area. They also benefit from an improvement in the company's performance through a financial bonus.

⁸ Trisha Nishimura. Effective Professional Development of Teachers: A Guide to Actualizing Inclusive Schooling. (<https://eric.ed.gov/?id=EJ1016781>).

⁹ Jhimson de Villa Cabral. School Learning Action Cell (SLAC) Sessions and Teachers' Professional Development in Buhaynasapa National High School. (https://www.researchgate.net/publication/331789567_School_Learning_Action_Cell_SLAC_Sessions_and_Teachers%27_Professional_Development_in_Buhaynasapa_National_High_School).

¹⁰ Mark Vega. Investigating the LAC Experiences of Science Teachers in Secondary Schools. (https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3571935).

II. Inequality in Education

Regional Director and now Acting Undersecretary of the Department of Education Willy Cabral presented the LAMP or Learning Assurance for Monitoring and Progress results, which the National Capital Region implemented in the school year 2020. LAMP aimed to measure learners' performance, and thus enable the DepEd to address learning gaps as plans are made for the coming school year. Covering Grades 6, 10 and 12, there were a total of 7,000 learners who volunteered to take the mid-year assessments and 27,000 who took the assessment tests at the end of the year.

The results showed the learners' level of proficiency in different subjects like English, mathematics, science, and Filipino. The test estimated the number of learners exhibiting 21st-century skills. These are problem-solving, critical thinking, and creativity. Using the "SOLO framework", the assessment tests mapped the competency levels of learners:

- Prestructural level – I don't understand, and I need help
- Unistructural level – I can identify, label, and follow simple instructions
- Multi-structural – I can describe, calculate, list, and combine
- Relational – I can explain, solve, compare, analyse, relate, and question
- Extended abstract – I can create, predict, reflect, imagine, evaluate, and generalise

Director Cabral noted that 65 per cent of Grade 6 learners were in the relational stage, i.e., they can solve problems and analyse issues. Among Grade 10 learners, 55 per cent were able to solve problems, and 49 per cent were able to analyse and evaluate. These indicate that they have developed critical thinking skills. However, 68 per cent and 56 per cent of the learners had low proficiency in English and mathematics respectively.

Director Cabral recognised that learners achieved gains despite the tremendous challenges of the pandemic. Students continued to enrol in distance learning, classes were organised, distance learning was delivered using various modalities such as printed learning modules, and online classes were conducted, with the help of stakeholders. Unfortunately, there were gaps and losses too. Some learners did not finish their assigned tasks, some parents were unprepared to mentor their children, and teachers had difficulties navigating the blended learning modality.

Because of the loss of contact time between teachers and learners, learners were perceived to have weaker competencies, especially in difficult subjects like mathematics and science.

The assessment results will be considered when adjusting the learning plans of the government. The DepEd plans to scale up best practices, focus on targeted teacher training, implement end-to-end preparation from curriculum instruction to assessment, and carry out expenditure planning. He concluded by recognising teachers' and other stakeholders' work in the last school year. It was not a year that was wasted, he said. Director Cabral emphasised that moving ahead, there was a critical need for collaboration and assessment and the opportunity to change for the better.

Mayor Stefanie Eriguel, mayor of Agoo, shared the other challenges in the delivery of distance education. The budget provided by the national government was inadequate, and the local school board assumed the responsibility for reproducing the learning modules. The local government provided internet access to all schools and extended training in digital technology to teachers and parents. Fortunately, the private sector and the provincial government rose to the occasion. Donations were received, which enabled them to procure printing equipment, and the provincial government provided laptops to teachers.

Mayor Eriguel believes in the use of data in evaluation and planning. With the help of Synergeia, assessment tests were conducted on 3,410 Grade 2 to Grade 6 learners in English, mathematics, and Filipino. The results showed a decline in performance in mathematics for Grade 5 students and in English for Grade 4 students, and their average scores ranged from 60 per cent to 69 per cent.

But Mayor Eriguel sees the assessment results in a positive light. The data will be used to introduce interventions to improve learning, and there is a plan to administer an assessment test to high school students. She encouraged other local government units to undertake learning assessments and emphasised, "If you cannot measure it, then you cannot improve it."

Agoo initiated two other programmes out of concern for students' difficulties. She noted their poor living conditions at home, and the fact that many students are forced to work instead of studying. She was equally alarmed by the increase in teenage pregnancies. In response, the local government unit established the Agoo Health and Education Centre, an online platform on Facebook administered by a team of mentors. It provides a hotline that parents, students, and teachers can call to seek assistance.

Their other programme, “*Kapit ka Lang’ Bes*”, is a barangay-based tutorial programme that assists students in understanding their lessons. The local government unit engaged community volunteers to serve as mentors. Tutorials are held in barangay halls, daycare centres, and covered courts. Safety protocols are observed, including testing the mentors for infection. Learners from coastal barangays need the most assistance. But more than assisting the students, the programme kept them from dropping out of school.

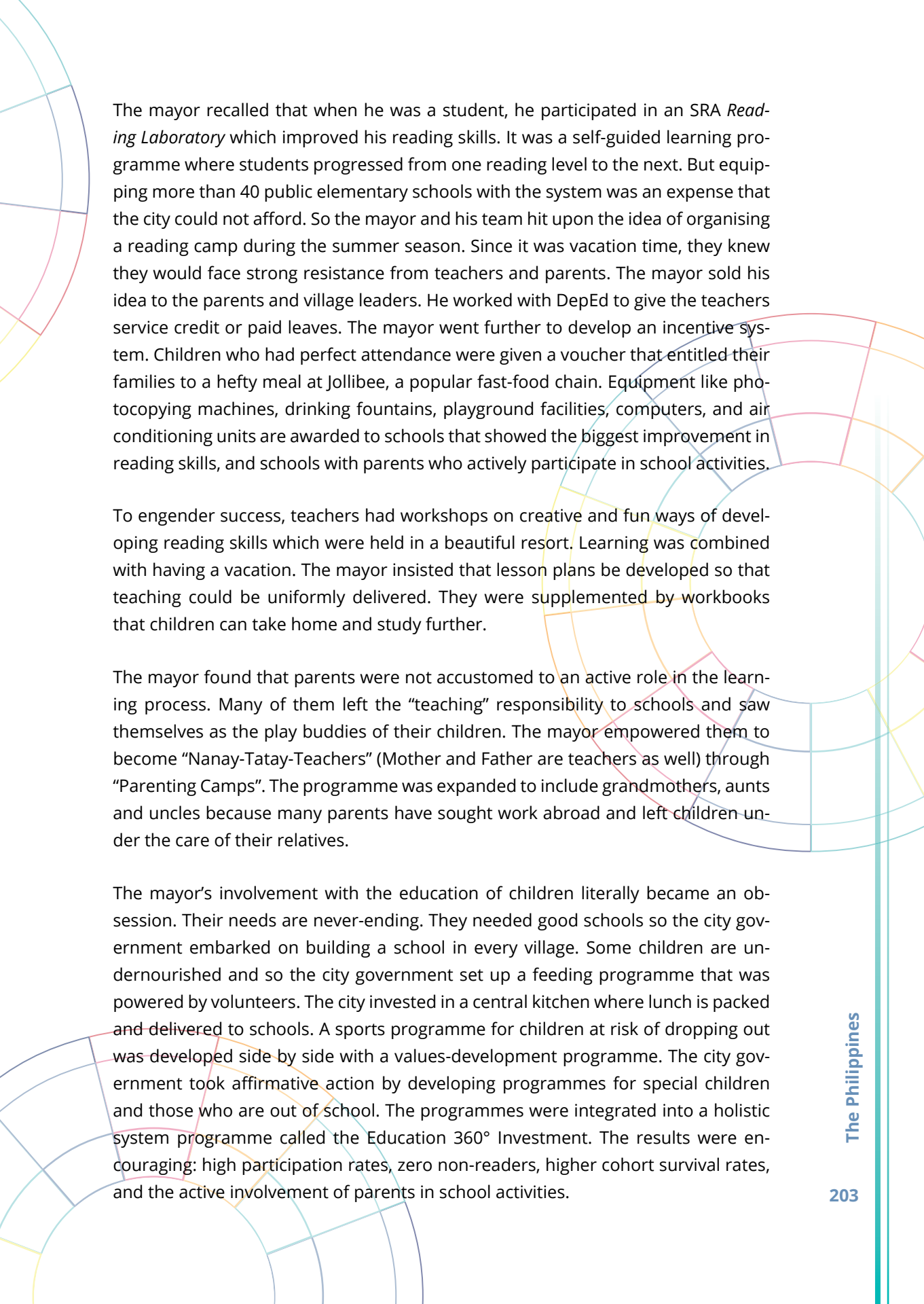
Mayor Eriguel concluded by stating that Agoon engaged all stakeholders and adapted, innovated, and maximised media use. She said, “At the end of the day, education must remain inclusive, and no child should be left behind. We need to make sure that we give the best opportunities to all our learners and all our children.”

III. New Actors in Education

Education Mayors, Education Governors. The central government in the Philippines is responsible for the delivery of basic education. But in a country composed of more than 1,700 islands, an education system controlled by the top can be unresponsive to the needs of varied communities. Mayor Rex Gatchalian of Valenzuela City describes the system as being “too big and too far to understand the learners on the ground, and too slow to respond to the changing needs of learners.” Mayor Gatchalian started deconstructing the delivery of education by “Building from the Ground Up”. He is one of the local chief executives — provincial governors, city and municipal mayors – who are called “Education Mayors and Governors”. They are the new actors and game-changers in the delivery of basic education.

Opening the education system to a genuine participatory system is a difficult process. Principals and teachers are appointed by the central government and owe their accountability to the Department of Education. Local governments are seen as financiers and advisers. Even the Local Government Code limits the participation of local school boards to nominal functions: disbursing the Special Education Fund, naming schools, and recommending appointments of school officials.

But Mayor Gatchalian was headstrong and started analysing how children perform using data on achievement levels. To his frustration, he discovered that a large percentage of the children, 15,482 children, were not reading well. He faced a group of principals who were reluctant to discuss the problem. “You need not worry, Mayor. There is no problem,” he was told.



The mayor recalled that when he was a student, he participated in an SRA *Reading Laboratory* which improved his reading skills. It was a self-guided learning programme where students progressed from one reading level to the next. But equipping more than 40 public elementary schools with the system was an expense that the city could not afford. So the mayor and his team hit upon the idea of organising a reading camp during the summer season. Since it was vacation time, they knew they would face strong resistance from teachers and parents. The mayor sold his idea to the parents and village leaders. He worked with DepEd to give the teachers service credit or paid leaves. The mayor went further to develop an incentive system. Children who had perfect attendance were given a voucher that entitled their families to a hefty meal at Jollibee, a popular fast-food chain. Equipment like photocopying machines, drinking fountains, playground facilities, computers, and air conditioning units are awarded to schools that showed the biggest improvement in reading skills, and schools with parents who actively participate in school activities.

To engender success, teachers had workshops on creative and fun ways of developing reading skills which were held in a beautiful resort. Learning was combined with having a vacation. The mayor insisted that lesson plans be developed so that teaching could be uniformly delivered. They were supplemented by workbooks that children can take home and study further.

The mayor found that parents were not accustomed to an active role in the learning process. Many of them left the “teaching” responsibility to schools and saw themselves as the play buddies of their children. The mayor empowered them to become “Nanay-Tatay-Teachers” (Mother and Father are teachers as well) through “Parenting Camps”. The programme was expanded to include grandmothers, aunts and uncles because many parents have sought work abroad and left children under the care of their relatives.

The mayor’s involvement with the education of children literally became an obsession. Their needs are never-ending. They needed good schools so the city government embarked on building a school in every village. Some children are undernourished and so the city government set up a feeding programme that was powered by volunteers. The city invested in a central kitchen where lunch is packed and delivered to schools. A sports programme for children at risk of dropping out was developed side by side with a values-development programme. The city government took affirmative action by developing programmes for special children and those who are out of school. The programmes were integrated into a holistic system programme called the Education 360° Investment. The results were encouraging: high participation rates, zero non-readers, higher cohort survival rates, and the active involvement of parents in school activities.

The last leg in the education programme was strengthening the governance of schools. All the stakeholders were organised into school governing councils (SGCs). Capacities in teamwork, planning, resource mobilisation, and conflict management were developed through training programmes. Initially, there was great reluctance, and attendance at workshops was sparse. But the mayor cracked the whip, checked the attendance himself, and imposed sanctions on those who were non-cooperative. Two years later, the lackadaisical attitude had been replaced by enthused participation. The mayor rewarded them by making them participants in the budgeting process. Their capacity was built to develop budget proposals. An SGC assembly was called where they presented their proposals and the winning ones were chosen through a ranking system. The mayor made the budgeting system transparent, participatory, and demand-driven.

During the pandemic, the mayor converted eighteen classrooms in the Valenzuela Science and Math High School into mini-TV stations so that lessons could be delivered “live” by teachers every day, in all subjects, for all grade levels, using YouTube or Facebook messenger.

In his own inimitable way, the mayor is a pseudo-superintendent. But, it is a joy to work with him – he who converts and expropriates land so that families can have beautiful family parks. His advocacies continue to be:

- Unshackling the local school board so that it can formulate programmes to address pressing matters on the ground instead of being limited to developing supplemental programmes.
- Making the local school board less mayor-centric and turning it into a consultative body.
- Making the Special Education Fund budget *“Of the Students, By the Students, For the Students.”*
- Changing our mindset to make education programmes data-driven.
- Institutionalising and sustaining teachers’ training with an emphasis on creativity

The mayor is a great believer in the use of data. The performance of children and parents is assessed all the time. Children and teachers are made to keep a journal to document their meaningful learning experiences.

During the KAS conference, the mayor stressed that learners should remain at the centre of any education programme. “We should help them realise that there is joy in learning.”

Conclusion

The Philippines has made significant progress in providing children with access to elementary education. Quality remains its biggest challenge as evidenced by the low performance of students in international assessment tests as well as by their weak capacities in reading and mathematics.

The conference highlighted the need to give local governments and the school divisions greater independence in designing education programmes that are responsive to the needs of learners. The recurring theme of the conference was the importance of listening to the ground, targeted interventions and working with local governments and their communities.







South Korea

Chung-Ang University



1. Overview of Education in South Korea¹

With the Local Government Act of 1991, laws regarding the local educational systems of South Korea were established and became effective. Thus, there are little differences in the educational system between regions. However, if the central government sets up certain standards, local school districts can build curricula and designate teaching materials based on the standards. By leaving some room for flexibility, the educational system will be appropriate to meet the educational needs of each region.

The Korean educational system's goal is to allow everyone to have the opportunity to obtain essential and broad knowledge by receiving sixteen straight years of education in this order: six years of elementary school, three years of middle school, three years of high school and five years of university. Universities provide further education with two to three years of master's courses and an additional two to three years of doctorate courses.

Elementary Schools

The Korean government provides free elementary school education so as to educate the public with essential knowledge. 99.9 per cent of children in Korea receive this elementary education. Thus, it shows the completeness of Korea's elementary education. This is a result of the cultural pressure for education and the efforts of the government. Elementary school education takes six years and almost all the schools are public schools. There are some private elementary schools although the differences from public schools are not noticeable.

¹ National Institute for International Education development. (<http://www.studyinkorea.go.kr/>).

Middle Schools

The purpose of middle school education is to broaden the basic knowledge that is provided in elementary education. In 1969, entrance examinations were abolished. Thus, any student who wants to receive middle school education can apply for schools near his or her residence, and get registered for a school through computer-generated selection. The courses are for three years and this is also free, similar to the elementary education. The percentage of private schools is higher in middle schools than in elementary schools, but private schools also provide free education, similar to public schools. In addition, there are not many differences among national, public and private schools.

High Schools

The purpose of high school education is providing a middle to high level of general education and fundamental specialised education. High schools are classified as general schools, industrial schools and others (foreign language schools, art and music schools, and science and technology schools). The courses are for three years and fees are charged. For general schools, a student applies for schools near his or her residence and gets registered for a school by computer-generated selection while the other types of schools are chosen by students themselves.

Technical Colleges

Technical colleges provide educational programmes in addition to high school education. There are about 150 technical colleges across the country and around 10 of the schools are national or public schools while the others are private schools. The purpose of technical colleges is to educate students to become skilful engineers by imparting strong theoretical and technical knowledge. Students acquire knowledge of applied theories and techniques, so that they can either find jobs right after graduating or transfer to four-year universities.

Universities

There are about 250 universities that provide bachelor's degrees. Medical schools, schools of oriental medicine and dental schools have six-year courses, including undergraduate studies. Korean universities provide various majors and courses. Each university has its own policies concerning credits that need to be completed

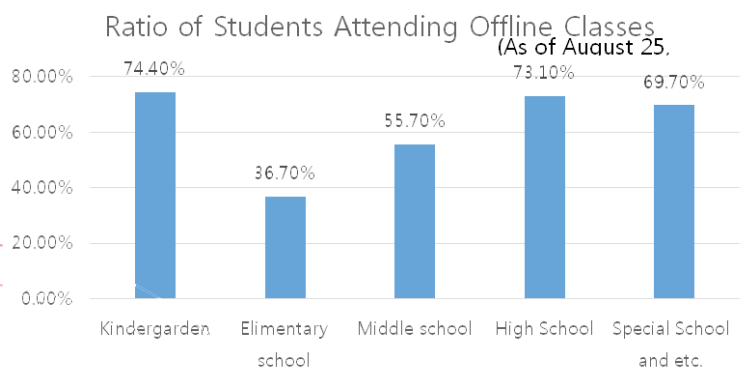
for graduation, the maximum number of credits per semester, standard number of credits, ways of obtaining credits and special credits. Universities are classified into the following categories: national, city and private.

2. Impact of the Pandemic on Education.

During the pandemic, Korea faced the dilemma of whether to prioritise education or safety. Face-to-face (F2F) education is essential for student learning, but if face-to-face classes continue, the safety of both teachers and students might be threatened. During the pandemic, the Korean government's educational policy was implemented top-down. The number of confirmed cases was released to the public every day, and based on this information, the Ministry of Education provided guidelines on whether to close schools, when to resume classes when the situation improves, and how classes should be managed.

A significant number of middle and high school students went to school in person to receive F2F education, but it was inevitable that some schools had to shut down. Graph 1 shows the proportion of students attending school in person as of 25 August 2021. In kindergartens and high schools, a very high percentage of students go to school to have classes F2F. High school students have to go to school because they need to prepare for college entrance exams. For elementary school students, student safety is regarded to be very important, with only 36.7 per cent of students going to school in person. It is questionable whether the 25-60 per cent of students who do not go to school are receiving sufficient education.

Graph 1: Ratio of students attending offline classes (as of 25 August 2021).



Source: Ministry of Education, South Korea, August 2021.

According to Table 1, as of 25 August 2021, more than 34,800 students were unable to attend school due to mandatory quarantine by the Korea Centers for Disease Control and Prevention or were in self-isolation. Those who had to undergo mandatory quarantine were those who were found to be positive from tests or who had contact with infected people. Absence from school does not necessarily mean that students are not learning, but surely students are missing out on some learning opportunities. It is questionable whether students have been properly educated.

Table 1: Number of students who missed school due to Covid-19 (as of 25 August 2021).

	Total	Quarantine by the KCDC	Self-isolation
Kindergarten	1,988	1,340	648
Elementary School	11,743	4,410	7,333
Middle School	9,318	3,227	6,091
High School	11,579	5,621	5,958
Special School etc.	195	76	119
Sum	34,823	14,674	20,149

Source: Ministry of Education, South Korea, August 2021.

How are universities responding to this situation? Universities are also confused. Using Zoom, students can take classes in real time or they can access lectures through recorded lectures from professors. Face-to-face classes are limited to some majors, such as physical education classes, which need to meet students in person. Students maintain the right to study and they must be provided with recorded lectures if they are reluctant to attend F2F classes. Universities also have to spend huge amounts of money on Covid-19 disinfection and prevention measures.

3. Best Practices

1. Infrastructure and Teachers' Development

ICT Infrastructure

South Korea has a reputation for having responded well to the Covid-19 pandemic. The key to such performance lies in the Information and Communications Technology (ICT) public infrastructure provided by the government. Actually, Korea is considered one of the world's most technologically advanced countries. Prior to

the Covid-19 pandemic, 99.7 per cent of South Korean households had full access to the internet, and 99.9 per cent of teenagers used high-speed internet in their daily lives, according to a 2019 report from the Korean Ministry of Science and ICT.

Given the excellent ICT infrastructure in the education system, it may sound strange that the first step the Ministry of Education (MOE) took to substitute the operation of physical schools with online learning was to expand the ICT infrastructure. Yet, the government realised that they had no experience of allowing a huge number of users to simultaneously access the online learning platforms previously. This is because, to some extent, online learning was not perceived as the preferred means of learning. And, this is also because the online learning system was not initially designed with a server volume that could support all students across the nation connecting at once. To cope with the new situation, extra servers were added for the two major online learning platforms, the Korea Education and Research Information Service's (KERIS) e-Learning Site, and the Education Broadcasting System's (EBS) system.

Extra Infrastructure

During the pandemic, the Ministry of Education in Korea laid out guidelines, and schools tried to accommodate government policies. Table 2 shows the New School Model, which takes both learning and safety of students and teachers into account. Classes with reduced density, quarantine environments and principles of management of potentially infected students are as important as teaching-learning effectiveness.

Table 2: New School Model during the Covid-19 pandemic.

Classes with reduced density	Strict school quarantine environment	Management of potentially infected students
<ul style="list-style-type: none"> - Face-to-face classes criteria adjustment for regions - Different class schedules and break times - Class division and online-offline blended learning - Expansion of infrastructure for remote learning classes 	<ul style="list-style-type: none"> - Desks spaced apart - Frequent opening of windows - Thermal imaging cameras installed - Set the mask and air conditioner usage standards - Disinfecting desks and door handles - Table partitions installed - Sitting in one direction 	<ul style="list-style-type: none"> - Self-diagnosis before going to school and do not go to school if symptoms appear - Diagnostic tests performed at screening clinics when clinical symptoms appear - Suspension of school attendance for overseas entrants - Diagnostic test before entering the dormitory

Source: Ministry of Education, South Korea, May 2021.

However, there is always a big gap between a top-down policy and practices at the bottom. Some classrooms go online, some offline and it was found not to be sufficient. So, extra infrastructure was extended: schools had cameras to detect body heat, regularly disinfected desks and chairs, and enforced very strict rules. What if a student is infected? They cannot go to school. If a student flew back from abroad? They cannot go to school for two weeks.

Picture 1 shows high school students going through camera monitoring, and sanitising their hands before entering a school building. Teachers check the body temperature of students. The cafeteria is also important. Students sit separately at a table with partitions installed. This scene is what we have never seen before. It is a top-down management system, and nobody complained.

Picture 1: Students entering homeroom and eating at a cafeteria.



Teachers in classrooms use Zoom, conducting interactive classes. Usually, Korean classrooms are full of actions. But some students do not participate in Zoom classes because both parents are away at work and they just do not wake up for the classes. Sometimes, teachers wake them up. Some students cannot attend Zoom classes if they have siblings because there is only one computer to attend classes at their homes.

Picture 2: A student taking a Zoom class at home.



How are universities coping with this situation? Universities are also in turmoil. Real-time classes are offered by using Zoom. Professors often record classes, which students gain access to. A very small number of classes are face-to-face classes. For example, physical education classes need to be face-to-face classes. Schools have to incur the cost of disinfections to prevent the spread of Covid-19. They have to provide recordings to those who refuse to participate in offline classes.

Supporting capacity building for teachers

The role of teachers in the success of education cannot be overstated and the same goes for online education. To aid the transition to online teaching, the government quickly responded by publishing and distributing online education guidelines nationwide. The government also created a website called “School-On,” which serves to provide a wide array of information to teachers on how to teach, communicate, and share contents through online platforms.

To further mitigate issues for a smooth transition, a group of volunteer teachers at metropolitan and provincial levels started to operate an additional service called “Teacher-On,” which aims to support teachers with technical difficulties by remotely connecting to their devices. Further, a group called “the Community of 10,000 Representative Teachers” was formed. This community assists teachers to connect with the Ministry of Education, the 17 Metropolitan and Provincial Offices of Education, KERIS, and the EBS. The essence of this group is to jointly tackle issues – from policymakers to teachers – concerning the carrying out of online classes.

Preventing the digital divide and supporting marginalised groups

Online education invariably requires many prerequisites, including access to the internet, possession of digital devices – the quality of devices matters, too – students' computer literacy, and so on. There was a concern that, without meticulous consideration, online education could widen the digital divide and increase educational inequality. To avoid these negative outcomes, the South Korean government provided free digital device rental services. Thus, students from low-income families without digital devices were given priority to borrow devices from their schools. The private sector also donated many devices.

Furthermore, through a zero-rate policy, students have received free mobile data access to education websites by dint of generous support from the three major telecommunication companies in South Korea (KT, LG, and SK). Also, in order to fully support students from low-income families, the government installed internet service at their homes and provided a monthly subsidy of USD17 for internet fees.

II. Inequality in Education

Educational experiences during the pandemic

Table 2 presents the results of a survey of students on the difficulties that students experienced during online classes. Difficulties with communicating with teachers and friends were pointed out to be the most serious problem for 39.3 per cent of the respondents. Two-way communication and interaction is very important, and Covid-19 prevents them from sufficient communication. Other difficulties pointed out were as follows: class contents being too difficult or too easy. Their devices did not meet the necessary specifications, and so they had a lot of trouble. Some students answered that they lacked the space to study, which prevented them from concentrating in classes. Also, difficulties in participating in class were pointed out.

Table 2: Difficulties students are experiencing during online classes.

Experiences	% of answers
Difficulty with communicating with teachers and friends	39.3%
Class contents being too difficult or too easy	39.1%
Devices not meeting specifications	33.1%
Lack of studying space	32.9%
Difficulty in participating in class	16.2%

Source: Newspaper, 더스쿠프.²

Another survey presented the following problems hindering students' learning: 1. They have to sit down for too long and become lethargic. They play games for hours; 2. When they do not understand, they cannot ask directly; 3. They get bored and engage themselves in something else; 4. There is too much homework; 5. They cannot concentrate because teachers are not in front of them; 6. There is no interaction. Teachers provide one-way classes.³

Teachers also experienced a lot of difficulties. A survey was conducted by the Teachers Union on Teacher's day, and the major difficulties that teachers highlighted as facing are listed in Table 3: 1. Delivering classes online and students' learning gap; 2. Performing extra duties of taking precautionary measures to make school life safe; 3. Burdened with tight academic calendar and curriculum operation; 4. Teacher evaluation conducted even though it is a non-face-to-face class; 5. Having to respond to parents' complaints; 6. Burdened with taking care of students and running after-school sessions; 7. Burdened with responsibility of giving guidance for higher education and life management advice. A lot of students suffer psychological challenges, and the major challenge that high school students face is the college entrance examination. Therefore, giving advice to students about how to manage their life is a big deal; 8. Annual strike of teachers' union.

In addition, the following problems were pointed out: deterioration of student peer relationship and lack of community awareness, a learning deficit and a deepening of the educational gap for the underprivileged, a decrease in academic ability and an increase in the lack of basic academic ability, the expansion of private education and an increase in the burden of care.

² (<http://www.thescoop.co.kr/news/articleView.html?idxno=51130>).

³ Seoul Education Research and Information Institute. 2020. The impact of changes in school teaching methods due to Covid-19 on teaching, student learning, and parental care: Focusing on elementary schools.

Table 3: Difficulties teachers are facing.

Difficulties teachers are facing	No. of respondents
1. Delivering classes online and students' learning gap	4,362
2. Performing extra duties of taking precautionary measures to make school life safe	3,949
3. Burdened with tight academic calendar and curriculum operation	2,959
4. Teacher evaluation conducted even though it is a non-face-to-face class	2,508
5. Having to respond to parents' complaints	2,192
6. Burdened with taking care of students and running after-school sessions	1,600
7. Burdened with responsibility of giving guidance for higher education and life management advice	1,384
8. Annual strike of teachers' union	1,359

Source: Korea Education Newspaper.⁴

What do university students feel are problems? They cannot concentrate. There is too much homework. They cannot focus on self-directed learning, and there is dissatisfaction about grading. They do not trust online testing because there is the issue of online cheating. Many students play games, and they do not go to school. Social interactions got disconnected. Many students took to the streets, demanding and chanting, "I want my tuition fees back." But for universities, the costs are really increasing. Universities are losing revenue due to not being able to provide life-long courses. Universities lose money if the students are dissatisfied. Universities are struggling with reduced revenues and increased costs, while students demanding tuition fees refund take collective action and initiate lawsuits

Inequality in education

The coronavirus pandemic is evaluated to be widening the learning gap in education-obsessed South Korea.⁵ According to the OECD, if underachievement is not addressed, life-long potential income will be 3 per cent less than peers. The GDP would decrease by 1.5 per cent.

A civic group dedicated to the campaign against private academy-based education analysed the academic achievement levels at 560 middle schools and 413 high schools across the country, with the results showing that the number of students in the middle level achievement has shrunk in both middle and high schools.⁶

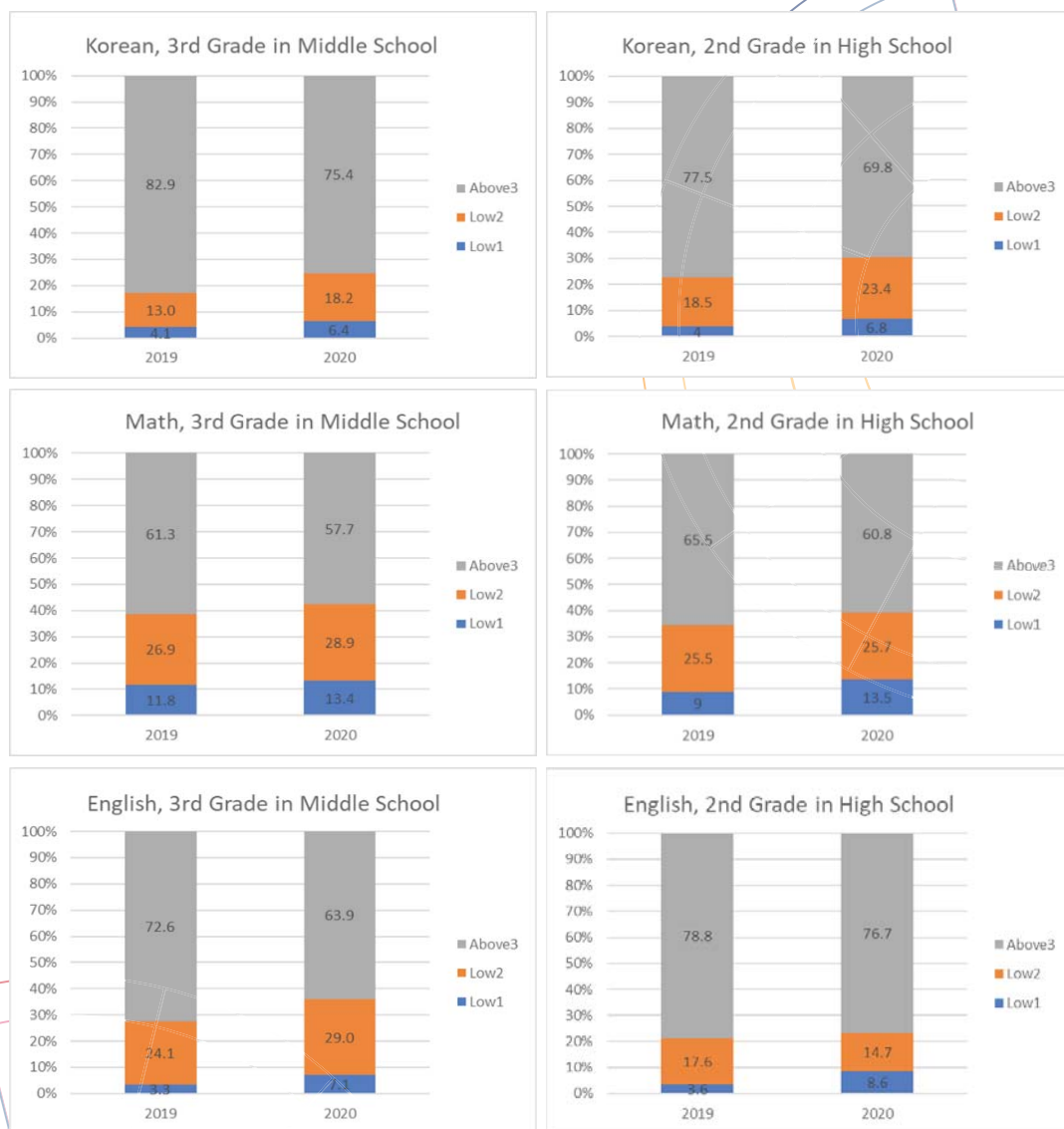
⁴ (<https://www.hangyo.com/mobile/article.html?no=93776>).

⁵ CNBC. 20 October 2020.

⁶ The Korea Times. 30 April 2021.

National Assessment of Educational Achievement (NAEA) collects scores on the subjects of Korean, Mathematics and English from the sample of third graders in middle school and second graders in high school. Compared to 2019 NAEA, 2020 NAEA shows that the number of students in level 1 out of 5 (below basic level) increased in all subjects.⁷ The number of students in level 2 out of 5 also increased in all subjects, except for English of second graders in high school. The number of students in levels above 3 decreased in all subjects. The results clearly show the polarisation and deterioration of student performance after Covid-19.

Graph 2: Changes in quintile of scores, NAEA 2019 and 2020.

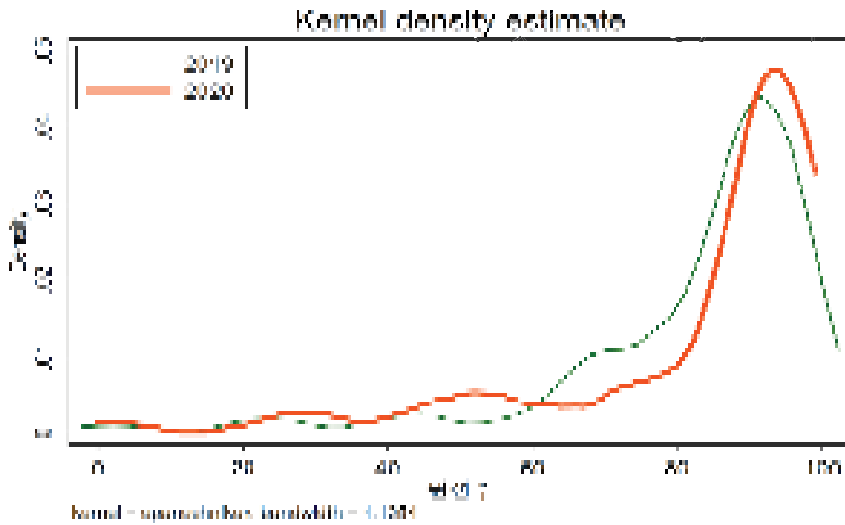


Source: National Assessment of Educational Achievement, 2020.

⁷ It was statistically significant except for mathematics of third graders in middle school.

When the distribution of raw scores in 2020 is compared with those in 2019 of the same courses in order to check whether polarisation occurred after Covid-19, it was found that there are fewer students with scores higher than 60 and lower than 83, while there are more students with scores lower than 60 and more students with scores higher than 83.

Graph 3: Distribution of raw scores, 2019 and 2020.



Source: National Assessment of Educational Achievement, 2020.

The gap of the rate of underachieving students between metropolitan schools and small town schools widened over the years of 2019 and 2020. Table 4 presents the rate of underachieving students by locality between metropolitan schools and small town schools on the subject of English. In 2019, the rates of underachieving students in metropolitan and small town schools were about the same, at 3.4 per cent and 3.6 per cent respectively. However, the gap widened in 2020 to 6.2 per cent and 9.6 per cent respectively.

Table 4: Rate of Underachieving Student by Locality (English, %).

Year	Metropolitan Schools	Small Town Schools
2019	3.4	3.6
2020	6.2	9.6

Source: National Assessment of Educational Achievement, 2020.

When we compare the rate of underachieving students in middle and high school students on the subjects of Korean, Mathematics and English, in rich and poor ar-

8, the academic gap was pronounced. The rate of underachieving students in middle and high schools was two or three times higher as shown in Table 5.

Table 5: The rate of underachieving student in rich and poor area (%).

		Rich area	Poor area
Middle school	Korean	3.1	5.9
	Mathematics	7.0	17.2
	English	1.8	5.1
High school	Korean	2.7	7.9
	Mathematics	5.9	17.0
	English	2.0	8.1

Source: National Assessment of Educational Achievement, 2020.

Key factors causing the education achievement gap

The key factors causing the widening of the education achievement gap among students are multifaceted. Some of them are as follows: reduced interaction with teachers and among students, lack of motivation, poor family background, digital distractions, and technical difficulties.

In online education settings less attention is given to students as teachers cannot approach students in person. Even though they can make eye contact, looking at someone's eyes on the screen is not the same as that in classrooms. Also, interaction among students is hindered. Peer group interaction is quite limited, not only in terms of learning but also in terms of creativity and fostering social ability and so on.

When there is reduced interaction with teachers, student motivation becomes more important. Depending on the motivation of students, online classes could help or hurt students' performance. Student motivation becomes more important for overcoming lower effectiveness and making the best use of new technology. Students can repeatedly watch a specific section of a lecture to increase the effectiveness of learning. Customised learning can be provided to the students by using AI: more challenging materials for outperforming students, and easier materials for students left behind. Of course, this has pros and cons.

⁸ A rich area is defined to be an area where the rate of basic livelihood recipients is under 2 per cent, whereas in a poor area, it is more than 10 per cent.

While students with high motivation can take advantage and do very well, those with weak motivation may turn on a lecture but do not pay attention. Underachieving students and low-motivated students really need somebody to guide them. Underachieving students cannot understand what teachers teach via online courses. If it were offline, teachers would have noticed and taken care of it. But for online classes, they cannot do so. For low-motivated students, during class, they do not talk and they do something else. Since teachers are in their own room, they cannot do anything about it.

Family background such as income and parents' education level also affects the student's learning. When it comes to how they solve problems, children from affluent families said: "I ask my parents." In contrast, those from low-income families said: "I ask myself" (26.5 per cent), "give up" (22.4 per cent), or "ask parents" (13.4 per cent). In Korea, private tutoring is quite important. In Korea public schools alone cannot take care of all the educational needs. Even low-income families have to pay for private tutoring because students cannot go to school. More educated and motivated parents pay more attention to their children. Parents' ardent attention could motivate students.

The academic gap also widened due to teachers. There are some teachers who belong to the category of "digital alien" or "digital immigrant". If an online learning lesson is taught by a digital alien, it is easily imagined what would happen. Students expect virtual classrooms to be really interactive and enjoy this setting. But regrettably teachers are not used to this kind of technology.



III. New Actors in Education

“Edu-Tech”-based hybrid education is replacing the conventional classrooms; a trend which is likely to accelerate. Since 1996, Korea has been funding remote education. The “untact” remote education is likely to be a new normal, replacing traditional education systems.⁹

In Korea, the first online college was established in 2001, and today there are 120,000 students attending 21 different online universities. The most famous online university in Korea is “Korea National Open University,” which had 230,000 students at its peak in the early 2000s. Other examples of government-funded online education are KOCW and K-MOOC, which were widely used in the early stage of the Covid-19 pandemic. Even after Covid-19, they could significantly cut down educational costs by utilising the technology. The Korean society is in preparation to help achieve the United Nations’ SDG 4, making use of such change.

AI-based education is a new trend, and it will be a big issue. Non-F2F education became the main planning goal for education officers due to the Covid-19 pandemic. Traditionally, instructors monopolised knowledge, and it was a one-way communication. Concerning the remote education experience, there was criticism that “school is boring” and that students could not learn anything. But, this could change. Online education can be fun, and students do not need to feel bored. Virtual classrooms are really interactive while students enjoy this setting. Students get to choose an instructor, and an AI teaching assistant can even help its designated instructor and the students. AI can help students with interaction, which really matters in education and helps students’ decision-making process.

There are calls for education methods to change in the future. Education platforms and content will be more important than ever. How can the education service sector apply AI? The government should develop many tools so that students can learn from them, and AI should be used to reduce unnecessary time spent on manual tasks.

⁹ While Korea has been working on remote learning platforms, unfortunately, the plans were disconnected. There was the “cyber remote home training” funded by 16 municipalities, where students could go home after school and still continue their studies online. But running this platform faced many difficulties, so it is no longer available since 2017, and went under the central government in 2018. Now there is no municipal e-learning platform other than what is run by the central government. Another one to mention is a smart education project in 2011. It aimed for educational innovation based on digital textbooks, but due to limits of budgeting and systems, it was not disseminated. But today, both ideas are actually being executed in the field.

We need an integrated platform to bring convenience to teachers. Universities do have their own platforms, but there are issues that a single university cannot solve by itself. There should be cooperative and collective measures to deal with this issue, based on platforms. There should be hybrid and AI-based policies to handle this issue in a timely manner.

We need the provision of public access and connecting devices. Korea has set aside a very large budget to reduce the gap after Covid-19. We need to utilise that budget. We need to develop this AI technology, and we need to provide strong responsibility for schools and teachers.

Korea is in preparation for a 2022 educational reform. Parents argued that personality development matters the most, so there is a need to secure school credits for that. Another important idea is the gap in social skills development. Without the basic skills, students cannot learn well. Five frames of self-control, academic and physical level, mind, psychological level, and human relationships are the basis of learning. If anything is lower, say, if one cannot control oneself, one's learning will be adversely affected just by that factor. We have to focus on students' psychological problems, physical problems, self-management, and human relationships.

4. Conclusion

Covid-19 has changed the education systems in the world. Covid-19 has resulted in school shutdowns globally, and 1.2 billion children are out of classrooms. The world is divided into Before Corona (BC) and After Corona (AC). How the AC unfolds and whether Covid-19 will be simply a crisis or an opportunity for the future of education is in our hands. There should be a shift in learning content and learning experience. Covid-19 accelerated and promoted a) online teaching and learning; b) interpersonal relationships and tutoring; and c) integration of education and technology. Without innovation, students suffer.

One key lesson South Korea learned from the Covid-19 pandemic is that a similar education crisis could arise again, and that we need to prepare for it. Luckily, online education proved to be a strong asset. The Korea government distributed the Online Education Guideline nationwide. The Korea government put a lot of effort into providing free digital device rental services to support students from marginalised families. The private sector (KT, LG, and SK) donated many devices, and offered free mobile data access.

Then, what is the problem? Is having sufficient hardware enough? We found that this is not the case. It is just a necessary condition. Even if we are equipped with high-quality tools, we still need curiosity, motivation, familiarity, and adapting skills from students. And it is still the same that without quality teachers, we cannot achieve our online education goal. Before Covid-19, students felt bored, slept, and could not learn well. So we thought that online learning and virtual learning would be fantastic. But after Covid-19, we found that we still need human teachers.

We need schools. But its role is changing. What schools should focus on are low-achieving students. Some teachers love high-achieving students, not low-achieving students. A doctor says that some teachers are like a doctor who hates sick patients and just prefers those not sick. Doctors are there to help sick people. Teachers are there to help low-achieving students.

Even with the existing technology, online education cannot substitute for in-person learning. Many students still need to interact with teachers and friends for academic and social development. Online education does not replace offline education. Interaction is still the key for human beings. We need socialisation and creativity and strong solidarity among people. These cannot come from online interaction.

Many people say we are already living in the era of AI. 80 per cent of teachers from a survey mentioned that the era of AI is likely to widen the digital disparity. Students who use AI and those who do not will result in a huge gap. How different countries will make use of AI is really important.



International Students Adapting to the Post-Pandemic Education System in Korea: Student Round Table Session

As we are in the beginning of the third decade of the 21st century, the world has experienced untold setbacks in all the disciplines, including education. Due to the Covid-19 pandemic, all the actors in education had to adapt to the ongoing transition in the system and the key actors are the students. As the conventional learning method of sitting in the classroom and listening to lectures was challenged, students had to go through new dynamics of online learning. South Korea has a very advanced education system, so the students are eager to get into universities. Furthermore, hundreds of international students prioritise South Korea as their educational destination because of its sound education system, advanced technology, and expertise in faculties. During the KAS Webinar, the importance of international education relations in Korea was understood as a prominent area to have genuine discussions on. Thus, this part of the report presents the role, challenges, opportunities and way ahead from the perspective of international students in South Korea. Interestingly, the presenter and the discussants in the session represent different parts from around the world, including South Asia, Africa, Europe and America.

Overview

Mr. Ashwini Kumar Dhakal, a master's degree graduate from Chung Ang University, GSIS Department, and first presenter of the session, provided a brief overview of international students in South Korea. South Korea is one of the major educational powerhouses in Asia for international students because of its sound education system along with advanced technological developments. In 2019, the number of international students at domestic universities was 153,695; however the number decreased sharply to 102,459 in 2020.¹⁰ This data shows that there is a major challenge to South Korea in the upcoming days to fill that gap of students' influx.

¹⁰ (<http://www.khetimes.com/news/articleView.html?idxno=763>).

To begin with, the very first challenge for international students residing in Korea is the “decision making” dilemma between continuing their studies and taking a break after the pandemic broke out in the beginning of 2020. The situation at that time was very uncertain about how the online education system would be implemented. Thus, the early challenge was to adapt to this transition. There are normally two categories of international students: exchange students and regular students. The latter had more time to adapt to the whole situation while the former were in a vulnerable condition.

Furthermore, the government and universities were also analysing all the possibilities so that domestic and international students would not suffer much adverse effects in pursuing their education, and the overall education system could adapt smoothly to online education. First, universities issued detailed information about running classes and its implications. The universities and departments regularly provided updated guidelines and instructions that reduced the communication gap and made the transitioning process smooth. Second, the government tried to protect international students by allowing them to enter with the provision of required procedures and regulations. The investment in educational ICT infrastructure and capacity development in all the areas of education is praiseworthy.¹¹

In the following pages, the report presents the discussion held during the session under diverse topics put forward by students from different universities in South Korea.

Opportunities

As the classes are online and outside activities are limited, students have more personal time and space. Interestingly, this creates opportunities for them to invest their time and energy to learn beyond the course curriculum. Additionally, students can be involved in part-time jobs, and freelance work. Most of the students agree with the point that significant technological progress was experienced in the past two years. As a result, various innovative ideas are under practice in the teaching-learning process. Margit Eva Borsody, from Yonsei University, highlighted that library facilities and project rooms’ capacity were tremendously increased. This implies that the pandemic acted as a catalyst to find creative approaches in the education process.

¹¹ (<https://blogs.iadb.org/educacion/en/covid19southkorea/>).

Challenges

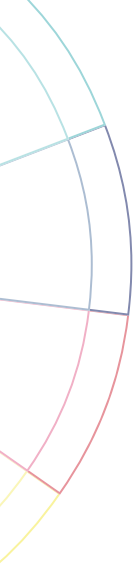
During the two-hour session, students talked about multiple challenges based on their experiences. The very first difficulty is mental health. It is a challenge itself to be in a foreign country, and not being able to interact with colleagues and the local community makes it even harder. Diane Hanh Ho from Chung Ang University viewed that graduate school is more of an applied learning process. It is easier to grasp ideas better with body movements and interactions. She further added that the classes became monotonous and students experienced weakening eyesight due to long hours of online classes. Ashwini presented a few unique cases of students enrolled at Korean universities. They had to take their entire courses by staying in their home country. Consequently, it raises the concern of missing out on abundant learning opportunities, which causes a psychological impact on the students in the long run. Last but not least, the language barrier, frequent changes in the immigration policy and inability to secure a job in the job market further created disturbances to the international students.

Tackling the Challenges

As possibilities and difficulties lie in every corner, it is vital to find appropriate measures to tackle the obstacles. Interestingly, Wan Chun, a member of the student union from CAU-GSIS, shared his experience about how the provision of separate study rooms, small group student gatherings and international student support services proved to be effective in mitigating student-life troubles. Furthermore, through the school tutoring programme, the one-on-one mentoring approach can be the key to uplifting the level of students who are having trouble catching up with lectures. In addition, Theos Benimana from Seoul National University emphasised the need for comprehensive policy measures to improve access to effective infrastructure and technology as well as diverse learning materials and curricula. Similarly, Margit identified the use of break-out Zoom sessions during lectures and use of external sites such as Kahoot to bring an extra dimension to the teaching-learning process.

Way ahead

Lots of discourses were already in process regarding the safe-landing procedure by accepting the new normal and the aftermath of the implications of the pandemic by the time the KAS Webinar was conducted in September 2021. These question how we can approach further in accelerating the progress of delivering equality



in education. The very first step is to work together to reduce the gap in socio-economic disparity so that any student from a developing country or developed country can have equal access and participation to get quality education. In the intensive and insightful session, Diane, Margit, Theos and other participants have common voices, which suggested that a hybrid learning method might be the best practice, aligning the traditional way of learning with the technology-inspired virtual learning system.

In the case of South Korea, its soft power through art, music, food, and fashion has immense influence all over the world. It has drawn great attention as well. Thus, it is interesting to see how the Korean government, universities and concerned authorities initiate new strategies to attract more and more scholars to Korea in the years to come.

Conclusion

To sum up, the student round table session of the KAS National Webinar in South Korea not only discussed the domestic factors but also compared how Africa as well as Europe handled the situation, and what could be learned from the South Korean case and vice versa. Thus, the discussants representing various countries contributed to the dynamic exchange of views. Lastly, under the supervision of moderator Prof. Chang and Programme coordinator Prof. Chun, this session analysed how international and local students adapted to the online education system in the post-Covid-19 period and realised the necessity to develop pragmatic synergies amongst diverse educational actors in making the future of the education system inclusive, effective, and productive.





Taiwan

D-School, Taiwan University
ZA Share
Awakening Cooperative Lab



I. Introduction and Overview of Education in Taiwan^{1, 2}

Taiwan society is mainly composed of successive waves of Han Chinese immigrants and their descendants from interracial marriages with the indigenous Malayo-Polynesian people. With more than 95 per cent of the population claiming Han ancestry,³ Chinese culture and folk beliefs – roughly characterised by the tension and syncretism amongst Confucianism, Religious Taoism, Buddhism, and polytheist worship – flavoured with the immigrants’ pragmatist spirit, set the back colour

¹ Lead Author: Ms. En-Ju (Angela) Pi

1. Research Associate and Educator, Awakening Cooperative Lab, Taipei, Taiwan
2. Student, Arete Honors Program, National Yang Ming Chiao Tung University, Hsinchu, Taiwan

Lead & Corresponding Author: Mr. Adler Yang

1. Research Fellow and Director, Awakening Cooperative Lab, Taipei, Taiwan
2. R&D Director for Learning Systems and International Programs, ZA Share, Taipei, Taiwan
3. Member, Tekisen Democratic University, Japan, Tokyo

Co-Author: Ms. Chi-Peng Kao

1. Student, Department of Japanese Language and Literature, College of Liberal Arts, National Taiwan University, Taipei, Taiwan

Author (Advisor): Dr. Shenglin Elijah Chang

1. Associate Dean, School of Innovation and Design (d.School), National Taiwan University, Taipei, Taiwan
2. Professor, Graduate Institute of Building and Planning, National Taiwan University, Taipei, Taiwan

² Given the intricate nature of Taiwan/Republic of China (ROC)'s status, the task of introducing education in this contentious political entity in itself may be more complicated and controversial than conducting a similar task for other countries. Depending on the definition, the scope of the political entity's education, especially its history and context, may differ substantially. To appropriately address the purpose of this report and prevent unwanted ideological disputes, the scope of this report shall be limited to the formal and informal education that take place under the jurisdiction of the Taiwan/ROC (hereinafter "Taiwan" unless distinction is required) government, with a focus on its people's cumulative endeavours towards progress and equality from the bottom up.

³ Ministry of Foreign Affairs. About Taiwan: People. (http://www.taiwan.gov.tw/content_2.php).

of Taiwan's educational culture. Given that most earlier (17th to 19th century)⁴ Han immigrants were economically marginalised groups who risked their lives crossing the Taiwan Strait for survival,⁵ Confucian education's pursuit of virtue and common good may be too luxurious to many. The immediate resolutions provided by the syncretic folk Taoism, Buddhism and polytheist worship, on the other hand, may better respond to their earthly needs⁶ amid recurrent episodes of bloodshed amongst different sub-ethnic groups and the aboriginal tribes.⁷ The conventional routes for upward mobility through military merit, political arrangement or merchandise/trade⁸ due to the delayed development and implementation of the academy/imperial examination system in Taiwan⁹ may also distinguish the character



⁴ Under the rule of the Dutch East India Company, Spanish Empire, Southern Ming China-affiliated Tungning Kingdom, then Qing China.

⁵ The histories of Quemoy (Kinmen) and Matsu islands, however, are very different from that of the Taiwan island, but could not be discussed in detail.

⁶ Li Ruo-jian. 2013. *Rebellions in Chinese Villages and Popular Religions (1957-1965)*. The Twenty-First Century, 138; Gilbert Reid. 1923. *Revolution as Taught by Confucianism*. International Journal of Ethics, 33(2), pp. 188-201. The estrangement between Confucianism and laymen was not only discernable in Taiwan but also commonly found in impoverished regions. Despite Confucianism endorsing the "right of revolution", rebellions initiated by the impoverished throughout Chinese history were more often attributed to folk religion (e.g., from the Yellow Turban Rebellion in the 2nd century to the Taiping Rebellion in the 19th century) instead of Confucianism.

⁷ Harry J. Lamley. 1987. *Subethnic rivalry in the Ch'ing period*. In *The Anthropology of Taiwan Society*, pp. 282-381. Stanford University Press.

⁸ Chen Shih-Jung 2006. *The Interactions Between State and Local Society: Paradigms of Modern Social Elites and Future Research Directions*. Bulletin of the Institute of Modern History Academia Sinica, 54, pp. 129-168.

⁹ Yeh Hsien-Chun. 2003. *The Educational Framework And Development In Taiwan During Ching Dynasty (1683~1895)*. PhD. Diss., Chinese Cultural University.

and culture formation of Taiwanese people from those in Mainland China, as the imperial examination and Confucian teachings are integral to the latter.¹⁰

Under Imperial Japan's rule (1895 to 1945), the colonial government implemented a modern school system based on racial segregation and access to further education was greatly restricted to the Japanese. Private academies continued their Confucian teachings underground as havens for cultural dignity or disobedience. Together with some of the few Taiwanese who were able to complete higher education, they became key leaders of social education and the early democratic movement, which enlightened their followers not only with modern scientific knowledge and progressive thoughts but also with the revival of traditional Chinese high culture.¹¹

However, after Taiwan came under the rule of the Republic of China (ROC) after World War II, soon becoming its sole effective territory, as the Kuomintang (Chinese Nationalist Party, hereinafter "KMT") lost the civil war to the Chinese Communist Party, the KMT imposed martial law for a period of 38 years (1949 to 1987). Not only did education and people's lives come under strict control by the KMT, many intellectuals and social elites were also arrested, tortured, imprisoned, or executed for their actual or perceived threat to the ROC. Along with Taiwan's rapid industrialisation and the meritocratic promise of the KMT-controlled education system, people's views on education became predominantly instrumental, and the ideal-pursuing aspect of education became restricted within politically and ideologically tolerable forms.¹² Cultural phenomena such as the frenzy over examinations, mushrooming of cram schools, and "tiger dads/moms" all became fully fledged in this context.¹³

Of course, Taiwan people's pursuit of the common good was never fully extinguished. Education activists continued to work alongside other activists to democratise different domains of society. Upon the lifting of martial law, they initiated the

¹⁰ While the Confucianism under Mencius' lineage can be considered value-rational, it is important to distinguish between its purer and imperial forms. The former insists on the fundamental role of values such as altruistic virtues and pursuit of common good for their own sake and strictly opposes utilitarianism or means-ends rationality as seen in other schools of thought (such as Mohism), while the latter, on the contrary, is virtually instrumental. Although not definite nor mutually exclusive, private academies (sometimes free of tuition for the universal access to education) and community schools tend to serve the former (Yeh 2003) while imperial academies enabled the conditions for the latter, as they served as official channels for the imperial meritocracy, in which many students only took education and Confucian teachings as the means to their calculated ends (For example, Pu Songling's classical novel *Strange Stories from a Chinese Studio* is full of deriding accounts of the morbid culture around the imperial examination and corrupted Confucianist culture).

¹¹ Chen Fangming. 2017. Chiang Wei-shui and Taiwan's Knowledge of Modernisation. Newsletter for Research in Chinese Studies, 36(1), pp. 1-5.

¹² Chun-chieh Huang. 2006. 臺灣意識與臺灣文化 [The Consciousness and Culture of Taiwan]. National Taiwan University Press.

¹³ Huang Chunmu 黃春木. 2008. 台灣社會升學主義的發展與解決對策 (1945-2007) [The Education Rush in Taiwan since the late 1940s]. PhD. diss., National Taiwan Normal University. (<https://hdl.handle.net/11296/5ftcds>).

first wave of education reform in the 1990s to reclaim education from the government's control, which mainly included dismantling government control of teachers, educational contents, education finances, and education administration.¹⁴ Alternative schools inspired by Montessori, Summerhill, the Free School movement and other educational initiatives or thoughts with learner-centred or democratic values emerged outside the system's jurisdiction and struggled to gain accreditation and social recognition. To empower the general public and realise the universal right to education, activists also advocated for an expansion of upper secondary and higher education, to which the government responded by tripling the number of higher institutions within a decade.¹⁵

The rapid expansion of higher education greatly affected the supply and demand in the human resources market. As the overall admission rate to higher education climbed from less than 30 per cent to more than 90 per cent,¹⁶ since 2007, job seekers "with a bachelor or higher degree" also become the highest unemployed group, compared to their counterparts with lower educational attainments.¹⁷ As the value of the formerly scarce higher education credentials diminishes, the social stigma of "not attending university" becomes alleviated amongst an increasing segment of the population, and many even begin to question the very value or purpose of higher education.¹⁸

With the legitimacy of the conventional system becoming disputed, a new wave of reform emerged in the 2010s: The Nine-Year Compulsory Education system was replaced by the Twelve-Year Basic Education system for multifaceted goals, which include simplifying senior high school admission processes, increasing flexible or school-developed curriculum hours to reduce "teaching to the test" and improving

¹⁴ Ding Gih-jen 丁志仁. 台灣教育社運 [Education Activism in Taiwan]. 福留子孫 [Wellness for the Next Generation Project]. (<http://well-being-ng.net/wellBeingNg/index.php?title=%E8%87%BA%E7%81%A3%E6%95%99%E8%82%B2%E7%A4%BE%E9%81%8B>).

¹⁵ Huang Yihyh and Chen Yi-Gean. 2005. The Problem of Entering Advanced Schools in Taiwan: A Sociology of Education Review on Theory and Research. *Taiwan Journal of Sociology of Education*, 5(1), pp. 77-118.

¹⁶ National Statistics, ROC. Last updated November 2021. Unemployment Rate by Sex, Education Attainment. Statistical Bureau. (<https://eng.stat.gov.tw/ct.asp?xItem=42761&ctNode=1609&mp=5>).

¹⁷ Adler Yang. 2021. Allocation Dependence: A Generative Mechanism that Inhibits the Pursuit of Holistic Development. *Synthetic Anthropology*, 15. Yang suggests this phenomenon may be considered an actual case of "overeducation-induced underemployment" as discussed by economists and sociologists such as Freeman (1976), Tsang and Levin (1985), Vedder et al. (2013).

¹⁸ Hong Syuejhen 洪雪珍. 24 June 2018. 混4年拿文憑沒有比較好...大學吹起休學風潮! 最需要擔心的, 是那些想休學卻不敢的人 - 洪雪珍專欄. [Mix 4 years to get a diploma is not better... The trend of college suspension! The people who need to worry most are those who want to take a break but are afraid to do so-Column]. *Business Weekly 商周*. (<https://www.businessweekly.com.tw/careers/blog/23054>); Chen Chih-Chung and Ko Lin. 27 November 2021. Over 40% of students in Taiwan have doubts about college value: poll. *Focus Taiwan*. (<https://focustaiwan.tw/society/202111270010>).

the substance and holisticity of student learning.¹⁹ The formerly marginalised and sometimes unaccredited alternatives became recognised as a type of formal education called *experimental education*, and its total number of Grade 1 to 12 students increased twelve-fold from 1,651 in 2011 to 19,657 in 2020,²⁰ even while the overall number of students is in decline due to the country's declining birth rate.²¹ Outside formal education, seeds for social change sowed by the Sunflower Movement began to blossom, some of which took the form of innovative educational initiatives and services.²²

Although significant education reform emerged in both the 1990s and 2010s, their underlying main narratives differ substantially. The discourse in the 1990s was led by small but highly socially motivated communities based on essential values, such as “what does it mean to be human” or “what makes a good society”. Since the 2010s, while many communication channels of the previous wave have become marginalised or have already disappeared, contents regarding education as the *means* to certain seemingly self-evident *ends* (e.g., preparing children for the age of AI) have appeared everywhere. Although not mutually exclusive nor necessarily incompatible, the dominating discourse on educational change gradually shifted from being a deliberative public forum to an enormous pie that even the mainstream media compete to devour.

The mainstream view on alternative education also changed dramatically. Initially, members of alternative schools were discriminated against by many even if the

¹⁹ Hung Yung-Shan. 23 October 2021. Exploring the Mechanism of 12-Year Basic Education Curriculum Research & Development and Coordination, to Analyse the Impact and Prospect of the Democratic and Public Governance in Educational Decision-Making. Presented at 2021 KASpaces Taiwan National Seminar for Accelerating Progress and Equality, Taiwan. The transformation is significant in many aspects. For example, it lifted the high-stakes test requirement for senior high school admission (in principle), and also mandated multi-stakeholder (including students) participation in the review of the national curriculum. The details of the Twelve-Year Basic Education system shall be discussed later in depth.

²⁰ K-12 Education Administration, Ministry of Education. 2020. Briefing of Experimental Education. (https://www.k12ea.gov.tw/files/common_unit_id/d8533636-0498-4fd6-b456-2bcda3a8b4d9/doc/109%e5%af%a6%e9%a9%97%e6%95%99%e8%82%b2%e7%b0%a1%e5%a0%b1.pdf); Department of Statistics, Ministry of Education. 2021. 專業教育、實驗教育及偏遠地區教育概況. [Overview of Professional Education, Experimental Education, and Education in Remote Areas]. (<https://stats.moe.gov.tw/files/analysis/110professional.pdf>).

²¹ Department of Statistics, MOE, *ibid.*; Department of Statistics, Ministry of Education. 2020. 各教育階段學生數預測報告 (109-124學年度) [Report on Student Number Projections by Education Level]. ([https://stats.moe.gov.tw/files/brief/%E6%9C%AA%E4%BE%86%16%E5%B9%B4\(105%E5%BD%9E120%E5%AD%B8%E5%B9%B4%E5%BA%A6\)%E5%90%84%E6%95%99%E8%82%B2%E9%9A%8E%E6%AE%B5%E5%AD%B8%E7%94%9F%E4%BA%BA%E6%95%B8%E6%8E%A8%E4%BC%B0%E7%B5%90%E6%9E%9C.pdf](https://stats.moe.gov.tw/files/brief/%E6%9C%AA%E4%BE%86%16%E5%B9%B4(105%E5%BD%9E120%E5%AD%B8%E5%B9%B4%E5%BA%A6)%E5%90%84%E6%95%99%E8%82%B2%E9%9A%8E%E6%AE%B5%E5%AD%B8%E7%94%9F%E4%BA%BA%E6%95%B8%E6%8E%A8%E4%BC%B0%E7%B5%90%E6%9E%9C.pdf)).

²² Chang Shenglin 張聖琳. 23 October 2021. Originality of Taiwan's Educational DNA. Presented at 2021 KASpaces Taiwan National Seminar for Accelerating Progress and Equality, Taiwan.

schools eventually became accredited.²³ Nevertheless, with the promulgation of *experimental education*, its popularity gradually switched with conventional schools. While it has become increasingly challenging for conventional schools to recruit students due to Taiwan's declining birth rate, experimental schools, on the other hand, have become highly sought after, to the extent that the number of applicants at some schools even greatly exceeds their capacities.²⁴

Have Taiwanese parents become, in the last twenty years, so progressive as to wholeheartedly embrace learner-centred values such as recognising every child "as a natural learner", recognising their "innate uniqueness as being inherently meaningful", and emphasising children's "holistic development and wellness over achievement"?²⁵

Given the change in the narrative, such a case seems unlikely. Instead, the success stories of graduates of experimental education²⁶ may actually appeal to the many searching for a replacement for the "*university degree*" variable in the invalidated "*university degree - employment*" formula. Experimental education, then, also becomes an opportunity for the myriad *educational commodity providers* to respond to the needs of the masses in a crisis of old paradigm legitimacy.

If the pursuit of democratic values, economic growth, and universal access to all levels of education can be considered as manifestations of progress and equality, the development of education in Taiwan indeed has brought overall positive outcomes. However, if the enabling conditions or driving forces of educational change also matter, a deeper examination of *progress* and *equality* in Taiwan's education system may allow us to better calibrate our understanding and avoid naive optimism.

²³ Adler Yang. 29 March 2014. Killing competitiveness in the name of raising it – And a potential alternative. Talk presented at 2014 TEDxTaipei Education Salon, Taipei, Taiwan. (<https://youtu.be/uojqcLtlh4g>). According to Yang's talk, the stereotypical view of alternative schools was that their students "don't study and just play all day", so people shouldn't send their child there to "ruin their future" unless they are rich enough to guarantee their child's success, or their child is a "troubled kid" who cannot fit in the "normal" schools.

²⁴ Ruan Xiaoqi, et al. 阮筱琪等. 21 September 2021. 全國實驗學校方興未艾 招生冷熱兩樣情 [Experimental schools across the country are on the rise, with contrasting enrolment situations]. 國語日報 [Mandarin Daily News], 715, pp. 1-20. (<https://www.mdnkids.com/content.asp?sub=1&sn=3835>).

²⁵ While learner-centred education itself represents a spectrum of educational values and practices, and thus does not have a single standardised definition, these are some of the commonly shared values amongst its key proponents, such as Maria Montessori, John Dewey and John Holt.

²⁶ For example, renowned cases such as Adler Yang (International-award-winning documentary filmmaker of *If There is a Reason to Study*), Audrey Tang (Digital Minister of Taiwan), Yun-Ju Lin ("The Silent Assassin", top 5th player as of August 2021 in the International Table Tennis Federation senior circuit) are all considered forerunners or graduates of experimental education.

By analysing the characteristic differences between the 1990s and 2010s waves of education reform and the education system of the previous periods, we found it thought-provoking to view Taiwan people's endeavours toward educational change through their underlying dialectical tensions between *value rationality* and *instrumental rationality*, where the former denotes the thinking, motive or action with a "conscious belief in the value *for its own sake* ... independently of its prospects of success", while the latter is "used as *conditions or means* for the attainment of the actor's own rationally pursued and calculated ends".²⁷

The earliest composition of the Taiwanese people with a majority of socioeconomically impoverished immigrants and the *quid pro quo* incentives for upward mobility during the Qing era configured a rather instrumentally rational soil. While social education and democratic reform attempts during the Imperial Japan era manifested value-rational pursuits, those sprouts were short-lived – soon suppressed by Imperial Japan and then highly constrained by the KMT-ruled ROC, only able to either go underground or develop within politically tolerable boundaries. At the same time, instrumentally rational narratives on education regained the upper hand as the freedom of expression was traded off for the education system's meritocratic promise in the age of *economic miracle*. Years later, under the context of the transition from military rule to democracy and an increasingly pathologically competitive and oppressive culture of education, the first wave of education reform in the 1990s was by and large driven by the pursuit of democratic or enlightenment values, "happy learning", "healthy childhood" and "holistic development",²⁸ as ends in themselves. Thus its proponents may be considered closer to the value-rational end of the spectrum. However, despite the education activists' remarkable strategies and their close cooperation with political activists and the new civil servants and appointed officials in the democratising government effectively enacting a series of progressive policy changes in education (although not without significant compromises), their appeals and endeavours did not gain support from many.²⁹ Not only did many discriminate against alternative schools, but the education reform was also often ridiculed by the popular media as a joke or mess as their

²⁷ Max Weber. 1978. *Economy and Society: An Outline of Interpretive Sociology*, pp. 25-26. University of California Press. (Italics added.)

²⁸ Cai Hongjeng. 2006. How is 'intellectual emancipation' possible in community colleges? An Analysis of an Epistemological Principle. *Formosan Education and Society*, 10, pp. 31-64.; Renn Hwai-Ming. 24 October 2021. What roles does education reform play in the overall social change, and vice versa: A Case Study of Quality Education Forum and the Wellbeing for the Next Generation Project. Presented at 2021 KASpaces Taiwan National Seminar for Accelerating Progress and Equality, Taiwan.

²⁹ Yang Mali 楊瑪利. 2003. 教改為什麼天怒人怨? [Why is there so much anger towards education reform?]. *天下雜誌* [CommonWealth Magazine]. (<https://www.cw.com.tw/article/5112741>).

pursuits were *unrealistic* or *irrational* (i.e., not *instrumentally* rational).³⁰ Only until the gradual repudiation of the “*university degree – employment*” formula and the legitimacy crisis of the conventional system has the new wave of education reform become (*instrumentally*) “rational” and more widely accepted.

Philosophers and social theorists have long warned of the problems with instrumental rationality, or more precisely, the *totalisation of instrumental rationality* in the paucity of value rationality. For example, Max Horkheimer famously argued³¹ that when an actor pays little attention to the normativity or purposes of actions, their purposeless (therefore *self-preservation-oriented*) means-ends calculations become predominantly conditioned by the encompassing political, social and economic structures. Thus, (instrumental) rationality *reverts* to oppressive *mythology* that perpetuates domination, alienation and other forms of the imprisonment of human beings under the guise of *enlightenment*. The fact that social-economic inequality would actually be perpetuated if the whole society follows the meritocratic promise of education for upward mobility (which is an instrumentally rational decision to make)³² may be considered a manifestation of instrumental rationality’s status quo-perpetuating nature.

Entailed in its *means-ends-calculating* nature, Horkheimer continued to argue, the totalisation of instrumental rationality also reduces rationality to *proceduralism* or *formalism*: The best means to (presupposed) ends are tested, formulated and *made normative*, under which actors become prescribed to their *assigned objective function* or *schemata*. While in Taiwan, senior high school admission, in principle, no longer requires test grades, and university admission also reduced the weight of test grades for the inclusion of diverse learning portfolios, the fact that the competition amongst many students, parents, educators and commercial educational services to *game the system* is no less severe than that for the abolished admission examinations³³ may also represent the continued predominance of means-ends

³⁰ Max Horkheimer. 2004. *Eclipse of Reason*. Rev. ed. London ; New York: Continuum. Horkheimer notes (p. 3) that when instrumental rationality is totalised, i.e., the entirety of rationality is reduced to instrumental rationality, “the average man will say that reasonable things are things that are obviously useful...This type of reason ... is essentially concerned with means and ends, with the adequacy of procedures for purposes more or less taken for granted and supposedly self-explanatory. It attaches little importance to the question whether the purposes as such are reasonable.” (emphasis added.)

³¹ Horkheimer, *Eclipse of Reason*. As the following paragraphs are rough representations of Horkheimer’s central theses, the sources are many. The italicised parts can be found in pp. 8, 21-25, 32-33.

³² Collins, Randall. 2019. *The Credential Society*. Columbia University Press; Sandel, M. J. 2020. *The Tyranny of Merit: What’s Become of The Common Good?* Penguin UK; Yang, Allocation Dependence. *Synthetic Anthropology*.

³³ Yang, *ibid.*

calculation for presupposed purposes over authentic contemplations on value decisions.

Contradictory it may seem, Horkheimer foresaw the future of totalised instrumental rationality as the dismissal of itself – once “self-preservation is finally automated”, the laymen’s need or right to reason becomes dismissed by those in power. Following the same line, if having teachers was only instrumentally rational to build students’ instrumentally rational capacities (e.g., competitive knowledge/skills), isn’t it totally (*instrumentally*) reasonable to expect teachers to be replaced by information and communications technologies (ICT) and artificial intelligence (AI), given that ICT and AI are instrumentally rational apparatuses by design while human beings’ calculating capacity is inferior and are more prone to biases, fallacies, and subjectivity?

However grim a society’s prospect under the totalisation of instrumental rationality is, a complete embracement of value rationality might not be a promising solution. Not only was Confucianism’s ethical imperative of intrinsic values against extrinsic values probably considered ideal but otherworldly by the Qing Taiwanese laymen, discourses on value rationality today are also likely to be too ivory-towered or even *elitist*³⁴ to the majority in today’s fast-paced capitalist society, not to mention its increasing portion of the working poor. A full concretisation of the value-rational narrative in policy change may instead breed social or political polarisation.³⁵

Taiwan has to find a way to resolve the dialectic. In this report, we will examine the situation of progress and equality in the context of Covid-19, infrastructure and teacher development, inequality in education, and new actors in education, with cases studies presented at the 2021 KASpaces Taiwan National Seminar for Accelerating Progress and Equality³⁶ held online in Taiwan. Finally, we will present a set of provisional characteristics underlying Taiwan’s approach based on our examination and conclude with preliminary ideas to address the dialectical tension raised in the Introduction.

³⁴ Berendzen J.C. 2017. Max Horkheimer. In The Stanford Encyclopedia of Philosophy, edited by Edward N. Zalta, Metaphysics Research Lab, Stanford University, 2017. (<https://plato.stanford.edu/archives/fall2017/entries/horkheimer/>).

³⁵ Sandel, Tyranny of Merit; Adler Yang. Manuscript submitted for publication. Unveiling Emergent Civilizational Dilemmas from Allocation Dependence: A Synthetic Anthropological Attempt to Study a “Straw in the Wind”.

³⁶ The theme of the seminar was Decoding the DNA of Taiwan Education: Where Do We See Progress and Equality?

II. Impact of the Pandemic on Education

Taking its lesson from the Severe Acute Respiratory Syndrome (SARS) pandemic in 2003, on 2 January 2020, the Taiwan government rapidly mobilised and deployed measures to prevent the spread of the yet unknown coronavirus disease 2019 (Covid-19) that had broken out in Wuhan, China, in December 2019.³⁷ Twelve days after the first imported case was reported, on 2 February 2020, the Ministry of Education (MOE) mandated that all schools shall postpone their openings of the spring semester for two weeks and launched a designated website to keep educators informed about the latest announcements and resources relating to teaching under Covid-19. As Covid-19 infection cases in Taiwan were well under control in 2020, only two universities, one high school and one kindergarten temporarily suspended their in-person activities following the Central Epidemic Command Center (CECC).³⁸



However, Covid-19 slipped through Taiwan's defence system in April 2021, and cases rose sharply in May. When the number of confirmed domestic cases in Taiwan hit 185 on 15 May 2021, the Greater Taipei Area raised its alert level to three in Taiwan's four-tier system,³⁹ and the MOE mandated that all schools shall suspend face-to-face classes from 19 May to 28 May⁴⁰ and continued to adjust the suspension period on a rolling basis, which eventually lasted until July.⁴¹

³⁷ Ministry of Foreign Affairs 外交部. May 2020. 超前部署，先發制疫 [Subduing the Pandemic In Advance]. ([https://www.mofa.gov.tw/Upload/RelFile/2861/171546/20200508%E8%B6%85%E5%89%8D%E9%83%A8%E7%BD%B2updateV1%20\(1\).pdf](https://www.mofa.gov.tw/Upload/RelFile/2861/171546/20200508%E8%B6%85%E5%89%8D%E9%83%A8%E7%BD%B2updateV1%20(1).pdf)).

³⁸ Teach For Taiwan. 4 December 2020. 2020 年度回顧：疫情與教育不平等. [Review of 2020: The pandemic and educational inequalities]. (<https://www.teach4taiwan.org/blog/2020%E5%B9%B4%E5%BA%A6%E5%9B%9E%E%A1%A7%EF%BC%9A%E7%96%AB%E6%83%85%E8%88%87%E6%95%99%E8%82%B2/>).

³⁹ Keoni Everington. 12 May 2021. Taiwan's 4 epidemic warning levels. Taiwan News. (<https://www.taiwan-news.com.tw/en/news/4203460>). Level 3 is one level below the strictest Level 4. It mandates: Wearing of masks at all times outdoors; Indoor gatherings limited to five people; All places of business and public venues are shuttered, with the exception of essential services, police departments, hospitals, and government buildings; Masks and social distancing required at all businesses or venues that remain open; In areas where community transmission has taken place, residents are restricted to a set perimeter and must submit to Covid-19 testing.

⁴⁰ Ministry of Education. 18 May 2021. 全國各級學校因應疫情停課居家線上學習 [Schools at all levels close for on-line learning in response to the Covid-19 pandemic]. (https://www.edu.tw/News_Content.aspx?n).

⁴¹ Ministry of Education. 7 June 2021. 全國各級學校因應疫情 延長停止到校上課至學期結束 [Schools at all levels extend school closures until the end of the semester in response to the Covid-19 pandemic]. (https://www.edu.tw/News_Content.aspx?n=9E7AC85F1954DDA8&sms=169B8E91BB75571F&s=210015AEE5D67F5E).

Despite the MOE's long-term endeavour to build its digital infrastructure for at least 23 years prior to the Covid-19 outbreak in May 2021,⁴² according to the International Survey on Teaching and Learning published by the Organisation for Economic Co-operation and Development (OECD) in 2018, the rate of ICT-integration for education by teachers in Taiwan was 15 per cent, much lower than the world average of 53 per cent.⁴³ Facing the sudden challenge posed by Covid-19, a survey conducted by the National Federation of Teachers Unions (NFTU) from 7 to 14 June 2021 showed that 27 per cent of senior high school teachers had had students who were not able to learn from distance due to the lack of infrastructure, and after measures for Covid-19 were taken by their respective schools, 7.56 per cent of the teachers still had their problems unresolved.⁴⁴

To support teachers' teaching with ICT, the MOE released an "Online Learning Kit" with more than 8,000 educational videos for the elementary and junior high school curriculum. For the Kit to be fully utilised, the MOE also recruited teachers familiar with digital learning platforms and online teaching models to lead online training sessions, which attracted more than 6,500 participants. Through a joint effort between the public and private sectors, the "Technology-Assisted Self-directed Learning Programme" and the "Digital Learning Partner Programme" also provided guidance on online teaching and students' self-learning.

Meanwhile, the civic sector also mobilised to provide mutual aid. For example, the Taiwan Online Synchronous Teaching Community, an online community jointly organised by Hong Kong and Taiwan educators for self-empowerment and resource sharing, provided a platform for teachers from various subjects to exchange digital tools and their ICT teaching methods and experiences. Amongst roughly 270,000 full-time teachers in Taiwan, the community has accumulated more than 130,000

⁴² Ministry of Education. 2016. 2016-2020 資訊教育總藍圖 [Master Plan for Information Education 2016-2020] (<https://ws.moe.edu.tw/001/Upload/3/rfile/6315/46563/65ebb64a-683c-4f7a-bcf0-325113ddb436.pdf>). The MOE's attempt to build the digital infrastructure for education can be traced back to when it began promoting the "Information Education Infrastructure Project" in 1997 and the Information Education Master Plan in Primary and Secondary Schools in 2001. It has since continued to promote the White Paper on Information Education and related digital learning programmes, such as teacher training, encouraging the integration of ICT into teaching, providing subsidies to elementary and secondary schools, improving campus software and hardware infrastructure, and enriching digital resources, to promote the development of information education in Taiwan. Since 2017, more than 10 billion dollars have been invested to build or upgrade 42,000 "smarter classrooms" in primary and secondary schools across Taiwan to create an information teaching and learning environment.

⁴³ Lin Jiayi 林佳誼 and Jhang Yushih 張毓思. 3 November 2021. 破壞式學習 [Disruptive learning]. 天下雜誌 [CommonWealth Magazine], pp. 58-66. Taipei, Taiwan.

⁴⁴ The National Federation of Teachers Unions 全國教師工會總聯合會. 18 June 2021. 【新聞稿】恐有千位以上高中生欠缺線上學習設備全教總呼籲主管機關立刻清查補足. [Press Release: More than 1,000 high school students may lack online learning facilities NFTU calling on the authorities to immediately check and make up for it] (http://www.nftu.org.tw/News/news_view.aspx?NewsID=202106181258480985). The survey was conducted online and disseminated via Facebook and NFTU's membership mailing list and 960 valid responses were collected.

fans and has become one of the larger-scale platforms for teachers' professional development.⁴⁵

"In the past, teachers were like performers with students watching you perform alone on stage," said National Taiwan University (NTU) Professor Ping-Cheng (Benson) Yeh, who founded the Taiwan Online Synchronous Teaching Community when classes were first suspended in Taiwan. He believes that the role of teachers has to be redefined, such that "in the future, teachers become like producers and directors, capable of rearranging the entire content, responsive to the curriculum requirements, while allowing students to become the protagonists of the classroom."⁴⁶

The autonomous response to the pandemic by community universities, the largest learning institution outside the formal school system,⁴⁷ also demonstrated the power and resilience from the bottom up. According to Kuo-Ching Hsieh, former president of the National Association for the Promotion of Community Universities (NAPCU) and the current president of Beitou Community University,⁴⁸ despite the lack of government support and resources, community universities' founding spirit and institutional design based on andragogy/heutagogy allowed their lecturers, mentors, and learners to respond to the challenges of the pandemic democratically, flexibly, and rapidly. At community universities, all learning and teaching at community universities are voluntary and largely self-determined, decisions are mostly made democratically, and resources are co-created or shared with their respective local communities; thus, their members are less restricted by and reli-

⁴⁵ Jhang Yushih 張毓思. 3 November 2021. 13萬粉絲交流網課心法 救了「數位小白」老師. [130,000 fans share online lesson ideas to save 'digital beginner' teachers]. 天下雜誌 [CommonWealth Magazine], pp. 136-138. Taipei. Fan number as of October 2021.

⁴⁶ Yeh Pingcheng (Benson) 葉丙成. 23 November 2021. How to get teachers motivated? How to get students motivated? Keynote presented at 2021 KASpaces Regional Roundtable on Accelerating Progress and Equity in Education, Singapore.

⁴⁷ Xiao Jiachun. 2004. Explore the development of community college from the perspective of civil society. *Formosan Education and Society*, 6, pp. 1-25. According to Xiao, the community university in Taiwan was created to promote the popularisation of knowledge and lifelong learning. By creating a new model of adult learning, it helps people understand their civic responsibilities in a democratic society, and in turn, promotes community development. Compare the community colleges in the United States with the community universities in Taiwan: both were established to serve the community. While the former is an independent organisation, the latter uses the space and resources of community secondary schools and offers courses outside of the educational activities of secondary schools. Community colleges in the United States are primarily practical courses that provide vocational training and require a high school diploma at the time of application. After completing a two-year programme, students can earn an associate degree, which can then be articulated into university programmes. In Taiwan, community colleges are purely credit-bearing, with no entrance examinations or academic restrictions. You can apply at the age of 18 or above, and there are no restrictions on the number of years of study. Academic, community and life skills programmes are offered with a relatively high degree of autonomy and flexibility in learning. For more, see Hsieh (24 October 2021).

⁴⁸ Hsieh Kuo-Ching. 24 October 2021. Covid-19: An Opportunity for Education Re-Change. Presented at 2021 KASpaces Taiwan National Seminar for Accelerating Progress and Equality, Taiwan.

ant on the input of the government. Through discussions, members of community universities formed their solutions to the public health mandates, including creative forms of distance or hybrid learning and ways to socialise amid lockdowns. As a result, Kuo notes that the issues of exacerbated lack of learning resources, low learning motivation or disparity of learning achievements during the pandemic are less severe in community universities than formal schools.

With the joint efforts made by people across sectors to rapidly respond to the challenges posed by the pandemic, the initial confusion and disorder in education became gradually stabilised three weeks after the Covid-19 outbreak⁴⁹ as the integration of ICT into education rapidly became more comprehensive.

According to the *National Online Learning Survey of Elementary and Middle School Teachers* conducted by CommonWealth Parenting⁵⁰ from 20 to 30 July 2021, the change in teaching format from physical to online has resulted in more than 60 per cent of teachers readjusting the pace of a 50-minute class, such as increasing the proportion of students' self-study, shortening class time, or increasing online interaction and discussion. After resuming physical classes, more than 50 per cent of teachers said they would like to increase the proportion of students using ICT for self-study, tests, and homework; nearly 90 per cent of teachers said that online learning widens the gap between students and that "the ability to learn independently" is the key factor that influences the effectiveness of online learning. Furthermore, more than 80 per cent of teachers believed that teacher training methods and teacher selection criteria should be adjusted in response to the digital transformation of education.

However, some raised concerns about the taken-for-granted approaches to ICT. Gih-Jen Ding, President of the Jendo⁵¹ Association and a leading education activist since the 1990s, for example, has been a long-time proponent of using open-source software to prevent students' growing dependency on large tech firms that privatises and monopolises content and means of information and communication, which he believes have antithetic implications for the publicness of education.

Another often neglected aspect is that a school does not only serve as a place for children to learn new knowledge but also a place for their *holistic* development,

⁴⁹ Jhang Yusih 張毓思. 3 November 2021. 從馬拉松變跑百米 台灣數位學習的下一步 [From marathon to 100m sprint, the next step in digital learning in Taiwan]. 天下雜誌 [CommonWealth Magazine], pp. 80-82. Taipei.

⁵⁰ Chiou Shaowun 邱紹雲. 1 September 2021. 開學後，88%老師願意改變傳統教學法 [Welcoming new semester, 88% of teachers are willing to change traditional teaching methods]. 親子天下 [CommonWealthParenting], pp. 82-85. Taipei. 1,322 valid questionnaires were collected.

⁵¹ Transliteration of "振鐸", which means the "vitalisation of education".

which includes ensuring their *safety* and *wellness*. However, according to the statistics by the MOE, on the first day of suspension of face-to-face classes, 1.26 per cent of Grade 1 to 12 students still had to attend school due to the lack of care or security at their homes. Without food provided by schools, some students even needed meals to be sent to their homes.⁵² Fortunately, such a situation did not last too long, as Taiwan significantly suppressed the Covid-19 outbreak in three months⁵³ and face-to-face classes began to resume in late September.

“Although education is fundamental to social change, we should not reduce all social change to educational change,” said Ding at the 2021 KASpaces Regional Roundtable.⁵⁴ “We should not expect the consequences of inequality exacerbated by the pandemic to be solved by education. What we need is a better social safety net. If Taiwan has done a relatively good job in taking care of the disadvantaged children during the pandemic, it was mainly because we have a relatively decent health insurance system, not because of our public schools.”

III. Infrastructure and Teacher Development Under the 12-Year Basic Education

After tremendous changes since the 1990s, the public education system in Taiwan today is now based upon the Twelve-Year Basic Education framework. This framework was legally made possible through the promulgation of the *Senior High School Act* and partial revision of the *Junior College Act* in 2013, with the *Curriculum Guidelines of Twelve-Year Basic Education* (“*Curriculum Guidelines*” or “*new Curriculum Guidelines*”) serving as the protocol for its implementation. The latter defines the learning objectives and content of each stage of public education, guides educators to ensure students’ learning progress and performance and serves as an essential basis for the implementation of the public school curriculum, the development of textbooks, and the development of entrance examinations. Given its overarching role, the Curriculum Guidelines could be considered one of Taiwan’s most fundamental educational infrastructures.

⁵² Tsao Funian 曹韻年 and Chen Singying 陳星穎. 24 June 2021. 數位落差，不只是硬體落差——看見疫情下的教育不平等 [Digital disparity, not just hardware disparity -educational inequality in the context of the pandemic]. 報導者 [THE REPORTER], Taiwan. (<https://www.twreporter.org/a/covid-19-education-opportunity-inequality>).

⁵³ Soon. 29 July 2021. Why Taiwan Is Beating COVID-19 – Again. The Diplomat. (<https://thediplomat.com/2021/07/why-taiwan-is-beating-covid-19-again/>).

⁵⁴ Ding Gih-Jen. 22 November 2021. How to Change the Education System from the Bottom-Up: Experience from Taiwan. Presented at 2021 KASpaces Regional Roundtable on Accelerating Progress and Equity in Education, Singapore.

Development of the Curriculum Guidelines and Curriculum Review System

In 1968, President Chiang Kai-Shek mandated that the “curriculum, textbooks, and teaching guidelines for elementary to senior high schools be solely compiled and supplied by the MOE-affiliated National Institute for Translation and Compilation (NITC) under ethical, democratic and scientific values.” On the one hand, some people consider that since NITC hired prominent scholars to lead the compilation of textbooks, the quality of textbooks improved significantly, and the standardisation of textbooks also ensured equal access to quality learning materials and fairness for examination preparation amongst all students.⁵⁵ However, many social and educational activists considered NITC’s control over the curriculum and textbooks as an extension of government censorship and this was, therefore, one of their prioritised targets of education reform.⁵⁶

Through the cooperation between newly appointed officials (some have experience in activism or academia) and education activists, the right to compile textbooks has gradually shifted *from the government to the people*⁵⁷ since 1991, with the NITC officially withdrawing from all compiling activities in 2002. What replaced the NITC’s standardised textbooks was the notion of *Multiple Textbooks Following One Guideline*,⁵⁸ which means that the government sets the curriculum guidelines⁵⁹ for primary and secondary education that publishers should abide by in their textbook compilation, and then all schools are free to choose from all government-reviewed

⁵⁵ Huang Fatse 黃發策. 1995. National Institute for Translation and Compilation - 國立編譯館. 圖書館學與資訊科學大辭典 [Dictionary of Library and Information Science]. (<https://terms.naer.edu.tw/detail/1681218/?index=3>). The NITC was the highest translation agency and one of the higher government-affiliated academic institutes in ROC until it was dissolved and merged into the National Academy for Educational Research in 2011. After its establishment in 1932 and uninterrupted by the Second Sino-Japan War and the China Civil War, it hired leading scholars of the time and served a central role in the preservation of cultural heritage and the publishing and translating of prominent academic works that otherwise could not have been done in a time when society is dysfunctional or if left to the discretion of the market economy. The NITC was also responsible for defining/explaining scientific and professional terms and had compiled and published some of the ROC’s most important dictionaries.

⁵⁶ Lin Hsingtsu. 1998. The Implications of the Open and Reviewing System of Textbooks on Teachers’ Professional Autonomy. *Curriculum & Instruction Quarterly*, 1(1). (<http://dx.doi.org/10.6384/CIQ.199801.0027>). This is also mentioned in the Introduction of this report.

⁵⁷ Which some consider that, in practice, is equivalent to the market economy. See the following paragraphs.

⁵⁸ The National Institute for Translation and Compilation re-published textbooks in 2004 and entered the market as an equal competitor.

⁵⁹ Before the 2000s, all the textbooks’ content followed the “Curriculum Standard”, which was edited by the Ministry of Education. In 1998, the MOE launched the “Nine-Year Curriculum Guidelines” instead of the Curriculum Standard. The Nine-Year Curriculum Guidelines emphasised the need for a more coherent and articulated curriculum for both primary and junior high schools.

publishers' textbooks without direct government intervention.⁶⁰ The MOE also established the National Primary and Secondary School Curriculum Review Committee, a curriculum research and development body to review the curriculum guidelines devised by experts. These two policies marked the beginning of the gradual transformation from monolithic to pluralistic curriculum and the cooperation on curriculum between the people and the government.

However, the curriculum has always been the battlefield of interest groups due to its influence on the next generation, and Taiwan is no exception. The withdrawal of the NITC sparked disputes as some regard it as a move giving in to the market economy, which sees no values but money. In addition, the formation of the history curriculum has also been at the centre of conflicts. One of the more significant incidents was the Anti-Blackbox Curriculum Movement in 2015;⁶¹ activists (some claim they were mainly formed by students) protested against the MOE's controversial revision of the history curriculum guideline and the protest culminated in a student committing suicide as an act of protest.⁶²

Following the Movement, in 2016, the curriculum review system underwent dramatic changes with the amendment of the Senior High School Education Act. It mandated that among the 41 to 49 committee members, only 10 to 12 shall be government representatives; the remaining 31 to 37 shall be non-government representatives, such as experts in various stages of education, teachers, parents, non-government organisations and, for the first time in history, students' representatives. The members mentioned above must also include indigenous people.⁶³ Although the pluralistic composition of the curriculum review committees gained support from activists, they have only been able to approve or veto the curriculum

⁶⁰ Free choice of textbooks is considered an important demonstration of the professional autonomy of teachers in Taiwan's education reform.

⁶¹ Anti-Black Box Curriculum Movement. Last modified 16 November 2021. In Wikipedia, (https://en.wikipedia.org/w/index.php?title=Anti-Black_Box_Curriculum_Movement&oldid=1055590746); Yun-Zhen Yang. 23 October 2021. How might the life cycle design of major education policies be improved to become more democratic and inclusive: Taking 2019 National Curriculum Guideline for Example. Presented at 2021 KASpaces Taiwan National Seminar for Accelerating Progress and Equality, Taiwan.

⁶² Lin Guan-Hua 林冠華. Last modified 17 November 2021. In Wikipedia. (<https://zh.wikipedia.org/w/index.php?title=%E6%9E%97%E5%86%A0%E8%8F%AF&oldid=68690501>).

⁶³ Ministry of Education. 2014/2021. 高級中等以下學校課程審議會組成及運作辦法. [Regulations for Curriculum Review Committee of Schools of Secondary Education, Elementary Education, and Kindergartens]. (<https://law.moj.gov.tw/LawClass/LawAll.aspx?pcode=H0000133>). While the Curriculum Review Committee was already included in the original Senior High School Education Act, the previous Act only stated the "purpose of setting the Curriculum" and the "meaning of forming the Curriculum Review Committee." The amended act provides more detailed regulations on the organisation of the curriculum review committee, the selection of its members, the ratio of attendance, the system of recusal, and the tasks and responsibilities of the review committee. At the same time, in response to the amendment of the Higher Secondary Education Act, the MOE also amended the Regulations for Curriculum Review Committee of Schools of Secondary Education, Elementary Education, and Kindergartens.

guidelines instead of actively participating in the formation of curriculum content. Complicated with other issues in practice, some question whether the curriculum review process can bring diversity into the curriculum.⁶⁴

Two Key Challenges to the Twelve-Year Basic Education System

Responding to the increasing number of people who have voiced their expectations for extending the length of national education since the 1990s, the MOE released the “Report on Education in the Republic of China” in 2010 with an announcement that the conditions for a Twelve-Year Basic Education system had matured, given that – for example – the senior high school admission rate was already higher than 99 per cent,⁶⁵ and nearly 60 per cent of junior high graduates chose to attend senior high schools in their local districts instead of the perceived *better* districts. Following the Report, the MOE has spent years developing the research and development, planning, implementation, and revision processes, and the curriculum review system for the Twelve-Year Basic Education System, culminating in its eventual publication and implementation of the *Curriculum Guidelines of Twelve-Year Basic Education* in 2014 for the 2019 academic year.

While the tasks of the new Curriculum Guidelines are manifold, amongst all, two stand out: One is to carry on the 1998-introduced Grade 1 to 9 Curriculum Guidelines’ unsuccessful attempt to transform student learning beyond subject materials to *competencies* that integrate knowledge, attitudes, and abilities, while also addressing students’ diverse personal needs for development;⁶⁶ the other is to ameliorate the *pathological* admission culture from junior to senior high school.

⁶⁴ Fang Delong. 2020. An Analysis of the Operation of Taiwan’s Curriculum Review System. *Taiwan Education Review*, 9(1), pp. 46-56.

⁶⁵ Hung Yung-Shan. 23 October 2021. Exploring the Mechanism of 12-Year Basic Education Curriculum Research & Development and Coordination, to Analyse the Impact and Prospect of the Democratic and Public Governance in Educational Decision-Making. Presented at 2021 KASpaces Taiwan National Seminar for Accelerating Progress and Equality, Taiwan.

⁶⁶ Ministry of Education. 2014. Curriculum Guidelines of 12-Year Basic Education: General Guidelines. (<https://cirn.moe.edu.tw/Upload/file/32077/83646.pdf>). In recent years, more and more countries, such as France, Spain, Denmark and Finland, have adopted a competency-oriented curriculum. In Taiwan, the “Core Competencies” are categorised into three categories, which are expected to be learned in “real-life scenarios”: “Taking initiative”, “Engaging in interaction” and “Seeking the common good”. The term “taking initiative” refers to the development of students’ autonomy and enthusiasm for learning; “engaging in interaction” means learning to get along with and cooperate with people of different characteristics; “seeking the common good” emphasises a sense of participation in the environment and a willingness to contribute to the progress of society. The curriculum recognises that students are the subjects of learning and that each child should be able to achieve success through appropriate talent development.

Attempts to Support Teacher Development for “School-Developed Curriculum”

To further develop a competency-oriented curriculum in respect of the unique needs of schools and students from their diverse contexts, in the Curriculum Guidelines, the MOE mandates a significant portion of *school-developed curriculum* at all primary and secondary schools. In contrast to the MOE-mandated curriculum developed by the government to ensure all students’ foundation for lifelong learning, the school-developed curriculum should be locally developed in respect of the school’s vision, local characteristics, and community resources, and their students’ unique contexts.⁶⁷ In 2015, the MOE launched the *Pilot Schools* programme to help schools at all levels to adapt to the new curriculum.⁶⁸ The results of the piloted school-developed curriculum across the country are later used as a reference for

⁶⁷ MOE, General Guidelines. “The 12-Year Basic Education Curriculum is classified into two types...:

1. MOE-mandated curriculum: This type of curriculum is planned by the government to develop students’ basic learning ability and establish a development foundation according to students’ aptitudes. In elementary school and junior high school, the curriculum includes domain-specific courses that develop students’ fundamental knowledge and skills and facilitate balanced development in all areas of learning. MOE-mandated courses in upper secondary schools may include general subject courses needed by students to establish a learning foundation for various domains, and vocational subject courses and hands-on courses oriented toward their professional development and aptitudes.
2. School-developed curriculum: This type of curriculum is designed and offered by each school to highlight the school’s vision of education and facilitate students’ development according to their aptitudes. Elementary and junior high schools offer alternative curricula, which include crosscurricular and integrative courses with theme-, project-, and issue-based inquiry, club activities and professional courses, and special needs domain courses. In addition, courses including Native Languages and Native Languages of New Immigrants, service learning, outdoor education, interclass and interscholastic exchange, student-directed activities, homeroom guidance, self-directed learning, and domain-specific remedial instruction. Upper secondary schools offer school-developed required courses, elective courses, group activity sessions (including homeroom activities, club activities, student-directed activities, service learning, and weekly assemblies or lectures), and alternative learning periods (including self-directed learning, athlete training, enrichment courses or remedial courses, and school-distinctive activities). Some of the elective courses are to be designed and revised by teams responsible for domain-specific curriculum guideline revisions before these courses can serve as a reference for schools to design their curricula.”

⁶⁸ Participating schools in the Pilot Schools programme assisted in the following tasks:

1. Planning the curriculum of the school with the new curriculum concepts, including the MOE-mandated curriculum and school-developed curriculum.
2. Pilot the implementation of the new curriculum in the school, and gradually develop and enrich it.
3. To pilot the development of competency-oriented curriculum materials and teaching modules.
4. Review and make recommendations on the implementation of the new curriculum.
5. Organise workshops for staff and parents on the new curriculum, including “curriculum planning”, “development results” and “experience sharing”.
6. The former pilot schools that joined the programme are required to support the later pilot schools.

educational authorities to revise the Twelve-Year Basic Education Curriculum and for other schools to learn from their experiences.⁶⁹

In addition to school-level strategies, there is also an updated system for empowering teachers to adapt to the new Curriculum Guidelines. In the pre-service teacher training stage,⁷⁰ universities with teacher education programmes provide competency-oriented workshops or classes such as problem-based teaching and theme-based teaching to allow teacher education students to design competency-oriented courses and reflect on their teaching plans.⁷¹ Another important policy for in-service teachers is the *open classroom observations*, which requires all teachers to teach openly with others observing at least once a school year.⁷² This policy facilitates the formation of a professional community of teachers in the school who will work together to prepare lessons and further their education. The Compulsory Education Advisory Groups formed by experienced teachers or school supervisors in their respective districts since 2006⁷³ also serve a crucial role in organising workshops, explaining the content, providing case studies, and serving as an essential teaching aid for the implementation of the new Curriculum Guidelines in each county and city.⁷⁴ To support senior teachers, the MOE also launched the *Continu-*

⁶⁹ As of 2021, there are 483 junior high schools and elementary schools, 51 general high schools, and 35 technical and comprehensive high schools participating in the Pilot School programme.

⁷⁰ The teacher preparation process in Taiwan can be broadly divided into six stages:

1. Recruitment of teacher education students.
2. Pre-service Teacher Education Programme: Students take professional courses in education and subspecialty courses at teacher training universities.
3. Teacher Qualification Examinations: including the Teacher Professional Knowledge Test and the Subject Competency Test.
4. Education Internship: Half-year internship as an intern teacher at a school.
5. Issuance of teaching certificate.
6. Becoming an active teacher and continuing education.

⁷¹ Yang Jhihying. 2019. Teacher Training Program Development in Response to New Curriculum Policy Changes. *Taiwan Education Review*, 8(4), pp. 51-57.

⁷² Ministry of Education. 2016. 國民中學與國民小學實施校長及教師公開授課參考原則 [Reference Principles for the Implementation of Open Teaching for Principals and Teachers in National High Schools and National Elementary Schools]. ([https://cirn.moe.edu.tw/upload/12class/%E6%B3%95%E5%88%B6%E4%BA%BA%E5%93%A1%E4%BF%AE%E5%9C%8B%E6%B0%91%E4%B8%AD%E5%B0%8F%E5%AD%B8%E6%A0%A1%E9%95%B7%E5%8F%8A%E6%95%99%E5%B8%AB%E5%85%AC%E9%96%8B%E6%8E%88%E8%AA%B2%E8%BE%A6%E7%90%86%E5%8F%83%E8%80%83%E5%8E%9F%E5%89%870926\(%E7%99%BC%E5%B8%83%E7%89%88\).pdf](https://cirn.moe.edu.tw/upload/12class/%E6%B3%95%E5%88%B6%E4%BA%BA%E5%93%A1%E4%BF%AE%E5%9C%8B%E6%B0%91%E4%B8%AD%E5%B0%8F%E5%AD%B8%E6%A0%A1%E9%95%B7%E5%8F%8A%E6%95%99%E5%B8%AB%E5%85%AC%E9%96%8B%E6%8E%88%E8%AA%B2%E8%BE%A6%E7%90%86%E5%8F%83%E8%80%83%E5%8E%9F%E5%89%870926(%E7%99%BC%E5%B8%83%E7%89%88).pdf)).

⁷³ Ministry of Education. 2007/2013. 建構中央與地方教學輔導網絡實施方案 [Implementation plan for building a central and local teaching and counselling network Regulations.]. (<https://edu.law.moe.gov.tw/LawContent.aspx?id=FL044354>).

⁷⁴ Fu Jiajun. 2019. A Regurgitation of 360° Leadership in Counsellor Work - An Example of Kaohsiung City National Education Counselling Group. *Journal of School Administration*, 119, pp. 176-87. ([https://doi.org/10.6423/HHHC.201901_\(119\).0007](https://doi.org/10.6423/HHHC.201901_(119).0007)).

ing Education Programme for Serving Senior Teachers⁷⁵ to encourage teachers in all counties and municipalities to form study groups. Each group receives an annual subsidy of \$25,000 NTD to cover the cost of Twelve-Year Basic Education-related study and further education.

Overall, Taiwan's infrastructure and teacher development are gradually shifting from teachers unilaterally following the government's orders to being supported to exercise their professional autonomy and design a curriculum that meets students' diverse needs.⁷⁶ However, it is still very overwhelming for many teachers to teach outside of their disciplines and engage in inquiry-based instruction despite the MOE's supportive measures.⁷⁷ Seeing such a challenge, since 2018, the NAPCU has partnered with the MOE to bridge schools with learning resources in the local community, assisted public school teachers with developing community-based school-developed curriculum, or even grant the right for primary and secondary schools to include community university courses as their school-developed curriculum. With thirty years of experience in community-based andragogy, in three years, the NAPCU has facilitated more than twenty cooperative programmes between community universities and their neighbouring local public schools, in which students ranging from primary school children to the elderly learn together in traditional handicraft workshops or nature. Such mixed-age learning has also facilitated the formation of social safety nets through community mutual aid, which greatly complements the schools' efforts in meeting the challenges of taking care of marginalised students.⁷⁸

As one of the key drafters of the Twelve-Year Basic Education-related policies, Gih-Jen Ding clearly understands the value of the school-developed curriculum but has already initiated a new step to carry on the never-ending quest for universal education and the shift towards a learner-centred education system capable of responding to the crises of our time. For many years, he had led a pilot programme experiment with feasible ways of bringing learner-centred education into public secondary schools and found a foundational model that works within the government's budget per student that *requires customisation* by its stakeholders when put

⁷⁵ Ministry of Education. 18 May 2017. 教育部於106學年度試辦在職資深教師續航計畫-推動教師專業發展支持系統。 [The MOE piloted the Continuing Education Program for In-Service Senior Teachers in the 106th school year - Promoting Teacher Professional Development Support System]. (https://www.edu.tw/News_Content.aspx?n=9E7AC85F1954DDA8&s=7237F395EF787D8B).

⁷⁶ Hung Yung-Shan. 2019. Teachers' Professional Development in the Context of Curriculum Reforms in Taiwan: Retrospect and Prospect. *Education Journal*, 47(1), pp. 49-60.

⁷⁷ Syong Jhihgang & Wu Jiachi. 2018. Functional Leadership in the 12-Year Basic Education: The Meaning, Challenges, and Responses of Public Teaching by School Principals. *Taiwan Education Review*, 7(5), pp. 120-24.

⁷⁸ Ko Ing-shiuan. 23 October 2021. How to Enrich Learning Contents of 12-year Basic Education with Community Resources: Take the Project of Community Universities and 12-year Basic Education for Example. Presented at 2021 KASpaces Taiwan National Seminar for Accelerating Progress and Equality, Taiwan.

into practice. Building upon Ivan Illich's blueprint in *Deschooling Society*, he argues that in the next stage, schools should transform into alliances of organic learner-centred groups connected to boundless learning webs that transcend campuses, which he believes will become cultural and infrastructural foundations for decentralised democratic societies in the future that are resilient to the centralisation of power and crises such as inequality, polarisation, authoritarianism, and environmental disasters. Since 2021, he has partnered with the MOE again to organise a fellowship for public school teachers to bring this vision to the *undefined blank spaces* under the school-developed curriculum umbrella.⁷⁹

Unresolved Challenge Posed by Credentialism

Unfortunately, the hopeful attempts to bring about progress and equality through the new curriculum still face a serious threat of being distorted. Like many other Asian countries, Taiwan has been known for its fervid teach-to-the-test culture and competition in admission tests that distort healthy and holistic learning, and it has taken a long time to address this *disease*. To further this task under the new Twelve-Year Education system, Article 37 of the Senior High School Act mandates that all students should be admitted to senior high schools in their districts without entrance examinations. When the number of applicants exceeds the senior high schools' quota, only non-academic factors may be used as tiebreakers if at-school performances are accounted for in the process.⁸⁰ However, some schools are still perceived as being better than others and they still receive applications exceeding their admission quotas. To many families, this means an escalated competition, from academic subjects to volunteering, contests, special talents and more.

⁷⁹ Ding Gih-Jen. 23 October 2021. How to Bring the Paradigm of Self-Determined Education into the School System Through the 2019 National Curriculum Guidelines? Presented at 2021 KASpaces Taiwan National Seminar for Accelerating Progress and Equality, Taiwan.

⁸⁰ Article 37 of the Senior High School Education Act states: "...Under the exam-free admission program, all applicants can be admitted as long as the number of applicants does not exceed the limit set by the competent authority. If the number of applicants under the exam-free admission program exceeds the limit set by the competent authority, the final enrolment number shall be determined by the competent authority at the special municipal/county (city) level along with the competent authority of each school district, and reported to the central competent authority for future review. Skill-based and specialty-based senior high schools may not be subject to such requirement as they have special recruitment needs. They can establish their curriculum plans, enrolment plans, quota and exam-free admission procedure, while reporting relevant information to the corresponding competent authorities for approval. ...[T]he fact of whether or not a student received a passing grade for his or her performance in health and physical education, arts, integrative activities, and technology may be used to settle a tie. Performances in other learning areas shall not be counted as tie breakers..."

Based on a longitudinal ethnographic study on Taiwan's struggle with credentialism,⁸¹ Adler Yang, Researcher at Awakening Co-op Lab and the R&D Director at ZA Share, discovered a mechanism he calls *Allocation Dependence*:⁸² As long as agents are dependent on resource allocation, they are inevitably propelled to fit themselves to the measures (e.g., rules to abide, criteria to meet) of such allocation; entailed in this mechanism are consequences, including but not limited to the alienation and fragilisation of the agents, disparity and exhaustion of resources. Yang considers that Taiwan's new guise of competition for admission manifests Allocation Dependence and that it can only be alleviated if families decrease their dependence on the *perceived superior* resources that *good* schools offer. Working with different types of marginalised students, his action research on *Learning by Caring* shows an apt alternative to the educational resources provided by the admission/school system: Based on the continuous actualisation of their prosocial aspirations, students would receive resources from others' reciprocations to their endeavours, which would support their continuing growth. He further suggests that compared to the mainstream *forecast-based approach* to talent cultivation – which moulds students into forecasted functions, marginalises those who are unfit, and always fall prey to



⁸¹ Adler Yang. 2016. If There is a Reason to Study. Activator Marketing. (https://en.wikipedia.org/wiki/If_There_Is_a_Reason_to_Study).

⁸² Yang, Allocation Dependence, Synthetic Anthropology; Adler Yang. 2021. How Might We Unveil Generative Mechanisms of Wicked Problems? Discovering "Allocation Dependence" Through a Critical (Auto)Ethnography of an Alternative School. Paper presented at 2021 International Association of Critical Realism Conference.

the inherent uncertainty in forecasts – such an *agent-based approach* allows learners to become more capable of adapting to an ever-changing world based on their unique but equally respectable contexts.⁸³

IV. Inequality in Education: Attempts to Address the Urban-Rural Gap

As in most countries, the academic achievement of Taiwan students in urban schools is generally higher than that of their rural counterparts.⁸⁴ To balance the development of rural areas and to ensure educational equality, the MOE implemented the Educational Priority Area Project in 1996, which provided subsidies for learning resources, teacher and student dormitory renovation, parenting education, school lunches, and school infrastructure in rural schools,⁸⁵ thus resulting in an overall improvement of resources for rural schools, especially in terms of hardware and equipment. In 2003, the MOE began to encourage retired professionals and university students to provide academic guidance to rural students, and in 2006, the MOE integrated the related programmes into the After School Alternative Programme to introduce remedial instruction on a large scale. From 2003 to 2012, the MOE also implemented other programmes related to integrating ICT into rural education in the hope of bridging the digital gap between urban and rural areas. By 2006, compared to schools in other areas, the reported shortage of educational resources on average was already least severe in rural schools.⁸⁶ Follow-up research also showed

⁸³ Adler Yang. 2021. Learning by Caring: An Educational Attempt to Alleviate Allocation Dependence and Foster Regenerative Cultures Through Altruism. Presented at The 15th Annual Meeting of the Japan Association of Synthetic Anthropology; Adler Yang. 22 November 2021. What if the “Disadvantaged” are already the most “Resource Abundant?": A case for shifting from “Forecast-based” to “Agent-based” talent incubation. Presented at 2021 KASpaces Regional Roundtable on Accelerating Progress and Equity in Education, Singapore.

⁸⁴ OECD. 2013. What makes urban schools different? PISA in Focus, 28. (<https://www.oecd.org/pisa/pisaproducts/pisainfocus/pisa%20in%20focus%20n28%20%28eng%29--FINAL.pdf>). Except for countries such as “Austria, Belgium, Germany, Israel, Korea, the Netherlands, the United Kingdom and the United States, students who attend schools in urban settings come from more advantaged socio-economic backgrounds.”

⁸⁵ Department of Statistics, MOE. 2021. 國民中小學校概況統計。[Primary and Secondary School Profile Statistics] (https://depart.moe.edu.tw/eD4500/News_Content.aspx?n=48EBDB3B9D51F2B8&sms=F78B10654B1FDDB5&s=C0D2B286EA66BBD5). The Act for Education Development of Schools in Remote Areas defines: “schools in remote areas referred to in this Act means public schools at senior high school level or below which lack educational resources due to transportation, culture, amenities, internet access, social-economic conditions, or other factors.” According to the Classification and Recognition Standards for Schools in Remote Areas, it can be subdivided into three levels: remote, special remote, and extremely remote. As of the 2020 school year, there are 1,172 recognised primary and secondary schools and 107,952 students in remote areas, accounting for 4.5 per cent of the national student population.

⁸⁶ OECD 2007 PISA Database, as cited in Sheu Tian-ming. 2016. Impact of Educational Resource on Junior High School Student Achievement in Taiwan Rural and Non-rural Area (No. E98048; Survey Research Data Archive). Academia Sinica. doi:10.6141/TW-SRDA-E98048-1.

that rural schools are invested with the highest per-student expenditure and significantly higher quality technology facilities and student activities than other areas.⁸⁷

If assessed in terms of academic achievement, the MOE's earlier efforts to bridge the urban-rural gap are likely to be deemed insufficient, if not unsuccessful. In 2009, the reading gap between urban and rural students in terms of PISA scores was 56 points,⁸⁸ which is higher than the OECD average of 40,⁸⁹ albeit the overall average PISA scores of Taiwan students were higher than that of the OECD average and Taiwan could be considered one of the high performers amongst all participating countries and economies. Local research also showed that the mathematics performance of rural students is highly variable, and its average is significantly behind urban students', which indicates a disparity not only between urban and rural schools but also amongst rural schools.⁹⁰

Local and international studies show that once a certain material threshold is met, human factors matter more in the quality of rural education.⁹¹ While schools in rural areas already have undersized personnel departments and thus teachers are burdened with multiple jobs, the transportation barrier further discourages rural teachers from pursuing professional development opportunities outside of their school districts.⁹² Not only are teachers specialised in foreign languages and ICT difficult to recruit, the high turnover rate of teachers significantly limits the school curriculum to the content and form of delivery that teachers are capable of offering.⁹³ The high turnover rate of principals has also led to a lack of long-term planning.⁹⁴ Obviously, family structural factors such as poor economic conditions and low social status also significantly affect their children's overall growth.

⁸⁷ In contrast to PISA's method, which gathered data from school administrators' subjective perceptions of the extent of resource shortage at their respective schools, Sheu (2016) adopted a resource-investment model which measures objective calculable resources (e.g., teacher seniority based on service years, teacher mobility rate, parent education, etc.) and subjectively perceived quality of investment (e.g., technology facilities, learning environment, parental discussion, student activities, etc.) by the users of the investments.

⁸⁸ Lin Su-Wei, Huey-Ing Tzou, I-Chung Lu, and Pi-Hsia Hung. 2021. Taiwan: Performance in the Programme for International Student Assessment. In *Improving a Country's Education*, edited by Nuno Crato, pp. 203-226. Cham: Springer International Publishing.

⁸⁹ OECD. 2010. *PISA 2009 Results: Overcoming Social Background: Equity in Learning Opportunities and Outcomes (Volume II)*, p. 49. (<https://doi.org/10.1787/9789264091504-en>).

⁹⁰ Sheu, *Impact of Educational Resource*.

⁹¹ Sheu, *ibid.*; OECD, *ibid.*; OECD. 2019. *PISA 2018 results*. (<https://www.oecd.org/pisa/publications/pisa-2018-results.htm>).

⁹² Lyu Wunlin 呂玟霖. 2016. 淺談偏鄉學校教師人力的困境與突破. [The Difficulties and Breakthroughs of Teacher Manpower in Rural Schools]. *Taiwan Educational Review Monthly*, 5(2), pp. 26-28.

⁹³ Wu Ya-Ping. 2020. The Current Situation and Problems of Rural Education. *Journal of Educational Research and Practice*, 67(2), pp. 41-50. doi:10.6701/JEPR.202012_67(2).0003.

⁹⁴ Tsai I-tien 蔡宜恬. 2012. 回應偏鄉教育的師資課題. [Responding to the Issue of Teacher Qualifications for Education in Remote Areas]. *Taiwan Educational Review Monthly*, 1(8), pp. 44-45. doi:10.6791/TER.201206.0044.

The “Hollowisation” of the Rural

Behind the human factors are the social conditions that hinder rural education. According to the Ministry of the Interior, the number of births in Taiwan in 2020 hit a record low of 165,249.⁹⁵ Given the pull from urbanisation, the size of rural schools has been steadily declining:⁹⁶ More than 1,000 primary schools have fewer than 100 students in the 2020 school year,⁹⁷ which leaves rural schools at risk of class reduction, school merging, teacher redundancy, and even school closure.

Research suggests that the design of the education system also plays a key role in the depopulation and *hollowisation* of the rural. Given that selective schools and the belief in them attract families and students, by locating the most selective schools and universities in urban areas, students with better socioeconomic backgrounds or higher motivation tend to relocate to urban areas either by choice or through the tracking and placement based on senior high school or university entrance examinations. In comparison, students with lower socioeconomic backgrounds or lower motivation become *left behind* in rural areas.⁹⁸ The *academic turn* of vocational high schools that followed the expansion of universities worsened such segregation by tracking, as the already-low-academic-achievement students became forced to follow a curriculum with decreasing hands-on and skill-based training, which were traded-off for courses on academic subjects that prepare students for the academic environment in universities, and further disempowered these students' self-efficacy and motivation to learn. On the other hand, the teach-to-the-test educational culture and practices have already become deeply ingrained in Taiwan's education system and still requires a long way to be transformed. Under such a culture and practices, student learning is greatly limited to academic subjects that are preparatory for senior high school or universities; therefore, the life experiences of many students are restricted to their school campuses, cram schools, and homes, without much time, opportunity, or even incentive to explore their hometowns.

⁹⁵ Chen Jyunhua 陳俊華. 6 April 2021. 新生兒1月首度跌破萬人 2020年結婚率創11年新低. [Newborns Fall Below 10,000 for The First Time in January Marriage Rate in 2020, Hits 11-Year Low]. 中央社 [Central News Agency]. (<https://www.cna.com.tw/news/ahel/202104060269.aspx>).

⁹⁶ Peng Jin-Peng 彭錦鵬, Hsu Tian-Ming 許添明, Chen Ruy-Rong 陳端容, Li Jun-Da 李俊達, Wu Ji-An 吳濟安, and Chou Yan 周延. 2016. 偏鄉教育政策之檢視與未來發展：「偏鄉資源配置」與「偏鄉學生能力提升」[Review of Education Policy in Rural Areas and Future Development] (Report No. NDC-DSD104012-1). National Development Council. (https://www.ndc.gov.tw/nc_708_27402).

⁹⁷ Department of Statistics, Primary and Secondary School Profile Statistics.

⁹⁸ Adler Yang and Hsiao Tien-Yi (Jordan). May 2021. 從「教育與地方發展」的關係梳理「教育地方創生系統」的可能 [The Possibility of Creating 'Region-Revitalising Education Systems': An Analysis of the Systemic Relationship Between Education and Regional Development]. [Session presentation]. Presented at 國家發展委員會「前草實驗大學地方創生x育才扶產工作坊」[National Development Council: 'Qiancao Experimental University, Region-Revitalising, Support Industry and Nurturing talent Workshop'], Kaohsiung, Taiwan.

Without a sense of belonging or knowledge of local career prospects, it became a mainstream choice for the more motivated youth from rural areas to move to urban areas for job opportunities unless unable to do so.⁹⁹ Various factors not limited to those above, including a *loser culture*, grim prospects in the rural, and the myth of the urban, lead to a vicious cycle that continues to not only depopulate the rural but even *hollowise* its industry, culture, and ethos.

Acknowledging the fundamental role that the hollowisation mechanism plays in rural areas, new solutions were devised both from the top down and the bottom up.

Attempts to Address Hollowisation at the National and Local Levels

At the national level, the MOE began to invest more than \$400 million TWD since 2007 to support rural primary and secondary schools to develop their unique *features* representing the history, culture, industries or natural environment and resources of their neighbourhood areas. Such a policy is based on the understanding that the *diversity of rural students' backgrounds has to be considered as advantages instead of disadvantages* and that rural schools should have educational visions that better correspond to their unique contexts and may be different from their urban counterparts.¹⁰⁰ In 2015, the MOE continued to consolidate several sub-projects to promulgate the *Rural Education Innovation Development Plan*, which focuses on supporting rural schools to develop their *featured curriculum*, integrating ICT, facilitating resource matching, and publicising successful cases to gain support from the local communities and encourage their collaborations with rural schools.¹⁰¹ Furthermore, to loosen restrictions on rural schools imposed by higher-level uniform laws, the *Act for Education Development of Schools in Remote Areas* was passed in 2017 and lauded an act of *transformative justice*¹⁰² to the rural areas, as it permits differential treatment for rural schools to better respond to their unique needs.¹⁰³ At the tertiary level, the MOE also launched the University Social Responsibility Project (USR), which utilises the youth and expertise in universities for the develop-

⁹⁹ Yang, Possibility of Creating "Region-Revitalising Education Systems".

¹⁰⁰ Chen, Shengmo 陳聖謨. 2012. Demographic Structure Change and Its Impact on the Development of Elementary School Education in Yunlin Rural Area. *Educational Resources and Research*, 106, pp. 23-56.

¹⁰¹ Peng et al., Review of Education Policy in Rural Areas.

¹⁰² Wu Jhongyong 吳忠勇. 2017. 《偏遠地區學校教育發展條例》草案探討. [Exploration of the Act for Education Development of Schools in Remote Areas]. *臺灣教育評論月刊* [Taiwan Educational Review Monthly], 6(11), pp. 61-65.

¹⁰³ Wang Hueilan 王慧蘭 (2017). Remote Areas and the Disadvantages? Law Deregulation, Space Governance, and the Possibility of Education Innovation. *Bulletin of Educational Research*, 63(1), pp. 109-119.

ment of local communities and to increase the youth's sense of belonging in their neighbourhood.¹⁰⁴

Under National Taiwan University (NTU)'s USR programme, two professors and their teams worked together on two different aspects to support the education system and local development of a dwindling tea town and former transport node between Greater Taipei and Yilan County, Pinglin District, on the northeastern mountains of Taiwan, which had become gradually hollowised as a highway constructed in 2000 had bypassed the town.¹⁰⁵ Classical musician Chia-Fen Tsai led her team of students and staff at NTU to work with teachers and students at Pinglin Junior High School to revive *Sio-po-kua*, an endangered folk song considered an archetype of many Taiwanese traditional folk arts. On the other hand, Yi-Yi Chen from the Department of Social Work brought the Agricultural Humanity Curriculum Transformation Project to Pinglin and conducted action research on *Knowledge Ties*.¹⁰⁶ The collaborative activities led by both professors, such as theme-based curriculum on folk songs or agriculture, community-based activities, and the culminating local festivals and musical concerts, brought diverse learning experiences and outcomes to their multiple stakeholders and empowered the local children with soft and hard skills in the context of their neighbourhood. Not only did it mutually benefit the NTU and Pinglin students and faculty in their learning and career development, but it also brought new possibilities and outsider attention to the previously hollowising Pinglin.

In a similar vein, Hui-Chin Huang, a Daxi-born interior design lecturer at Chien Hsin University, and Tsung-Chun Li, former Director of the Department for Produce Marketing at Jih-Shan High School, a vocational high school located in the mountainous Daxi District on the outskirts of northwest Taiwan, also worked together on different dimensions to empower the rural youth.¹⁰⁷ Li observed that the severe disengagement and disciplinary issues at his school arose from the school's *irrel-*

¹⁰⁴ Peng et al., *ibid.*

¹⁰⁵ Tsai Chia-Fen. 23 November 2021. Taiwanese Folk Song *Sio-po-kua* and the Transformation of Local Cultural Curriculum. Presented at 2021 KASpaces Taiwan National Seminar for Accelerating Progress and Equality, Taiwan.

¹⁰⁶ Chen Yi-Yi. 23 November 2021. Knowledge Ties between NTU Students and Pinglin Young People. Presented at 2021 KASpaces Taiwan National Seminar for Accelerating Progress and Equality, Taiwan. "Knowledge Ties", where different knowledge systems are shared between actors, and when tacit knowledge, such as everyday understanding, collides with formal knowledge systems, new knowledge, identities and further actions are triggered.

¹⁰⁷ Li Tsung-Chun. 23 November 2021. How and what types of vocational education transformations might facilitate the development of rural youth and indigenous families in remote regions? Presented at 2021 KASpaces Taiwan National Seminar for Accelerating Progress and Equality, Taiwan.; Huang Hui-Chin. 23 November 2021. The Hometown Circle: Community Design for Education. Presented at 2021 KASpaces Taiwan National Seminar for Accelerating Progress and Equality, Taiwan.

evance to students and the *disempowerment* and *humiliation* they experienced at schools.¹⁰⁸ With the understanding that “teaching to the subjects and textbooks” instead of “responding to them as humans” will push his students further away from him and toward the bottom of society, and that the academic content as required by the curriculum may not necessarily be relevant to them in the rest of their lives, he decided to initiate an out-of-school programme that was attractive enough for them to participate in instead of the original activities of negative influences. He invited students, drop-outs, graduated NEETs (Not in Employment, Education or Training) and contract workers to work together in a “start-up” to co-design activities to serve the members of their local community, such as helping farmers to sell their produces, teaching the elderly ICT skills, and even utilising their natural environment to design hiking or natural activities for other high school and college students. By doing so, learning became relevant and empowering to these previously marginalised youth, and the mobilisation of their previously underutilised energy transformed them from being *burdens* to becoming the *human resources* of the community. On the other hand, Huang worked with Jih-Shan High to develop their “feature curriculum.” She designed a place-based programme to awaken the youth’s sense of local self-identity to address one of the causes of youth exodus from the rural. It consisted of explorational activities for students to get to know, connect with, and envision the future of their hometown. While they were started at Jih-Shan High, after ten years, Li and Huang’s programmes have eventually weaved an ecosystem that bridges youth, schools and the local communities for empowering marginalised youth in northwestern Taiwan, alleviates the mental and physical overload of rural teachers, and supports young people to return to their hometowns to start their businesses and careers.

¹⁰⁸ For example, due to their low academic achievement under a highly college-prep-oriented curriculum (despite studying at a vocational high school) while not having any skills they are good at. As the expansion of high education and its high attendance rate made a university degree the new “basic degree”, Li argues that most vocational high school students are socially expected to attend university, which in turn gradually reduces the proportion of hands-on learning.

V. New Actors in Education: Experimental Education and Beyond

A distinctive feature of Taiwan's formal education system is its inclusion of alternative education, officially called *experimental education*.¹⁰⁹

During the first wave of education reform that emerged in the 1980s and 1990s, several unaccredited schools were founded¹¹⁰ in the pursuit of values such as human rights, egalitarian teacher-student relationship, freedom and autonomy, respect for learners' differences, and diversified experiences of non-disciplinary knowledge in education, which the mainstream spoon-feeding schools under the government's unilateral control could not provide. After extraordinary struggles, these formerly unaccredited schools become the forerunners of *school-based* and *non-school-based institution/group* experimental education.

On the other hand, while students were only allowed to homeschool if their school could not provide special education for their disabilities under the Compulsory School Attendance Act promulgated in 1982,¹¹¹ the amendment of the Primary and Junior High School Act in 2010¹¹² provided the legal basis for homeschooling, officially called *individual* experimental education. In 2011, the law was amended again to include the *Regulations on Non-School-based Experimental Education at the Compulsory Education Level* and the *Regulations on Non-school-based Experimental Education at Senior High School Level*,¹¹³ which regulate the eligibility and content

¹⁰⁹ In this chapter, "experimental education" refers to the areas covered by the "Three-Type Acts of Experimental Education" passed in 2014, which include "school-based experimental education" and "non-school-based experimental education". The term "non-school-based experimental education" is also divided into "individual experimental education", "group experimental education" and "institutional experimental education". The development of "experimental education" can be seen as the process of Taiwan's extra-institutional education groups with specific ideas seeking legal and administrative protection within the system, which is how Taiwan's extra-institutional education has gained institutional recognition. Nowadays, experimental education has become an emerging trend in Taiwan, with the number of experimental education groups, schools and individual experimental education (i.e., homeschooling) applying for accreditation increasing each year, demonstrating the diversity of education in Taiwan.

¹¹⁰ The earliest alternative schools or programmes in Taiwan included the Forest School founded by the Humanistic Education Foundation, the Caterpillar Academy (later renamed Seedling School) at Taipei BeiZheng Junior High School, the Baoshan Elementary School Shanhu Branch, and the Holistic School. While some did not survive, after tremendous struggles, some are now accredited as private schools or privately managed public schools (which will be introduced soon in this section), or as experimental schools.

¹¹¹ Translated from "強迫入學條例".

¹¹² Article 4-4 states, "To ensure students' rights to learning and education and parental right of choice, the stages of primary and junior high school education may be implemented in the form of alternative education. The content, duration, scope, application criteria and procedures of alternative education, and other associated matters shall be specified by the Ministry of Education after consultation with municipal and county (city) governments."

¹¹³ These are later replaced by the Three-Type Acts for Experimental Education.

of the programme for primary and secondary school students to apply for home-schooling, as well as how the county and city education bureaus are to conduct programme reviews. As a result, the conditions for homeschooling have been made more accessible, and the number of students who apply for homeschooling has grown.

The establishment of *Privately Managed Public Schools* marked an important milestone in alternative education's history of gaining legal status. Privately managed public school means that the school is established by the government, while a civic entity runs the operation and curriculum of the school. This kind of school is entitled to the resources of public schools, including grants and teacher placements, while the managing civic entity can plan the curriculum, student counselling programmes and teacher development in line with their educational philosophy. Although the 1999 amendment of the Primary and Junior High School Act already entitled local education bureaus to permit applications for non-school-based alternative education and establish privately managed public schools under their locally legislated regulations,¹¹⁴ in the first decade, only Yilan County took the lead to promulgate its regulation in 2001 and established the two earliest privately managed public schools in Taiwan in 2002.¹¹⁵ Given that most of the other local governments had not yet enacted their regulations on or had insufficient staff dedicated to overseeing alternative education initiatives, between 2000 and 2010, there was a wave of *domestic immigration* in which families moved to cities or counties, such as Yilan, where options for alternative education were available.

With an increasing number of people unsatisfied with the mainstream education system and parents' initiatives to demand and advocate for educational choice,¹¹⁶ in 2014, the Legislative Yuan promulgated the *Three-Type Acts of Experimental*

¹¹⁴ Article 4: "In principle, primary and junior high school education shall be implemented by the government, but private implementation is also encouraged. ... The primary and junior high schools referred to in the preceding paragraph may be delegated to private operation, in accordance with regulations prescribed by municipal and county (city) governments."

¹¹⁵ Yilan County Government. 2001/2020. 宜蘭縣屬各級學校委託私人辦理自治條例 [Yilan County Regulations on Schools Entrusted with Private Self-Governance] (<https://glrslaw.e-land.gov.tw/LawContent.aspx?id=FL023523>). The two schools are Cixin Waldorf Experimental Elementary School and the Humanity Primary and Junior High School.

¹¹⁶ Chen Yi-Guang (Tim). 24 November 2021. Protecting students' right to learn and parents' right to educational choice through democratic processes in Taiwan. Presented at 2021 KASpaces Taiwan National Seminar for Accelerating Progress and Equality, Taiwan.

Education,¹¹⁷ which integrates the lessons learnt from previous local implementations and officially grants all Taiwan citizens, at the national level, the right to *opt-out* from mainstream school regulations and to *join or initiate the education suitable to their own needs*. Since then, schools and students under the experimental education umbrella have increased dramatically (Table 1), and these Acts have been continuously amended to respond to new situations under such rapid expansion. For example, higher education was made eligible for school-based experimental education; the eligibility for privately managed public schools was extended to senior high school level; and equal rights, such as nationally certified diploma for studying abroad, tuition reimbursement (since their parents paid taxes but the children do not attend government-funded schools), access to school clubs and facilities, counselling and support services, and alternative channels to university admission, are granted to non-school-based experimental education students.¹¹⁸

Table 1: Numbers of Experimental Schools and Students Since 2014.¹¹⁹

Academic Year	School-Based		Privately Managed Public Schools		Non-School Based
	Number of Schools	Number of Students	Number of Schools	Number of Students	Number of Students
2014-2015	0	0	3	1186	2823
2015-2016	8	277	3	1357	3697
2016-2017	35	2764	5	1620	4985
2017-2018	53	5139	9	1887	5598
2018-2019	64	6244	10	1940	7282
2019-2020	79	6949	11	2158	8245
2020-2021	91	8911	13	2378	8744

¹¹⁷ The Three-Type Acts include:

1. the Enforcement Act for Non-school-based Experimental Education at Senior High School Level or Below, concerning individual, group, or institution experimental education at primary and secondary school levels;
2. the Enforcement Act for School-based Experimental Education, concerning the transformation of private schools and a certain percentage of public schools into experimental schools; and,
3. the Act Governing the Commissioning of the Operation of Public Schools at Senior High School Level or Below to the Private Sector for Experimental Education, concerning privately managed public schools at primary and secondary school levels.

¹¹⁸ Chen, *ibid.*

¹¹⁹ K-12 Education Administration.

Challenges to Experimental Education: Supervision and Supply of Teachers

As the policies concerning *experimental education* became progressively more comprehensive, the activist character of the originally out-of-the-system *alternative education* also has to adjust when it comes under the accreditation by and the funding and supervision of the government.

To support and encourage the practices of pluralistic educational values while protecting the rights of students and parents, the government has set up Experimental Education Review Committees in each county and city.¹²⁰ Persons applying for individual, group, institution or school-based experimental education must submit their proposals to the county or city Review Committee for review and approval before implementation. If a particular experimental education proposal deviates significantly from universal values,¹²¹ the Committee will not approve the proposal, so as to protect students' human rights and appropriate development.

To ensure the impartiality and comprehensiveness of the reviews, reviewers are drawn from a wide range of backgrounds, including public school principals and directors, experimental education parents, and education experts. In addition to reviewing proposals, the Committee members are also required to conduct surveys¹²² at the end of each school year to confirm the implementation status of experimental education programmes. The MOE also commissions the Taiwan Experimental Education Center (TEEC) to organise the “Experimental Education Reviewers’ Consensus Camp” every year to enhance the understanding and supervision skills of the reviewers with respect to the current development of experimental education.

Despite good intentions to prevent abuses of the right to experimental education,¹²³ the review system is not free of biases, controversies and political tug of wars. For example, Seedling Experimental Primary School, one of the oldest experimental schools, had faced termination of its operation due to land issues.¹²⁴ Humanity

¹²⁰ Jhan Jhihyu 詹志禹. 2021. 實驗教育審議委員會（審委會）之定位與功能 [Positioning and Functions of the Experimental Education Review Committee]. Taiwan Experimental Education Center. (<https://teec.nccu.edu.tw/upload/files/實驗教育審議委員會（審委會）之定位與功能-詹志禹.pdf>).

¹²¹ Chen, *ibid*. Which complies with the Universal Declaration of Human Rights and Convention on the Rights of the Child.

¹²² For example, through on-site visits, interviews, presentations or learning needs surveys.

¹²³ For example, applying for experimental education as a guise to receive tuition reimbursement for the parents' personal use unrelated to their children's learning, to skip school for cram schooling, etc.

¹²⁴ Huang Wei-Ning. 24 November 2021. What are the challenges in the development of Taiwan-based alternative education models? How should their tensions with the government be addressed? Presented at 2021 KASpaces Taiwan National Seminar for Accelerating Progress and Equality, Taiwan.

Primary and Junior High School, one of the two earliest privately managed public schools, has also gone through several legal turbulences due to the divergent interpretations of the school's rights and obligations under the grey area of the "privately managed public school" model.¹²⁵

Another pressing issue alongside the rapid expansion of experimental education is the supply of suitable teachers. On the one hand, the existing teacher education system did not train teachers for the unconventional experimental education philosophies and practices; thus, it can be highly challenging for certified teachers to facilitate learning in such open, democratic, and learner-centred settings. On the other hand, while the Acts made teachers' eligibility inclusive to a bigger talent pool as they are not required to be officially certified and could be recruited under the Labour Standards Act instead of the Teachers' Act, high turnover and instability of personnel remain an unresolved issue for many experimental education initiatives.

While many experimental education initiatives have their pre-and-in-service training systems,¹²⁶ the Taiwan Experimental Education Center established the first general *Experimental Educator Education Programme*¹²⁷ in 2018 to provide educator education based on the common learner-centred values and features at most experimental education initiatives. In contrast to the conventional teacher education that is predefined according to certification requirements, this Programme is unstructured as its members first have to become self-directed learners capable of co-developing a democratic learner-centred community and facilitating their own learning. Through its members' shared initiatives, they will learn to clarify their educational philosophies, develop their capacities for self-directed and collaborative learning, design thematic learning activities, learn basic counselling skills, and take part in immersive internships at actual experimental education initiatives. Despite being designed based on the surveyed needs of experimental education initiatives, the Programme is not limited to pre-or-in-service experimental education educators. Amongst the Programme's more than 100 enrolled students since 2018, there are experimental education parents and students, non-profit organisation workers, public school teachers, and even persons from the general public. Such inclu-

¹²⁵ Zhou Le-Sheng, 24 November 2021. Who's the owner of Humanity School? Presented at 2021 KASpaces Taiwan National Seminar for Accelerating Progress and Equality, Taiwan. For example, are privately managed public schools allowed to seek extra sources of income given their higher running costs (e.g., from lower student-teacher ratios)? Is the government or the private managing entity the employer of staff and faculty? Once such a school is established, is it the members of the school or the government who shall have the right to keep or change the managing entity?

¹²⁶ For example, the Waldorf system partners with the National Tsing Hua University to provide credit courses, teacher certification programme and a Masters degree programme.

¹²⁷ Taiwan Experimental Education Center 臺灣實驗教育推動中心. Last modified 4 May 2020. 師資培育 [Teacher Education.] (<https://teec.nccu.edu.tw/article/all/1.htm>).

siveness has helped spread learner-centred values and practices into other areas in society.

Cross-Pollinations Between Experimental Education and Other Social Sectors/Issues

Although experimental education was initially developed from the need for an alternative to conventional schooling, its learner-centred spirit and *undefined blank spaces* in practice have fostered many innovations unimagined by its forerunners during the first wave.

For example, to Tien-Yi (Jordan) Hsiao, Founder of Only Experimental Education and veteran education activist from the first wave, experimental education is the foundation of his endeavour to transform his marginalised *non-rural yet non-urban*¹²⁸ hometown in southwest Taiwan, Qianzhen Caoya (Qian-Cao) village in Kaohsiung City.¹²⁹ While experimental education has become, to some, another form of *privilege*,¹³⁰ many of his students come from lower-income families or are school-phobic/refusal children. Instead of hiring many teachers to offer courses, which costs much money, he and the parents he empowered become *mentors* and *counsellors* to facilitate self-directed learning by utilising public and community resources and supporting students' wellbeing. On the other hand, he works with career education specialists to develop educational programmes for local shop/business owners, so students can learn knowledge and skills and explore future careers relevant to them in their hollowising hometown. With his group experimental education as a pilot, he developed a model that empowers marginalised local students and creates innovative services for businesses in the hollowising local industries. Through a partnership with education social enterprise ZA Share and the National

¹²⁸ Lin Zixu 林子瑛, Ji-Rou Wu 吳季柔, Yu-Hsin Hsu 徐宇昕, and Wei-Han Wang 王崴漢. 26 May 2021. 分級制度下的破口 非山非市學校難擺脫資源困境 [A breach in the grading system Non-mountain, non-urban schools struggle to get rid of their resource plight]. 政大大學報 [NCCU ONLINE NEWS]. (<https://unews.nccu.edu.tw/unews/%E5%88%86%E7%B4%9A%E5%88%B6%E5%BA%A6%E4%B8%8B%E7%9A%84%E7%A0%B4%E5%8F%A3%E3%80%80%E9%9D%9E%E5%B1%B1%E9%9D%9E%E5%B8%82%E5%AD%B8%E6%A0%A1%E9%9B%A3%E6%93%BA%E8%84%AB%E8%B3%87%E6%BA%90%E5%9B%B0%E5%A2%83/>). The non-rural yet non-urban or "non-mountain, non-city schools" are not officially considered remote schools, and are therefore ineligible for subsidy schemes for remote schools. However, they are also not as accessible as urban schools, hence becoming a missing link in the allocation of educational resources.

¹²⁹ Hsiao Tien-Yi (Jordan). 24 October 2021. From Qianzhen Caoya's Placemaking to Experimental Primary, Middle Schools and Universities: A Vision of Co-raising Children in Qianzhen Caoya, KaoHsiung. Presented at 2021 KASpaces Taiwan National Seminar for Accelerating Progress and Equality, Taiwan.

¹³⁰ Wu Ching-Yung 吳清鑄, Huang Jin-Di 黃金地, Feng Chao-Lin 馮朝霖, Liao Hung-Bin 廖宏彬, Huang Zheng-Jie 黃政傑, and Huang Hsin-Yi 黃馨誼. 2019. 實驗教育貴族化 [The Aristocratisation of Experimental Education]. Taiwan Education Review, 715, pp. 1-20. doi:10.6395/TER.

Development Council (NDC),¹³¹ Hsiao's model not only facilitated the employment of marginalised students locally, and supported local industry with R&D and marketing, but has also become a feasible model that schools from all around Taiwan study as a reference for their school-developed curriculum.

Hsiao's partners, ZA Share and NDC, represent two kinds of important new actors in education that work outside the scope of schooling or formal education.

Carrying on the tremendous youth energy that emerged during the 2014 Sunflower Movement, ZA Share was founded in 2015 with its founder Yang-Chi (Ozzie) Su's urge to spur radical social learning from the bottom up. Su's expertise as an artist and designer helped him organise Asia's biggest expo for education innovation and alternatives, attracting 30,000 to 60,000 visitors per year with its stylish and avant-garde curation.¹³² ZA Share's success in transforming the often-perceived prude and dull education system into a new trend for innovation and experimentation provides a platform for inspiration and cross-pollination, which not only became jump-boards for young peoples' entrepreneurial endeavours, such as AesthetiCell (a then-university student-initiated organisation that aims to bring an aesthetics/design mindset into textbooks and has eventually partnered with the most prominent textbook publishers),¹³³ but also became an important channel for the government to get to know and foster cross-sector cooperation with the latest innovations and activism from the bottom up.

By visiting the ZA Share Expo, Mei-Ling Chen, Former Chair of the NDC and current President of the Taiwan Regional Revitalisation Foundation, discovered many young people's initiatives to transform the rural areas through educational activities and services. Many of those works are in line with the NDC's aim to bridge education innovations with its overall strategies for Regional Revitalisation.¹³⁴ In contrast to the MOE's focus on remedying basic skills or developing the relative advantages of rural students, the NDC's take on education is not limited to school-aged students and formal education: It aims to educate people of all ages about their local culture, develop a sense of identity, and empower them to transform

¹³¹ The highest administrative branch for the overall planning of the country's development and the facilitation of cross-departmental and sector cooperation.

¹³² Adler Yang and Su Yang-Chih (Ozzie). 2020. Yes, Taiwan Made Alternative Education THE TREND! Keynote presented at 2020 International Democratic Education Conference, Nepal.

¹³³ Chang Po-Wei Chang. 24 October 2021. Give me a textbook, and I'll turn it into an art gallery! Presented at 2021 KASpaces Taiwan National Seminar for Accelerating Progress and Equality, Taiwan.

¹³⁴ Chen Mei-Ling. 24 October 2021. The Synergy Between Education and Social Evolution. Presented at 2021 KASpaces Taiwan National Seminar for Accelerating Progress and Equality, Taiwan. Originally coined by Japan, regional revitalisation in Taiwan aims to address developmental issues such as the declining birth rate, uneven development between different regions, and youth exodus from/hollowisation of industries in rural areas.

their hometowns for the better. By providing funds and setting up collaborative programmes for such goals, government entities other than the MOE, such as the NDC, also contribute to the flourishing of new educational initiatives.

IV. Conclusion

Examining Taiwanese people's accumulated endeavours and their underlying contexts for the pursuit of equality and progress, we have found the following characteristics:

First, the *respect for and inclusion of the diversity of needs and development* serve as the foundation of progress and equality in Taiwan's education. Whether it is the vision of the Twelve-Year Basic Education, Act for Education Development of Schools in Remote Areas, or the Acts for Experimental Education, the progress and equality of Taiwan's education lie in the shared effort of respecting and understanding the inherent *otherness* – as long as a standpoint is taken – that lies in different people, their uniqueness and their needs; and being *inclusive of their diverse ways of being* and *not subjecting them to a single paradigm or ideology*. Based on the premise above, the Taiwan government attempts to accommodate the diverse needs of the people by incorporating *intentionally undefined blank spaces* in its policies. Whether it is the school-developed curriculum under the Twelve-Year Education framework, policies facilitating rural schools to develop their features and to be treated differently, or the right for teachers, parents and students to opt-out and create their own education under the Acts for Experimental Education, these initiatives reflect such *intentionally undefined blank spaces* in policymaking.

The blank spaces highly relate to our second point: Progress and equality emerge from the relatively low barriers to communications and cooperation amongst multiple stakeholders, especially between the government and civic sectors. As many former activists or scholars became appointed to offices during Taiwan's democratisation process, the relatively low barriers to communication and cooperation between education reformers and the government facilitated the rapid changes during the first wave of education reform. During the second wave and until today, government officials with experience in activism or teaching continue to foster – both at the personal and infrastructural level – communication and cooperation between the government and different stakeholders, which thus allow new changes and innovations to emerge from cross-pollinations, which could then again feedback to new policymaking. Given that blank spaces imply “waiting to be filled”, such blank spaces – such as the yet-to-be-defined school-developed curriculum,

features of rural schools, and the proposals for experimental education – all provide affordances to creative or even unprecedented cooperation.

Finally, progress and equality are both the *intentional or unintentional drivers of, and responses to, changes in social structures*. This brings us back to the Introduction of this report: While the value-rational pursuit of progress and equality may be the intentional drivers for a relatively long-term-planned first wave reform, the innovations that followed the onset of the second wave are increasingly instrumentally rational responses to the new educational climate.

In the Introduction, we mentioned that many philosophers and social theorists have already discussed the problems or even *crises* of instrumental rationality, and we brought up some of their manifestations. Other examples such as the commodification of education and the *hijacking* of experimental education for non-learner-centred or even manipulative purposes may also demonstrate actual threats to progress and equality posed by the totalisation of instrumental rationality.

However, by trying to comprehend the development of instrumental rationality in Taiwan's educational culture with as little prejudice as possible, we found that its resurgence today can be interpreted as an emergent response to the increasingly pluralistic society. In such a society where pluralistic identities, faiths or value systems are respected and included, the value-rational pursuit of specific all-encompassing educational values and their implementation may no longer be as viable as in the past. Instead, means that can serve everyone's own ends or beliefs may naturally become the *common denominator*.¹³⁵

For the sake of wrapping up this report, we suggest that the dialectic between value rationality and instrumental rationality shall continue. If it were not the few first wave reformers who dedicated their lives to the struggle for values such as democracy, universal rights, and inclusiveness, the momentum for educational change would have unlikely been triggered, as instrumental rationality works for already-defined purposes. Yet if there were not the practical demands, such as for an alternative or complementary factor to the *"university – employment" formula of success*, the new wave of reform and the innovations that followed would also unlikely be widespread to the mainstream, as the language of value rationality tends to be otherworldly to the majority's everyday lives. Both are indispensable to the making of Taiwan's education up to today.

¹³⁵ Of course, the statement itself being a "universal (i.e., all-encompassing value)" creates a logical paradox, and the "neutrality/partiality of means" would also lead to a never-ending debate, which unfortunately could not be discussed in this report.

While this report does not *settle* for a single answer or solution, we see the potential of consciously facilitating *states of constructive dynamics* between the two: Those who work together to mitigate, for example, the instrumentally driven abuses of current policies may be viewed as value-rationals trying to keep the instrumentally rationals *in check*. Likewise, when some people's propositions are deemed too otherworldly, wouldn't it also be a good reminder for returning from the *ought to be* to *reality*?

We hope the maturation of this dialectic also matures our democracy.¹³⁶

¹³⁶ We thank Chia-Fen Tsai, Cian-Yu Jhu, Gih-Jen Ding, Huei-Ming Li, Hui-Chin Huang, Hwai-Ming Renn, Ing-Shiuan Ko, Jhih-Shun Huang, Ke-Ting Chen, Kuei-Yuan Chan, Kuo-Ching Hsieh, Le-Sheng Zhou, Mei-Ling Chen, Po-Wei (Wayne) Chang, Tien-Yi (Jordan) Hsiao, Tsung-Chun Li, Wei-Ning Huang, Yang-Chih (Ozzie) Su, Yi-Guang (Tim) Chen, Yi-Yi Chen, Youngsters from Daxi, Yung-Shan Hung, Yun-Zhen Yang for speaking at the 2021 KASpaces Taiwan National Seminar, which laid the foundation this report is built upon. We thank Chi-Shun (James) Huang, Chyi Fan, George Wei, Huei-Ming Li, Keanu Hsieh for making donations to the Seminar, which helped us cover unexpected costs in the working of this project. We thank Ching-Ying Yu, Chi-Yao Liao, Hhei-Ching Kao, Hsin-Yu Chen, Hsin-Yu Fan, Hsuan-Hsin Liu, Hui-Yu Shih, Jia-Jie Chang, Jia-Ru Tien, Kai-Li Huang, Ko-Yu Chi, Kuan-Hsun Wang, Kun-Shan Lei, Liang-Yu Huang, Li-Hsuan Liu, Rou-Yun Huang, Ting-Yu You, Tsung-Chi Wu, Tung Chang, Yan-Ru Chien, Yi-Fang Zheng, Yi-Ling Chen, Yi-Wen Lee, Yuan-An Shen, Yu-Chih Tan, Yu-Hsian Chen, Zhih-Yin Liu for volunteering, without whom the enormous amount of bilingual preparational work for the Seminar couldn't have been done. We thank our colleagues Chung-En Hsiao and Pei-Lin (Vivian) Tuan, who led the administration side of this project and without whom the Seminar wouldn't have happened.







Thailand

Centre for SDG Research and Support

1. Introduction¹

1.1. Thailand's education system

The Ministry of Education in Thailand generally provides twelve years of free education for students in public educational institutions (six years of primary and secondary education respectively). This education at public schools is free and compulsory for students until year nine. Apart from the mandatory stage of education, most children attend kindergarten, which adopts a pre-school educational approach. It values young children's development in various areas such as physical and mental development. According to the Ministry of Education, after completing year nine as the mandatory level, some students are able to pursue upper-secondary education in a preparatory track for further tertiary education. Also, some decide to continue their education in vocational schools. In addition, the constitution and education law (promulgated in 2004) in Thailand allows parents to homeschool their children and provide them with basic education.

There are three Thai education systems: (1) formal education (with the structures as mentioned above), (2) non-formal education, and (3) informal education. In the area of "non-formal education", the concept of "lifelong learning" is the priority, aiming to provide learning prospects to out-of-school citizens. The services extend from literacy level to secondary and vocational levels. Learning centres have been established in many communities to promote the imparting of specific knowledge and skills to citizens as there is resource sharing with the formal educational institutes. With the help of internet connection, the lifelong learning culture can take

¹ The author of this report is Dr. Sovaritthon Chansaengsee.

the form of distance learning. In terms of “informal education”, a learning society outside the formal educational institutes seems feasible. The government and other sectors have established a network of learning resources such as libraries, museums, and broadcasting media. In addition, international schools are also available for children and youth as another alternative.

1.2. Education for the marginalised and other minorities

“No one left behind” is a familiar phrase, having been widespread for more than a decade. The Ministry of Education and other ministries in Thailand as well as relevant partners pinpoint the equitable educational opportunities. Under the Equitable Education Act 2018, the Equitable Education Fund (EEF) was established to provide subsidies for children and youth to obtain equal rights to access any form of education. The target groups include poor primary- and secondary-aged students and those who dropped out of schools. The activities conducted by EEF encompass collaborating with related agencies, supporting teachers’ development, conducting research, providing innovative scholarships, and establishing the Equitable Education Research Institute (EEFI), which attempts to conduct innovative research and develop technology to enhance Thai education and human development.

Additionally, other agencies play a role in expanding the accessibility of education. UNESCO is one example, contributing to the accomplishment of the Sustainable Development Goals. Another organisation, “Save the Children”, is concerned with getting migrant children and those from ethnic minority communities into educational institutes. In addition, the Office of the Basic Education Commission (OBEC) has extended basic education in the country with the establishment of schools in more than 325 districts. For both the governmental and non-governmental organisations mentioned, enhancing the accessibility to education for all groups of citizens in Thailand is their priority.

Special needs education is another dimension required to be fulfilled to ensure the equality of education. Inclusive education seems quite a trend challenging governmental agencies and related stakeholders. As the government has passed legislation on providing suitable education to children with disabilities, state-funded special needs education has been embarked on; some schools or non-profit organisations have also provided inclusive education. There are almost 200 schools supporting the parents of children with special needs established by the Ministry of Education’s Special Education Bureau. This movement reinforces the concept of “No one left behind”.

1.3. Educational Challenges in Thailand

A long-debated issue, the quality of education in Thailand has been reflected by various statistical reports. UNESCO's 2017/8 Global Education Monitoring (GEM) Report has disclosed a number of relevant issues on Thai education. In terms of accessibility to education, even though 99 per cent of Thai citizens complete primary education, only 85 per cent complete lower secondary education. Sixty-two per cent of female adolescents drop out of schools. One of the quality-related concerns is students' academic performance. Only 50 per cent have a proficiency in reading proficiency and 46 per cent in mathematics. From the survey, almost four million adults are incapable of reading a simple sentence.

Some education barriers are related to governmental regulations as Thailand has not yet implemented concrete regulations on health and safety, accessibility to water supply and sanitation facilities, and the maximum number of students per teacher. Another matter in Thai education is assessment. Relying mostly on paper tests, the assessment of some skills cannot be fulfilled due to the fact that they should be subjective, so as to evaluate certain aspects. Yet, most Thai students believe that paper test scores are the only and ultimate indicator of their performance; this must be biased and impartial.

However, opportunities are now available since the quality assurance system promulgated by the Ministerial Regulation on Education Quality Assurance B.E 2561 plays a role in over 45,000 schools nationwide. The principles encapsulated in the quality assurance system contributed to the enhancement of educational quality. The process of development involves management and information systems, the enhancement of educational standards and plans, and the implementation of educational quality assessment.

Establishing collaboration with other nations, both ASEAN countries and others, is another nimble, pro-active plan. Not only at the school level, but also higher education institutes is involved in the area of academic collaboration. The forms of international collaboration include: mobility, exchange programmes, scholarships, joint programmes, research grants, visiting professorships, and qualification recognition. However, the opportunities and the challenges of education in Thailand rely significantly on domestic and external factors.

1.4. Teaching approaches in Thailand

Similarly, attention is now being focused on newly proposed learning and teaching approaches. Thailand is one of the countries seeking and trying new teaching strategies or approaches to determine which methods best suit certain Thai contexts.

Based on the philosophy of education, once the Thai education system applied an innovative teaching practice known as “learner-centred”, some creative curricula were established to respond to the actual concepts of “learner-centred”. A widely adopted teaching approach is lecture-based since the entrance examinations for well-known educational institutes is determined more by paper test scores than any other form of assessment of students’ academic performance.

Meanwhile, there are diverse kinds of educational institutes and centres that provide alternative educational routes for Thai children and youth; for instance, Buddhist-oriented schools, Waldorf schools, Montessori schools, Reggio Emilia schools, and homeschooling. These are the examples of non-mainstream or non-conventional schools in which the lessons are intensively based on hands-on experience and project-based learning. Even though alternative schools adopt different paradigms for learning development from mainstream schools, a massive number of parents tend to consider and study intensively their advantages and disadvantages.

To stay current with the modern world, the Ministry of Education in Thailand has launched up-to-date educational approaches for schools to implement the universal learning concepts and philosophies in the common programmes. To illustrate, the STEM approach is familiar to most secondary students as it is believed to be one of the most effective methods enhancing the 21st-century skills of students. Some schools combine numerous technologies in their learning systems, while some schools emphasise only mathematics and science, aiming to produce sophisticated scientists or medical personnel. Hence, technology and well-equipped laboratories are necessary.

1.5. Trends for Thai education

Due to the fact that Thailand is an agricultural nation that produces a large amount of agricultural products and is one of the productive countries that yield a variety of crops and plants, one philosophy ideated by King Rama IX called “Sufficiency Economy” is compatible with the fundamentals of Thai culture. Therefore, some educational institutes integrate the curriculum of Education for Sustainable Development (ESD). As an educational policy, ESD mainly means to provide knowledge-based, skills-based, and values-based learning on sustainable development.

The connection among launched policies and approaches is obvious. Education For All (EFA) was once the core concept of education; it provided the right to access quality education for enhancing citizens’ academic potential. Particularly for marginalised or vulnerable children, EFA triggers inclusive education to be extensively practised around the country. This allows young citizens of all abilities, ages, genders, and ethnicities to attain at least basic education. Moreover, to accomplish a high standard of living, vocational training is delivered adequately to all age groups of learners according to the goals of EFA.

After the 17 Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development were launched by the United Nations, Thailand has consciously attempted to integrate the SDGs into most policies of development plans. SDG 4 proposes inclusive and equitable quality education as well as lifelong learning opportunities for all citizens. The Thai government has focused on the “education for all” concept, particularly for migrant children, with the expectation that education could improve their quality of life. The actions taken include establishing multi-stakeholder partnerships, expanding financial support for poor students, initiating gender-equal access to quality education, and providing digital tools to promote educational quality.



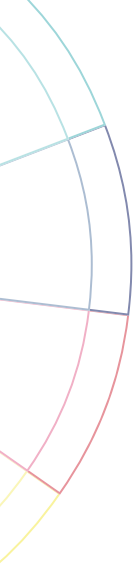
2. Impact of the Pandemic on Education

2.1. Impact on learning opportunities

The outbreak of the Covid-19 pandemic in Thailand has exacerbated educational inequality. According to Kenan Asia, this is due to the wide gap between students who can afford a new platform of education and those who cannot afford it. These different learning opportunities have a big impact on students of all levels. For primary students, there are those without knowledge of and skills to use technological gadgets or who do not possess any laptops or PCs or even smartphones and thus are unable to access online lessons. To clarify, most primary students do not have the ability to enter an online class by themselves because of the complications of security systems, such as usernames and passwords. In addition, despite secondary students' ability to manage technological devices related to online classes, many do not own any computer devices due to the low-wage jobs of the parents of underprivileged students. Turning to the impact of the pandemic on the learning opportunities of students in tertiary education, by virtue of being located in the big cities or locations with limited access, along with the restrictions of the educational institutes in terms of allowing students to live in the campus or nearby during the outbreak, all students have to be educated in their accommodations via internet connection. There seem to be numerous obstacles in this regard; for instance, weak internet connection, being far away from the campus, and lack of interactions with classmates and direct contact with lecturers, particularly those who are in the first year of university. Without these conditions, it is difficult to achieve the required standard of academic education. In the area of student mobility, the Covid-19 outbreak has prevented students from attending exchange programmes abroad; consequently their learning opportunities in foreign countries were suspended.

2.2. Impact on attitudes and behaviours of students

Online study, on the one hand, provides learners with access to quality education globally. However, at the national level, the Thai education system is set up based on students studying in the educational institutes. The rapid changes on the ground mean that the outbreak has disrupted the normal daily activities of humankind, causing dissatisfying learning attitudes and behaviours. According to Tongliemnak et al., school closures have resulted in increases in hunger, malnutrition, domestic violence, and sexual exploitation. In terms of mental health, stress, worry, and anxiety about their families' financial situation and their ability to continue their edu-



cation are reported by the majority of students, especially tertiary students. With regard to young students, primary and secondary students, the pandemic might lead to a greater risk of cyber-bullying and online exploitation. These occurrences, the increasing cost of education, closures of schools, and decreased overall learning due to the adoption of online classes may result in increased dropout rates. As reported by the World Bank, the physical, emotional, and social development of pre-primary children have been weakened, as well as their academic foundational skills. The same echoes have been heard from other young people who have stated that Covid-19 generated a negative impact on their mental health, with more than 70 per cent reporting stress and anxiety, as reported by UNICEF. In particular, Thai pupils in tertiary education have the highest levels of anxiety compared to Indonesian and Taiwanese university students.

2.3. Impact on instructors

After the outbreak of the Covid-19 pandemic, in-person instruction was made impossible; therefore, online learning became paramount. The Covid-19 outbreak reinforced ineffective teaching practices due to the fact that Thailand is not well-prepared for remote learning options. It seemed relatively difficult at the beginning for teachers to deliver e-learning effectively, particularly in rural areas. Since teachers play the major role in the educating of students, lecture-based and rote learning have become barriers for teachers leading online classrooms, which might be dull for students. Another barrier is poor teacher support. The inadequate support is exacerbated by the pandemic and low teacher salaries have a detrimental effect on overall teacher well-being. Moreover, a lack of technological skills discourages teachers from generating effective classes for students. On the other hand, it may be an opportunity for teachers to attain professional development in order to keep pace with the modern world.

2.4. Impact contributing to development

There are a lot of hidden effects created by the occurrence of Covid-19. Apart from the general health effects on students as a result of being in front of screens excessively, relationships in Thai families have been affected by the new normal as well. One of the disadvantages is their family's financial situation. According to Matichon Online, poor family financial situations may trigger suicides, mental health problems, and family violence. Two vulnerable groups requiring support from the government are the homeless and inhabitants of slums. On the other hand, relationships in families have also been strengthened because of members spending more

time together under the same roof. Working from home and online activities can develop people's digital literacy, particularly among the elderly. In the educational aspect, online learning somehow extends the prospect to pursue further education and most educational institutions have launched diverse online courses that can meet the needs of different groups of people.

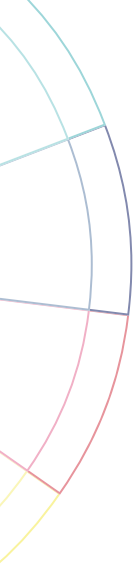
3. Best Practices

3.1. Infrastructure and teachers' development

3.1.1. Curriculum and key element links to the SDGs

The concerns of Education for Sustainable Development (ESD) have been extensively examined in Thailand for a significant number of years. Some educational institutions have combined the concepts of ESD; the goal is to provide holistic education, aiming to empower and encourage learners to develop critical thinking skills, responsibility for environmental security, economic survival, and social justice, as well as to accept cultural diversity through lifelong learning. The ultimate goal is "societal change".

The key elements of established educational programmes related to the SDGs include learning objectives which have been proposed to enhance learners' eight competencies in sustainability, comprising systems thinking, anticipatory, normative, strategic, collaboration, critical thinking, self-awareness, and integrated problem-solving competencies. Thus, various educational institutions and other relevant organisations have considered and taken intensive actions. The Office of the Basic Education Commission (OBEC) plays a pressing role in building knowledge and understanding of the SDGs to drive schools and learners to comprehend and be aware of the Global Goals of Citizenship of the future. OBEC is collaborating with World's Largest Lesson and UNICEF in order to discuss the course of action. A sample lesson plan for every level has been established for teachers to apply in practice and World's Largest Lesson's website provides lessons on instructing the citizenship at all levels, from kindergarten to high school, in a variety of dimensions, including urban, rural, and remote areas via the promotion of community participation.



In higher education institutions, some universities and colleges offer or integrate ESD concepts into the curriculum. One of the pressing concepts of ESD in Thailand is “Education by Participation”. The perspective of ESD in higher education involves three elements, which are environment, society, and economy. All these mentioned elements could be completed, relying on three educational procedures: the operation of education, decision making in education, and development of quality of life by education. Some higher educational institutions arrange courses containing lesson content on (1) the environment, society and the economy, (2) green economic and social development that creates sustainability, and (3) learning about the diversity and different cultures of the world’s population, so as to better understand and cooperate in living without conflict.

Additionally, some higher educational institutions attempt to integrate ESD into school levels and certain communities. This participatory education is installed and independently operated within each community. The subjects in the school curriculum were determined based on inputs and feedback from related stakeholders in the community. A lot of academic projects, supported by grants from the Thai government and relevant organisations, have been conducted on the concepts of ESD and the SDGs; therefore, in the foreseeable future, Thailand could accomplish the set goals of Education for Sustainable Development.

3.1.2. Educational trends: The pathways to the SDGs

The pathways to the SDGs require cooperation among scholars, educators, and related specialists who are involved in innovating teaching approaches and evaluation. In Thailand, the current trends of ESD are towards fundamentally transformational and holistic education which integrates teaching procedures with the social, environmental, and economic dimensions of sustainable development. With regard to innovative pedagogy, the “transdisciplinary” paradigm offers the potential of establishing new visions and learning experiences in which learning across sciences or other disciplines is applied. A strong effort can be seen being taken in many Thai education institutions as a means of improving the learning management process. Apart from the interdisciplinary paradigm, values-driven, critical thinking and problem solving, multi-method, participatory decision-making, applicability, and local relevance are other key ideas involved in the enhancement of the teaching process.

Combining personalised learning and integration approaches have created a relationship to ESD concepts. One best practice to be mentioned is Jirasart Witthaya School, Ayutthaya, which offers an innovative learning programme integrating ESD

as a core element. The proposed model, called “Jirasart Model”, addresses the following elements of the learning process: (1) Joyful Learning, (2) Integrating Knowledge, (3) Reflecting Observation, (4) Acting Experimentation, (5) Satisfaction, (6) Achievement, (7) Research and Development, and (8) Teamwork. “The Rice Project” is an eminent example, as its contents are varied by levels; for example, the core element for kindergarten is “Where is rice from?”, for primary students, it is “Transformation of rice”, and for secondary students, it is “Products from rice”. The project fundamentally involves the integration of five subject areas: mathematics, science, arts, languages, and social sciences. The school places a strong emphasis on the SDGs and ESD by applying the philosophy of “Sufficiency Economy” of King Rama IX, by collaborating with other countries to learn and share their practical experiences of the rice project and by extending the connection to academic collaborations in the foreseeable future. Besides, the school provides students with onsite gardens and agricultural demonstration plots as well as the rice project workshop by ACCU and UNESCO.

The trend of ESD has been empowered by the increasing awareness of the importance of environmental integrity and economic viability. The collaboration in certain communities is the key point leading to the achievement of sustainable change in society. As an example of the practices of being green, apart from the ESD pedagogy, many education institutions established clubs or activities. One such practice is called MU3R (Reduce, Reuse, Recycle), which aims to minimise the use of paper and plastic in the campus of Mahidol University. As the university has promulgated a number of relevant announcements on environmentally friendly and energy-saving policies, many students and university personnel consciously support “green practices” and have become more aware of environmental issues.

3.1.3. Professional development for teachers

Even though the first stage of the endeavour to drive ESD in Thai schools did not fit the definitions of ESD and Global Citizenship Education (GCED) launched by UNESCO – citizenship was added, aiming to strengthen the nation – the Thai government and the Ministry of Education have regulated the policies on developing curricula involving ESD and SEP (Sufficiency Economy Philosophy) for students at all levels.

Professional development is one of the pivotal emphases. The Office of the Basic Education Commission has announced a policy on developing teachers and educators to ensure quality learning and its intention to develop an efficient human resource management system by linking with the relevant departments in plan-

ning, manpower, recruiting, appointing, evaluating and developing, and by creating incentives for teachers and educational personnel.

The Teachers and Educational Personnel Council of Thailand organised “Education for Sustainable Development (ESD) International Forum 2017: Professional and Learning Development for ESD” for educational professionals interested in exchanging ideas and experiences internationally. The goals are to develop educational professionals so that they will have the skills and experience to be able to develop students to their highest potential and efficiency and to strengthen the profession.

A variety of platforms have been developed to assist teachers and educators to develop the knowledge and ideas of ESD and to adopt the concepts of various pedagogies. ESD Podcast was established by a collaboration between ESD Centre, Faculty of Education, Chulalongkorn University and EDUCA, Educational Expo for Teacher Professional Development. The general contents in the ESD Podcast are related to ESD and the SDGs, such as School as Learning Community (SLC), and the key speakers are qualified educational personnel who share crucial practices leading to ESD.

Not only is there teacher development on ESD, but also the potential development of learners in the form of youth camps, made possible through a massive number of activities, namely, creation of learning innovations and potential development projects for student leaders to become global citizens according to the Sustainable Development Goals. What is more, students could experience how to communicate and expand the role of global citizenship. In addition, ESD training in Thailand considers promoting both hard skills and soft skills. Leadership youth development is one key element enabling the youth to pass on the role of global citizenship to younger ones. All activities are coached and mentored by well-trained teachers.

3.1.4. Innovative teaching strategies

In Thailand, diverse pedagogies based on ESD are implemented extensively, based on innovative ideas such as storytelling, discovery and inquiry, self-reflection, a flipped classroom, and the design-thinking process. A research project on sustainable development based on sufficiency ways carried out by Yala Rajabhat University, aimed at integrating educational innovations for sustainable development into early childhood learning via problem-based learning. There were eighteen projects used as interventions; for instance, “Body and Mind”, “Democracy”, “Good Food, Good life”, “Junks Adjusted to be Money”, “Energy”, and “Global Warming, Helping

Together". After the project was implemented, pre-school students from fourteen schools were observed and their desirable characteristics for sustainable development were assessed to have improved.

Another innovative aspect of ESD is the programme usually offered by governmental organisations in the form of grants and competitions. In 2014, SEAMEO, collaborating with MEXT and UNESCO, provided the "SEAMEO – JAPAN Education for Sustainable Development (ESD) Award" to pilot schools with action strategy innovation and creativity-teaching methods developed through community involvement and international connections. These opportunities are the crucial keys to reinforcing and encouraging ESD in Thailand.

3.1.5. Case studies

A number of educational institutions have realised the contributory agents of environmental problems. Thus, they have established various programmes to promote ESD. Chulalongkorn University has been implementing ESD and an associated course as a required or elective subject for Masters and Doctoral programmes of the Faculty of Education. Apparently, the university also implements ESD in undergraduate programmes in education as a general education course. Hence, pre-service and in-service teacher-education students can comprehend and accumulate experiences via the implemented learning methods. The course generally directs students to (1) describe the meaning of change in Thai society and the world society and the crisis of development, (2) discuss the necessity of changing the development paradigm, (3) analyse the conceptual framework of sustainable development in the Thai and international contexts as well as the social context, based on the knowledge-based economy, the driving force of the knowledge-based society and the educational management strategies for enhancing a society sustainably, and (4) connect educational concepts to develop the community and to organise projects and activities to develop humans and societies. Service learning is another remarkable approach assisting students to develop key competencies for sustainability, such as anticipation, collaboration, self-awareness, systems thinking, and critical thinking competencies. This programme provides students with a supportive ecosystem to promote continuous learning.

In the case of the Masters of Education Programme in Educational Management at Chulalongkorn University, Principles of Education for Sustainable Development is the course offering contents on the principles and foundations of philosophical studies, history, society, culture, economy, and politics. Graduate students are also educated on the principles of the teaching profession, quality assurance in educa-

tion, a paradigm shift in educational management and the teaching profession, and educational management strategies and professional development of teachers for sustainable development. The outcomes are satisfyingly determined by a massive number of products, projects, and dissertations.

The Department of Environmental Quality Promotion (DEQP), Ministry of Natural Resources and Environment in Thailand considered embarking on the Eco-School project via a pilot project in the period 2008-2011; 41 schools expressed broad interest. This pilot project was developed through cooperation among four universities from four different regions. Eco-School aims to promote environmental education processes in schools, extending from the Provincial Environmental Education Centre Project (1995-2005), through which DEQP supports schools to establish provincial environmental education centres. There are nowadays a total of 63 Centres for Environmental Studies in 53 provinces.

Community-based learning and problem-based learning are major approaches to educate students. DEQP allocated a budget to support the Eco-School project. There were significant academic activities involved, including establishing media-documentation on environmental studies, training to develop the relevant personnel's potential, and a forum for exchanging learning-study trips. The functioning of the Eco-School project relies on the collaboration among diverse institutions, governmental organisations, and private sector organisations.



3.2. Inequality in education

3.2.1. Challenges and situations

Inclusive and equitable quality education and lifelong learning opportunities for all are the goals that can be achieved by well-planned and accessible sources of education. ESD is addressed by the SDGs, which are intensively concerned with inequality in education. In Thailand, eliminating educational inequality at the policy level is achieved by enacting the relevant laws and applying them to ensure there are sufficient opportunities to access education by the poor and handicapped, by people belonging to the original ethnic group, and by children from poor families.

Variances in socio-economic conditions and administrative conditions result in differences in teaching systems and learning management systems in the different regions of Thailand, thereby contributing to educational inequality, which is the disparity in the quality or standard of education that people receive, including the quality and different standards of educational institutions. Consequently, the government decided to implement the principles of “Education for All” across the nation, mandating the provision of education to cover all genders, all ages, all physical conditions, all backgrounds, all religions, and all nationalities and a place to live to receive a comprehensive education, without discriminating against the basic rights that everyone deserves, which is a mechanism for sustainable human development.

The wide academic achievement gap between students in different schools acts as a significant indicator to reflect the inequality in Thai education. According to the Organisation for Economic Co-operation and Development (OECD), even though the average scores for Thailand in science, reading, and mathematics were lower than the OECD averages, and there was a downward trend of PISA scores in 2012, the results of the assessment of science schools and the demonstration schools were found to be higher in mean scores than the OECD averages and Thailand has been ranked top five in international rankings. This obviously reflects the inequality in Thai education due to the varying quality standards of different educational institutions; thus, it shows a correlation between the PISA score and the social index.

Other factors contributing to inequality in education in Thailand include different programmes, learning facilities, educational personnel, poverty, and other uncontrollable external factors. Students in some certain programmes, namely science, mathematics and English, have been offered relatively easy access to quality learning materials as well as an excellent learning environment that is organised at a

top class level. The availability of overhead projectors and WiFi connection also indicates accessibility to media and innovative lessons. Educational administrators, directors, personnel, and school policies occasionally impact on inequality in education since policies serve students differently leading to discrimination. Poverty is commonly the major cause of inequality in education due to the fact that each year, there are 10-15 per cent of students who fail to complete their studies, have resigned or have dropped out of school. Also, such incidences are sometimes a result of the fact that some students have requested to transfer to another school due to the occupational requirements of their parents. In some cases, children have to leave school to make a living so as to support their families.

3.2.2. Comparison between urban and rural areas

Centralisation still exists even though we are now in the era of disruptive technologies. Urban communities across Thailand have mushroomed since there are a variety of prospects available in most urban areas and big cities. As a result, most metropolises have resorted to accommodation areas for middle-class to high-income dwellers. In terms of learning opportunities, a massive number of educational academies and tutorial institutes can be found in every corner of urban areas, contributing to stiff competition.

The difference between urbanisation and ruralism affects educational opportunities. Urban citizens have been offered more opportunities than rural people, including household resources. Although the Ministry of Education received 19 per cent of the total government budget and planned the distribution of the budget to educational institutions across the country, the budget was still disproportionately distributed to large and well-known schools located in major provinces rather than small schools or schools in remote areas.

It is undeniable that the academic achievement of students residing in big cities seems much higher than students from schools in rural and remote areas. In the Thai context, on average, students from rural schools are disadvantaged in terms of learning resources, teachers, and extracurricular activities. Socio-economic status also determined the opportunity for higher education or tertiary level education. Some media revealed that in addition to lack of resources and poverty obstructing accessibility to education by students residing in rural and remote areas, the distance from home to schools is also a contributory factor. The cause of the inequality resulting from greater home-school distances is the budget allocated at the basic level of government subsidies. However, the Thai government and numerous organisations have worked on this issue; for instance, Education Equal-

ity Fund (NSO), collaborating with the Office of the Basic Education Commission (OBEC) and Ministry of Education, arranged a meeting on “Elevate the quality of the school. Reducing inequality: Taking a sustainable step forward” under the Teacher and School Development Programme (TSQP) to examine how to continuously upgrade the quality of education.

Apart from ineffective and inadequate learning facilities and teaching resources in rural schools, quality teachers are defined as crucial tools to narrow the gap between schools in urban and remote areas. According to a 2019 PISA Thailand report, there were insufficient teachers in both urban and rural schools. For rural schools in the central region, the shortage of teachers was also cause for pessimism. The Teacher Absence Index reached 1.50, followed by rural schools in Bangkok and the surrounding provinces, where the Teacher Absence Index was 1.16. UNICEF has launched a campaign called “EDeaf” aimed at overcoming barriers preventing deaf children from attaining a fair chance in education. The programme is looking for volunteer teachers to join the team planning and promoting the children’s self-confidence, self-awareness, social and life skills, and IT skills. The sustainable practice is a part of the effort to narrow the gap between children and children with disabilities.

3.2.3. Relevant policies and measures to create equality in education

The Thai government has planned and taken relevant action to create equality in education for people of all ages. According to the Institute of Public Policy Studies (IPPS), in the current constitution, adopted in 2017, it is stated in Chapter 5, Duties of the State, Article 54 that the state must provide free compulsory education to all children, promote support for education for people according to their needs in various systems, enhance cooperation between the state, foreign countries and the private sector in the management of education at all levels by providing quality educational management and meeting international standards, and establish a fund to help the needy so as to reduce inequality in education. Article 258 also mentions establishing mechanisms and systems for producing teachers to increase teaching efficiency.

To eliminate inequality in education in Thailand, the government has set the following educational management guidelines: educational management based on the principle of equal action (Equalisation System), free and universal education for all children, including an inclusive education, education to build citizens (Civic Education) based on human rights and democracy, localisational education, teacher re-

form, and the development of teaching and learning supplemented by technology. Based on the guidelines, the government and the public and private sectors have initiated a variety of programmes to unite humanity in a general pursuit of equal, smarter, and greener lives for all.

According to The Twelfth National Economic and Social Development Plan (2017-2021), to reduce social inequality and increase the quality of Thai education, the main relevant strategic plans are to strengthen and develop human capital, create fairness, and reduce inequality in society by laying the foundation for Thai people to improve their economic and social stability. The proposed approach is to increase the likelihood of 40 per cent of the population with the lowest income to have universal access to government services, such as public health and access to quality education. Additionally, the government enacted laws to ensure sustainability and to budget continuous support that provides basic education for 15 years, free of charge, from pre-primary education (kindergarten), to elementary school, and up to Mathayom 6 or vocational certificate level, without age conditions.

Amnesty International Thailand is an organisation gathering a group of people actively campaigning to promote and protect human rights around the world. It works towards the development of human rights processes and culture in society by organising international unity campaigns and by carrying out human rights studies. This organisation also plays a part in implementing ESD in each campaign. For example, there is a project called “50 years after man stepped on the moon, the inequality in education in Thailand remains the same”, which was awarded by Media Award 2020. This documentary presents the story of people who still have to live with hardships. Many children have to live in old and humble houses. They are unable to concentrate on studying because of not having eaten since the night before. This helps to reflect poverty as one of the relevant causes of inequality in education.

3.2.4. Case studies

Buddhajak Wittaya School, in collaboration with Faculty of Education, Chulalongkorn University, created a project called “school as a learning community”. The main objective was to promote academic achievement and accessibility to quality education by children with challenges in their socio-economic backgrounds and children with special needs. Based on ESD, this school housed around 200 students with 16 teachers, and 80 per cent of the students were from poor families; therefore, most had to do part-time jobs after school. To achieve ESD, there was an integration of innovative strategies to strengthen the quality of learning of students

in Buddhajak Wittaya School. The innovative strategies include: Lesson Study (LS) with Buddy System, Professional Learning Community (PLC), and School as Learning Community (SLC). This school has become a learning community as it was provided with the opportunities to work together with educators, the community, and other stakeholders. Consequently, the school was recognised by the Office of the Basic Education Commission as the best in terms of students' progress in National Test scores in Thai, English, and social studies.

Another success in integrating ESD to eliminate inequality in education is the "Mae Hong Son Model", a model of weaving cooperation towards collateral educational opportunities. The Office of the Basic Education Commission stated that there were approximately 4.7 million underprivileged children in the education system today, accounting for 33 per cent of all children and youth in Mae Hong Son; therefore, it was a province with a high rate of disadvantaged students, 34,098 students in number. The major mission of the model was to weave cooperation to create opportunities and reduce inequality. The educational plan was therefore focused on two important matters, namely the opening of a learning centre for children with disabilities and those who lacked role models. Training parents to be teachers to continuously take care of their children's development so that they are well-prepared for accessing the basic education in the local schools in Mae Sariang District was one of the project practices. In addition, Mae Hong Son Province is also a pilot province in the "Disabled and Underprivileged Children and Youth Database" project by the Quality Learning Foundation (QLF); therefore, together with Naresuan University, they have developed a child and youth database forwarding system in Mae Hong Son Province by designing a data link system to connect provincial and district hospitals to local and special education centres. Hence, children with disabilities will have to be closely engaged and can access the services of the centres for being referred to schools. The "Mae Hong Son Model" proved that the factors leading to the success of the "Local Education Reset" includes systematic knowledge to support the management of spatial studies, policy tools to support any reforms, and institutional mechanisms that recognise children as targets to work together with systematically.

3.3. New actors in education

3.3.1. Non-state actors in education

To promote ESD in Thailand, embracing knowledge, implementing effective pedagogies, and preparing a proper learning environment are the keys to enabling all the SDGs. Non-state organisations believe ESD has the potential to contribute to societal transformation. TGO Climate Action Academy (CAA) presented the objective to build a body of knowledge and a network in the target groups, which consist of senior executives or corporate leaders and personnel from both the public and private sectors involved in greenhouse gas management, including students, and people interested in climate change, to develop a true understanding of the scientific basis of the impact of climate change on the economy, society, and environment. There are various prominent sustainable services available, such as education programmes, including e-learning curricula and training programmes.

A variety of direct programmes are provided to a wide range of target groups, based intensively on a paradigm of considering the future global sustainability in all aspects that are in pursuit of an improved quality of life. Examples of the programmes provided by CAA are: Climate Adaptation and Quantification and Verification of Carbon Footprint. Most programmes offer fundamental and professional knowledge based on the needs of each audience.



Another example of a best practice of ESD integration by a non-state actor is from World Wide Fund (WWF). WWF has implemented environmental education projects and invented a prototype for natural study centres and operations that are suitable for the conservation of natural resources, the environment and Thai society. WWF

Thailand has merged all three natural study centres and filed for registration as “Foundation for Environmental Education for Sustainable Development (Thailand): FEED”, which has been certified to be registered as a foundation by the Ministry of Interior.



In line with its vision to sustainably develop the natural environment, there are a variety of programmes and campaigns run by FEED, such as the Toyota Biodiversity and Sustainability Learning Centre, which was constituted to develop human resources for children and youth to realise the value of biological diversity and the knowledge to preserve it in a concrete way. This centre is a learning centre that goes from the square room to the natural classroom. The collaborative project has also conducted an environmental education course by integrating the core curriculum of Basic Education in 2008 in accordance with three essential areas: Eco Forest, Biotope, and Cheewa Pamavet Building. The Cheewa Pamavet Building is an exhibition room to honour and exhibit royal activities related to forests, water and soil through screens and interactive games.

Along with the provision of courses and activities to promote ESD in Thailand, there is a project established by an association comprising eight companies and organisations, including Princess Maha Chakri Sirindhorn Foundation (PMSF), governmental organisations, private companies, and a university. Called “Little Scientist House”, and adopting activities from the Haus der kleinen Forscher Foundation, Germany, this project aims to develop curricula and activities to raise awareness, knowledge, and skills connected to a society, the environment and the economy for sustainable development according to ESD.



For “Little Scientist House”, the key concept of promoting and developing children according to educational guidelines for sustainable development is a management system combining the driving forces of all sectors in the educational institutions, including the school administrator’s role in shaping the framework of sustainable action. Processes, concepts and teaching methods have, therefore, been managed and formulated in accordance with the goals of education for sustainable development. In addition, developing teacher qualities that are reflected in practical values is an essential trigger since teachers generally act as facilitators and role models in children’s learning. This project encourages children to initiate science projects and provides the public with information related to the children’s development and their proper learning style. These activities are the complementary tools to ensure the success of ESD for 2030.

3.3.2. Power of local stakeholders as new leaders

The community, families, and other stakeholders are currently participating in the education of children and adolescents due to the policy called “student home visit”, which is an activity that is very important and necessary in the implementation of the student support system in which there is step-by-step care and assistance of students with clear methods and working tools. For instance, to emphasise parental involvement, schools as well as related stakeholders such as community leaders and neighbourhood industries are collaborating in supporting children and families with resources. The National Education Act, B.E. 2542 (1999) and its amendments (No. 2) mention participation in Section 8 (2) to allow society to participate in education management. Educational institutions providing education at all levels must comply with the need to provide the opportunity for people in the community to participate in education management. Parental involvement will drive the administration of education to meet the needs of parents and the community and help educational institutions to be accepted by the community. The roles of com-

munities in participating in education management are as follows: (1) participation in organising and promoting the learning process of learners both at home and at school, (2) setting policies and targets for educational management for educational institutions, (3) public relations to support educational activities, (4) providing supporting resources and personnel in educational management, and (5) educational management audits.



Teacher professional development.



Fishing for a better future.

Kenan Foundation Asia is one successful case inspiring young students, building expertise in individuals and nurturing strong leaders by empowering the population with the knowledge, technology and skills necessary to build a sustainable future. It works with various groups of personnel, such as businessmen, teachers, students and community leaders, including executives from other non-profit organisations. This is one of the new actors implementing the Sufficiency Economy Philosophy (SEP) of King Rama IX of Thailand to promote a community to be self-reliant through developing strong community leaders and responding to the unique environment of each community, which are crucial elements surmounting the SDGs. The foundation utilises effective development methods to solve important community problems and encourage action, especially on issues related to economic development, education and health. One of the prominent projects is called "Youth to Professionals". This programme helps to develop essential 21st-century skills and to enhance the work skills of single mothers so that they can have a stable job, earn more and have the opportunity to advance in career and work. With a view to achieving long-term results, these targeted groups will have the new skills required and will have the confidence to find work and get quality employment. As a result, they can create a better future for themselves and their children. Most of the educational projects of Kenan Foundation Asia empower each local stakeholder to realise the importance of and be responsible for strengthening the wellbeing of the community with sustainable strategies.

3.3.3. Connection to sustainability

It is undeniable that research can drive Thailand to achieve the SDGs in the near future since they have been extensively conducted to promote the citizens' quality of life. There are a massive number of studies conducted on sustainable development by various sectors, including educational institutions, NGOs and private companies.

The Thailand Sustainable Development Foundation inherits the King's philosophy of sustainable development from the concept of Sufficiency Economy to establish an environmental education project to develop a system that supports learning goals on the environment. The foundation's priority missions are: (1) research and development on spatial communities in rural areas to lead to balanced, stable and sustainable growth, (2) promotion and support of research projects on the linkage of the Sufficiency Economy Philosophy with sustainable development, and (3) creating a platform for collaboration between thinkers and practitioners in sustainable development and communication at community, national and international levels.



*SCG Foundation:
Sharing the Dream.*

The relevant core organisations promoting the sustainable development of Thailand include royal projects, governmental organisations, higher educational institutions, public companies and associations. All are trying to implement effective approaches, particularly the sufficiency economy philosophy (SEP), which paves the way to sustainable development in education. SCG Foundation is part of a notable public company in Thailand, SCG. This foundation has run the project called "Sharing the Dream" for almost four decades, aiming to support scholarships for children and youth who have the determination to study but lack the required capital,

without any obligation for them to pay back. Besides this, human resource development is the key to unlocking the limitation on achieving quality living. Emphasis is placed on youth, who are the main forces of future national development. Each youth has different abilities from others and deserves to be supported to develop their potential to the fullest, such as artistic talent, academic excellence and other work skills. SCG Foundation supports the development of communities to become sustainable through a fund to allow people in the community to have the capital to pursue a career that is in line with their own way of life, and aims to create new generations who are community developers that serve their own locality as well as work with skill, potential and vital strength for further development.

To provide grants for research is one of SCG Foundation's major missions. It aims to create research projects on sustainable development promoting the quality of life of Thai citizens. What is more, to promote ESD, this foundation establishes national and international collaboration and extends cooperation to "local" entities. The "Bang Sue model" is one of the key examples that help reflect concretely the image of Open Collaboration. This project will also help raise awareness of and encourage proper waste management. This is to educate employees at all levels of the circular economy that focuses on the rotation of natural resources in the value chain and optimises waste, raw material and energy management to turn them into renewable resources in the system with proper processes. Apart from national collaboration, SCG Foundation increases knowledge building and exchange of views to promote cooperation by expanding the network more broadly by becoming a member of leading international organisations focused on innovation, strengthening the sustainability of the community and environmental protection, such as Starboard, Alliance to End Plastic Waste (AEPW), The Ocean Cleanup and Ellen MacArthur Foundation (EMF).

In summary, research and collaboration of any kind have the potential to connect people with nature and seed the awareness of being proper global citizens. These key points are vital triggers for propelling Thailand to achieve all the SDGs in the foreseeable future.

3.3.4. Online media: A new actor for life-long learning

In this era of disruptive technologies, accessing information resources and knowledge has become easier. Reliable approaches to getting educated are prevalent, especially online. Since people nowadays rely more on online activities, such as internet banking and online shopping, a massive number of websites and software applications have been competitively developed to respond to the needs of users in this digital world.

In the matter of promoting the lifelong learning of Thai citizens, one of the goals of the SDGs, online media as new actors offer a variety of platforms and channels for all age groups and genders to access information and knowledge. Also, ESD, together with its information, has been pervasively broadcast on various sites. Both detailed information on ESD and the relevant practices or projects appear on online media in both Thai and English. For instance, on the SDG MOVE website, there is a lot of basic knowledge on the SDGs, such as technical terms and research articles as well as specific issues on ESD, namely global practices and national and local projects. The website can be easily accessed and information is provided in Thai so that all members of the general public are able to attain certain information and knowledge.



Apart from the provision of general information and certain knowledge on ESD, many online media are effective learning platforms since some sites offer online learning resources for eco-friendly living.

The online learning system of the Department of Environmental Quality Promotion is one of the popular websites offering courses concerning many environmental issues, such as PM2.5 dust, zero waste, environmentally friendly consumption and production, as well as environmental royal projects, prepared in the form of infographic videos, which creates interactions with students. Certificates are available for all participants.



Udemy is another widely known online learning platform as there are currently more Thai language courses taught by Thai people. Interesting courses on sustainable development are available on a variety of devices, whether mobile phones, notebooks or tablets. Most courses are conveyed in the form of videos, along with assignments, and some courses will also provide participants with certificates.



In addition, mobile applications are considered as channels for the general public to access learning resources. As part of the promotion of the SDGs, the application for learning botany developed by the collaboration between the media office and Nong Takhian Bon Sub district Administrative Organisation, Sa Kaeo Province, called NTKB, is one such successful application that helps achieve Education for Sustainable Development. The Developed Active Learning course, in conjunction with the NTKB application, has been implemented as a learning process that encourages learners to learn on their own. The prominent advantage of the application is that learners can experience hands-on practice and interactive learning, such as an activity to study medicinal plants in the forest with the NTKB application.

3.3.5. Case studies

Even though various governmental and other relevant sectors have put tremendous effort into implementing key sustainable development issues in teaching and learning systems so that all global citizens can acquire the skills, knowledge, attitudes and values essential to promoting a sustainable future, there still are new actors in education in Thailand.



It is undeniable that the private sector in Thailand considers embarking on Corporate Social Responsibility (CSR) projects to be a powerful driver to achieve the SDGs. Education for Sustainable Development is, therefore, a crucial concept to be adopted to change society, the nation, and the world. Thailand Business Council for Sustainable Development or TBCSD has been working on a variety of projects. Youth preparation activities to conduct local research on the topic of “Effects of global warming on ecosystems, environment and health” is one such event originated by the collaboration between TBCSD and Thai Environment Institute (TEI) on the concept of supporting young people to be ready in conducting research related to global warming that affects ecosystems, environment and health, which is a problem at their local level. Other objectives are to encourage exchanges of knowledge among participants and to extend the results to other people in schools and the surrounding communities to raise awareness of the importance of being prepared to deal with such problems that will arise in the future. Most regions of Thailand have been included in this project. As research studies are one of the key factors to make the SDGs’ accomplishment feasible, it is absolutely right that preparing youth to experience the conducting of research, particularly on the areas of the SDGs, will contribute to achieving a higher quality of life for all Thai citizens.



Pikulthong temple.



Hospitality training project.

In a similar vein, lifelong learning can be achieved through the easy accessibility of learning resources that are appropriate for all genders and all age groups in the country. In Thailand, temples are accessible places for all citizens without any discrimination; thus, they are the significant units in most communities as well as the assembly points for various festivals and ceremonies. An example is Wat Pikulthong, Phatthalung Province, which is an example of a self-developed temple. This temple has become the centre of the community as an important source of learning for the community. No matter what problems the villagers have, they will be able to find almost every answer from Wat Pikulthong, such as on the subjects of Buddhism, art and culture, occupation, education and public health. Local people have learnt how to practise dharma, including through meditation, walking meditation and listening to sermons. After the initial establishment of “The Dharma Practitioner Club”, other activities were added to the project. With the support of the Ministry of Culture and Thai Health Promotion Foundation, various activities have been augmented, especially in regards to career promotion. A lot of local wise men are eager to convey their own knowledge to the younger generation and the temple is an important stage to provide all participants with learning facilities and social interactions, thus contributing to sustainable development.

4. Conclusion



From the diagram above, one of the ultimate goals is “Societal Change”. In Thailand, a variety of best practices emerged as representatives to respond to an increasing awareness of the impact of one’s society on the natural environment. After the launch of the SDGs, the relevant organisations have evolved to encompass creative education pedagogies and the fight against inequality in access to education as one of the key principles of sustainable development. Governmental organisations, the private sector, and many public companies have taken prominent roles in promoting inclusive and equitable quality education and lifelong learning opportunities for all. In addition, non-governmental organisations also help facilitate the government, citizens and societies in providing supporting commodities, funds, training and relevant resources. Other types of support have also come from educational institutions and royal project foundations and from local levels such as hospitals, temples and people.

A diverse range of projects have been established and launched with the purpose of raising awareness of and knowledge regarding sustainable development as well as providing various learning platforms that are more affordable and accessible. Most projects based on ESD concepts implement pedagogic elements that cover 21st-century skills, professional development, history, society, culture, economy, politics and environmental education processes. A lot of challenges have arisen as all stakeholders have been searching for the right keys to unlock the inequality in the country, which has been derived from a wide gap of socio-economic conditions, differences in teaching and learning management, lack of learning facilities and educational personnel, poverty and other uncontrollable external factors, such as

geographic issues. To be optimistic, projects and practices on ESD in Thailand create an immunity for the citizens to fight against global issues, thus prompting individuals to be concerned with a transformation of the way they think and act as well as their lifestyles; thus, the opportunities are quite vivid enough for current and future generations to access the right education leading to sustainable development.

The long-term goals of ESD in Thailand are related to human development, reflecting the future outlook. Since numerous effective models have been paving the way to sustainable achievement in the foreseeable future, these can guarantee a better life in a better environment for Thai as well as global citizens. The examples of best practices include Eco-School, environmental education centres, learning centres for children with disabilities, research projects based on the Sufficiency Economy Philosophy, raw material and energy management and national and international collaborations.

In Thailand, corporations as well as local residents are among the stakeholders that have reinforced the concepts of ESD that emphasise equitable quality education and lifelong learning opportunities for all. New actors in education are able to impart applicable knowledge and offer crucial resources along with open spaces for all people to access the lessons, which are designed to convey the knowledge, skills, attitudes and values necessary to address sustainable development challenges. Environmental integrity, economic viability and a just society are particular concerns for humankind in current and future generations.







KASpaces Regional Roundtable

Accelerating Progress and Equity in Education

22-24 November 2021

Webinar by KAS Political Dialogue Asia

Background¹

The Covid-19 pandemic has disrupted education and learning all over the world. Education institution closures in more than 188 countries have forced governments and educators to look for alternative ways to provide continuity of education through a plethora of means and technologies, including online digital, home-based learning. More than 20 years of education gains have been wiped out during this pandemic, with rates of proficiency, education participation and school completion expected to suffer dips.

This is no different in Asia, where hundreds of millions of students across primary, secondary and tertiary levels were forced to either turn to alternative learning methods or miss school. Schools and teachers have scrambled to transition to re-

¹ Report authored by Ryan Chua and Valentina Schott.

Ryan Chua is a Master in Public Policy student at the Lee Kuan Yew School of Public Policy, National University of Singapore. He was a project assistant with Konrad Adenauer Stiftung Political Dialogue Asia.

Valentina Schott is a Master of Comparative Studies on German, European and Chinese Law student at Humboldt University, Berlin and Tongji University, Shanghai. She was an intern with Konrad Adenauer Stiftung Political Dialogue Asia.

remote learning in a continent where internet connectivity rates and device affordability vary from country to country, and between the haves and have-nots.

Nevertheless, more must be done to ensure fair, equitable access to quality education for everyone. This is particularly crucial to ensuring that no one is left behind, as per the main tagline of the 2030 Agenda for Sustainable Development. Of the Sustainable Development Goals (SDGs) that were enshrined at the United Nations in September 2015, education was considered among the most important among equals, as Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

Remote learning is not perfect and cannot replicate the traditional classroom setting. Yet, it provides the best available option while governments and societies find a way to reduce the spread of Covid-19 infections and make it safe for students to go back to school again. Governments and education institutions have been doing their best to adapt to the new normal, teaching remotely and on digital platforms with a variety of approaches, models and pedagogies. Through this new normal, innovations in teaching and learning practices and experiences have been found in education that may outlast the pandemic itself.

After the successful carrying out of thirteen national webinars across East, South-east and South Asia, Konrad Adenauer Stiftung (KAS), in partnership with our partners, organised the first **Konrad Adenauer Sharing Political and Civic Engagements Space (KASpaces) Regional Roundtable**. The Regional Roundtable aimed to bring together participants and partners of the national webinars from the various countries in the region to share their experiences and best practices used to face the challenges of today in providing quality education for all. It facilitated interactive and lively dialogues to get different stakeholders to engage with one another on how best to move their education systems forward, as per the theme ***“Accelerating Progress and Equity in Education”***.

Programme Objectives

In the thirteen countries where the national webinars have been held, many best practices, lessons and common challenges were shared. As countries across the region are facing common challenges as well as opportunities, our objective is to bring national-level expertise to the regional level so as to promote cross-learning between diverse stakeholders on the varied approaches, institutional structures,

standards and practices, and the tools and technologies at play in managing the consequences of the pandemic on education. While new learnings and innovations are bound to take place, the higher objective remains the same: transforming education systems to deliver equitable, inclusive and quality education to all.

In line with “SDG Goal 4 on Education: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”, the following are the aims of the Regional Roundtable:

1. Provide a platform for the exchange and learning of new problems, ideas, and solutions in relation to the delivery of education during the Covid-19 pandemic;
2. Facilitate a dialogue between education-related stakeholders, including government officials, policymakers, teachers, education practitioners, civil society and students, to promote collaboration and cooperation in addressing education and sustainable development goals, and other aspirations;
3. Act as a repository of experiences and best practices of education and learning during the pandemic that can be analysed and utilised as new, innovative approaches towards education in the post-pandemic era;
4. Identify common challenges faced by countries in Asia towards achieving education-related SDGs and developing a collaborative framework to address sustainability and societal aspirations;
5. Build capacities of various stakeholders through networking, experience-sharing and enhancement of skills; and
6. Provide recommendations that can aid in the transformation of education systems in the region to deliver equitable, inclusive and quality education to all.

The programme involved participants representing thirteen countries across Asia:

- Bangladesh
- Bhutan
- Cambodia
- India
- Indonesia
- Japan
- Malaysia
- Nepal
- Pakistan
- The Philippines
- South Korea
- Taiwan
- Thailand

Introduction to education in Asia in the era of the pandemic

Leading up to the Regional Roundtable, thirteen national webinars were conducted by our esteemed partners to bring together stakeholders – local policymakers, education-linked civil society organisations, and teachers – from various backgrounds to discuss their experiences, challenges, opportunities, and best practices.

For most countries in Asia, progress had been made to improve education accessibility and to reduce inequality in education. This progress has been negated by the Covid-19 pandemic, which has led to the closure of schools and children having to stay at home without adequate capacity and resources for education continuity.

To counter all of this, governments in Asia have turned to remote and blended learning via digital learning tools to ensure that students do not suffer learning losses. However, challenges still arise from these new innovations.

Not all countries or local governments and education institutions came prepared with the right digital infrastructure and learning tools. Both students and teachers faced digital literacy challenges in becoming ready to take advantage of what remote and blended learning had to offer. This was exacerbated by the rural-urban divide, with remote or less developed areas often affected by the instability of internet access and electricity supply. Disadvantaged and marginalised groups are in danger of slipping further behind with insufficient support.

From these challenges, best practices emerged and lessons were learnt. This includes the need for continuous teacher capacity-building, caring for vulnerable groups, and making full use of various tools such as Ed-tech and radio and television broadcasting. Institutional arrangements also matter: the pandemic has led to calls for local governments and education institutions to have more autonomy and empowerment to implement innovative education arrangements in times of crisis.

From this crisis, new actors such as civil society organisations, social enterprises, and telco and internet service providers have surfaced. This emphasises the need for collaborations between existing and new partners to accelerate accessible and equal provision of education for all to ensure that no one is left behind.

Insights gained from the national webinars translated to discussions at the Regional Roundtable, where a select group of representatives across the thirteen coun-

tries were invited to share what they had learnt at the national level – for the cross-fertilisation of ideas and solutions, and to ensure that education systems across the region can emerge stronger and be more inclusive to all.

Impact of the pandemic on education

Over the past 50 years, the percentage of school children in Asia had increased to 90 per cent as of 2018 – a signal of progress for the region. More focus had also been placed on empowering women and long-lasting learning. South Asia became one of the most important regions for education, as 74 per cent of school children are based in this region. Signs of progress have also been seen across other countries, as roundtable participants from Cambodia, Bhutan, Bangladesh, and the Philippines shared that their countries had suffered from poor conditions in their education systems but have steadily improved in this regard over the last 50 years.

While many of these school children often complete primary school education, secondary school completion rates are unfortunately much lower. This is largely due to the weak foundation in education. This is not helped by the Covid-19 pandemic, which has added new dimensions to the challenges faced by education systems across the Asia-Pacific. Internet connectivity and parental support become major concerns during this time, with children not being able to attend schools physically and be supervised by teachers, who themselves face their own challenges in maintaining contact with their students.

While different countries had different levels of infrastructure that affected their own respective abilities to adapt to the new normal in education, all countries faced their own set of challenges in implementing the right policies and tools to ensure accessible and equitable education. The roundtable participants shared that not only developing countries but also countries with high-quality digital infrastructure were affected by the pandemic.

Countries like Malaysia, Pakistan, and India had issues with access to stable internet connections. This posed a major problem, especially in remote areas that could not be reached and did not have the same possibilities as urban areas. Because of this, resources must be allocated differently. For example, money that had been allocated for schoolbooks would be invested in digital learning tools instead.

Best Practices

In discussing the challenges and best practices that were learnt during the Covid-19 pandemic, three key areas were leveraged on to frame such discussions, namely, infrastructure and teachers' development, inequality in education, and new actors in education.

Infrastructure and teachers' development

Participants acknowledged the importance of the development of teachers and infrastructure for education, but also the challenges that come with it. For example, it was shared that communication is a problem in the Philippines due to the different dialects spoken across the country. The lack of quality infrastructure affects those who are geographically isolated and disadvantaged – especially when there is a large gap between what is provided in the urban areas and that in rural areas, and the lack of human resources available to build better education systems.

In order for countries to provide better in terms of infrastructure and teachers, regional countries have implemented some recent reforms in education, such as the National Scheme of Education in Thailand and Experimental Education in Taiwan. In the latter, there is a multifactorial landscape shift as the new reformed approach provides different academic paths in accordance with the demands of parents seeking more innovative practices in schools.

Other countries are also trying new approaches. In Cambodia, teachers' training has been extended from 12 years to 16 years. In Bhutan, due to the shift towards online learning due to the pandemic, the government is now focusing more on the digital infrastructure by providing technological tools to classrooms in the country. Bangladesh has also envisioned the use of blended learning in the future, and has established an administrative infrastructure to follow up on the progress for blended learning.

Digital learning

In the discussion on the merits of digital learning, it was shared that there were numerous advantages to this method of learning, as it increases the range of teaching that can be done, facilitates more exchanges between different institutions, and more easily allows for experts to be invited to participate. There can also be more

varied interactions with students in the classrooms through quizzes and gamification of the curriculum.

However, not everything about digital learning can necessarily be beneficial equitably. For some students, this has threatened their ability to socialise due to the inability to meet and talk in person with their peers. At the same time, while technology has been used in an attempt to narrow the gap between online and offline learning, existing technology has not quite developed enough to replace in-person classroom learning, which is currently still seen as superior to other forms of learning.

These concerns are exemplified even in developed countries. It was shared that South Korea has an advanced education system that has integrated digital learning with face-to-face learning and provided alternatives in the form of home-schooling. Yet, students still suffered from social distancing and the consequent inability to have contact with and connect with their peers. This brought to light the realisation that during these pandemic times, it is not only the academic standards of classes that must be ensured but also the “soft skills” of students, which will need be monitored to ensure they are developed properly.

Blended learning

Blended learning, which combines a mix of online and offline learning, was discussed extensively. While online learning has been necessary during the pandemic due to school closures and has proven to offer many benefits, there are still many who prefer physical classes.

As a result, blended learning has become a preferred middle path. The participants agreed on this, and stressed that the best way forward is a combination of face-to-face classes and online learning. This would allow for the benefits of digital classes to be reaped in the post-Covid-19 era whilst “normal teaching” would not be completely replaced, for the purposes of ensuring the emotional wellbeing of children.

There have been a variety of examples of this being conducted across Asia. A best practice observed is the New Generation Schools in Cambodia. They help to gather online educational material and have seen increased usage of electronic learning tools to engage with students. At the same time, they were also able to remain fully operational throughout the pandemic.

The role of teachers

On the role of teachers, a keynote address on the experiences from Taiwan explained that there is now more that teachers need to do, in addition to the traditional methods of teaching. In this new age, teachers should “do marketing” for their own teaching, where they highlight why their teaching is especially useful for the students, and why they should follow their lessons. This will increase the self-esteem of the respective teachers and catch the attention of their students, who will understand why they are learning. At the same time, they should also connect with other teachers to share best practices and to mutually support each other. This is important as it helps to broaden their knowledge of the range of useful methods for educating their students.

Gamification has become a hot topic of discussion in the post-pandemic education world, especially in Taiwan. Through gamification, teachers might trigger the competitiveness of their students. This creates multidimensional learning, where students are motivated to constantly improve their learning outcomes and combines traditional learning with competitive elements.

Participants also noted that to make education more effective, the purpose of education has to be clarified. Once that can be done, a mix of individual and common learning can be conducted for better learning outcomes. While there should be emphasis on new innovations and technologies, not all learning tools have to be out of the box. The role of teachers remains highly important, though it has shifted towards becoming someone similar to a coach in terms of helping students to manage their own learning outcomes. However, teachers face their own challenges, especially when it comes to having the adequate software and hardware tools to design online learning and home school curricula.

Student-teacher relationship

In the KASpaces Regional Teacher-Student Forum, teachers and students gathered to gain insights from one another, especially on how the teacher-student relationship has changed during this pandemic, and what are the improvements that can be made.

According to the experience of one student during the pandemic, students did not have a timetable but the attendance was checked. They could not use recorded sessions, unless they had a good reason. In addition, they had to turn their video

on, so teachers would be sure that they attended classes and that they could be evaluated on their performances.

When students did not have the possibility to use digital devices or platforms, teachers had difficulties with checking on the students' attendance. Teachers tried alternative methods where they asked students to sign on a list and communicate with them via online communication tools such as WhatsApp or Google Classrooms.

In order to fill the gap in between, some schools would have an academic advisor to maintain student-teacher relationships. However, student-teacher relationships are still not as strong as they were before the pandemic. This is especially because there were few opportunities for small talk or interactions between classes.

From a teacher's perspective, it has not been an easy ride as well. Remote learning has required teachers to be more present than ever. They were required to be available via the phone and email throughout the day. Some students also contact them regularly without respecting the outlined school hours, which can affect the life of a teacher. In terms of connecting with students, it was a lot easier to do so in the pre-pandemic days, where informal meetings and lunchbreaks could be carried out.

A solution that was proposed was to create WhatsApp and Facebook groups for some semblance of connectivity between teachers and students, since these would also be platforms that students are familiar with.

Inequality in education

While there have been new innovations and technologies to bridge the gap for teachers and students in education, learning losses still exist due to the inequality gap that is still present in many countries. There were discussions on how language and communication can be a hindrance to education equality, especially in countries with different ethnicities and backgrounds and inadequate common ground built.

Inequality has not escaped Taiwan either, where the discrepancies between academic achievement and ability to make a living is externally dependent and unpredictable. There is also a hollowisation of rural areas, largely due to the perceived lack of local careers that can be found.

In the Philippines, the Geographically Isolated and Disadvantaged Areas (GIDA) were left out of the education system because of a lack of infrastructure caused by the big gap between urban and rural areas and lower levels of human capital available. There are various local contexts that would need to be considered when considering how education systems can be built and reformed, such as disadvantages arising from demographics, geography, language and history of different communities.

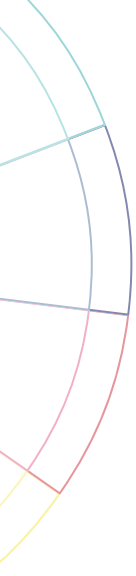
In order to find ways to narrow the inequality gap, some initiatives have been taken – some not necessarily focusing on new technologies and innovations alone. In Cambodia, which some do not consider as being innovative compared to its neighbouring countries, standardised tests have been conducted to assess the different educational levels in the country. Standardised information in this case has become important in terms of being used to help to close the gap between the less and more developed regions within the country.

In Thailand, a project called U2T: University to Tambon is being carried out at the sub-district level where the university acts as a system integrator to improve the economy, support community development and alleviate poverty alleviation. Action plans include using spatial data to identify population targets and holding policy hackathons to deal with problems and find solutions.

New actors in education

During this pandemic, teachers and students have had to assume larger responsibilities in delivering and receiving education. Other members of society have also played larger roles in delivering education. The session on the role of the community in education focused on such new and existing actors in education, and recognised school administrators, parents and community officers as “unsung heroes” of the pandemic.

Communities came together to support education initiatives through the collection of funds from their members. Communities also played a role in helping to keep up students’ motivation to learn, while creating flexibility in learning through supporting remote learning methods despite the disruption to the learning process from the pandemic. Within communities, parents have been instrumental in shaping education during the pandemic. In light of this, it was shared that it was important to clarify the role of parents and involve them in the education process. The community, including local NGOs, would also need to be involved to deliver diversity and contextualised knowledge such as ethnic minority languages.



To better understand the impacts of the pandemic on the education system, research and studies will need to be undertaken about education management during the pandemic. These results will be crucial towards establishing teaching guidelines that are useful for future pandemics and emergencies, and therefore increase the resilience of the education system.

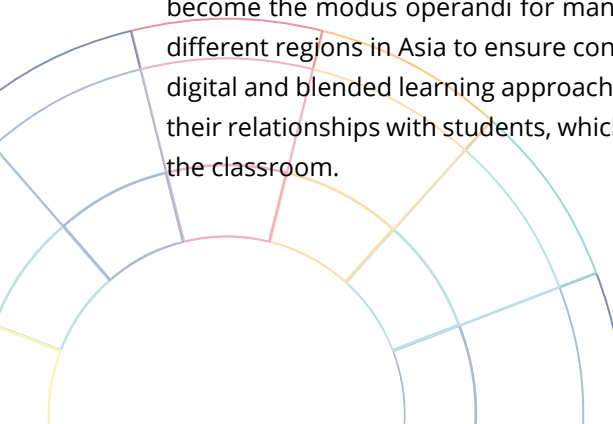
Another new role that was carved out during this pandemic was that of education technology, or EdTech, companies. In the last ten years, there has been more focus on making learning more fun through new technology tools. There has also been more stakeholder engagement between EdTech companies, schools, teachers and parents, to think out of the box and find new innovative ways of teaching.

The most successful EdTech companies have been the ones that started as private tutoring companies. After growing substantially, they now have very large capital which can be exploited to experiment with different approaches and technologies. Additionally, a lot of non-profit organisations can help to connect those with inadequate access to the internet and technology tools. When these can be provided, education would become more accessible to every child through remote learning methods.

Conclusion

The Covid-19 pandemic has put a dent on the progress made in education across Asia. There are disparities that existed even before the pandemic, but these have now been made more apparent and wider. This has led to learning losses by students while teachers are still trying to adapt to new approaches and tools needed for digital and/or blended learning.

In the face of this crisis, opportunities have arisen to reform the education system to be fit for the 21st century. Governments and educators have used the pandemic as a chance to relook at the education system and find new ways forward, especially in terms of infrastructure and teachers' development. Online learning has become the modus operandi for many, with best practices emerging from across different regions in Asia to ensure continuous learning for students. These include digital and blended learning approaches that impact upon the role of teachers and their relationships with students, which are now no longer confined to being within the classroom.



From here, new actors have emerged to better deliver education to children and students. These include parents, civil society organisations and the wider community, who have come together to ensure that students can still continue learning despite the inequalities that exist. Additionally, EdTech companies have also helped to revolutionise the education sector through new innovative approaches and technologies used to bridge the learning gap.

Platforms like the KASpaces Regional Roundtable become important in allowing for networks and therefore partnerships to be established. This can be done for the purpose of sharing best practices and fostering cross-sector collaboration to face the challenges of the ever-evolving labour market as well as the new demands of society. Education plays a key role in ensuring that we prepare the next generation for new crises and emergencies, while accelerating progress and equity in education for everyone.







Partner Organisations

Bangladesh

South Asian Institute of Policy and Governance, North South University

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.

Their vision is to become a leading academic institution and a think tank on policy and governance studies in South Asia and to develop professional leaders in policy and governance through education, training, and research. To generate and disseminate research and evidence-based knowledge on policy and governance issues across national, cross-national and regional levels. They aim to provide quality education by national/ regional/international faculty members and practitioners.



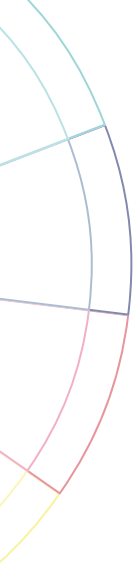
Bhutan

ICLEI – Local Governments for Sustainability, South Asia

ICLEI – Local Governments for Sustainability is a global network working with more than 2500 local and regional governments committed to sustainable urban development. Active in 125+ countries, we influence sustainability policy and drive local action for low emission, nature-based, equitable, resilient and circular development.

ICLEI is dedicated to building and supporting a worldwide movement of local governments to achieve tangible improvement in global environmental conditions through the cumulative impact of local governments. ICLEI promotes local action for global sustainability and supports cities to become sustainable, resilient, resource-efficient, bio diverse, low-carbon; to build a smart infrastructure; and to develop an inclusive, green urban economy with the aim of achieving healthy and happy communities. ICLEI focuses on five interconnected pathways that cut across sectors and jurisdictional boundaries that are also followed by ICLEI globally. The below listed pathways enable local governments to think holistically and adopt an integrated approach to sustainable urban development.

- 1.Low emission development:** This pathway intends to reduce environmentally harmful pollutants and greenhouse gas emissions. It aims to reduce greenhouse gas emissions in all activities, especially in transport and waste.
- 2.Nature-based development:** This pathway promotes emphasizes on the significance of biodiversity and ecosystem services provided by the same. The pathway highlights the need to integrate nature based solutions in urban planning in order to build climate resilience and promote overall city well-being.
- 3.Equitable and people-centered development:** This pathway supports inclusive development for all. It focuses on access to food, water, energy and sanitation for all, and clean air and soil and promotes human centered, safe, socially and culturally cohesive communities, where diversity and distinct identities are woven into the social fabric.



4. Resilient development: It focuses on anticipation, prevention, absorption and recovery from shocks and stresses, especially those brought about by climate change.

5. Circular development: This pathway promotes new models of production and consumption, building sustainable societies that use recyclable, sharable and replenishing resources to end the linear model of produce, consume, discard.

ICLEI - Local Governments for Sustainability, South Asia (ICLEI South Asia) - the South Asian arm of ICLEI - is a not for profit organization registered under the Indian Trusts Act. ICLEI South Asia's head office, located in Delhi, has been operational in India since 2005. There is a regional office in Hyderabad, state offices in Tamil Nadu (Coimbatore), Gujarat (Ahmedabad) and Maharashtra (Thane), and project offices in Jabalpur, Karnal, Ludhiana, Siliguri, Visakhapatnam, Kochi, Solapur, Nagpur, Rajkot, Vadodara, Tirunelveli, Tiruchirapalli and Udaipur. A country office is located in Dhaka and a project office is located in Rajshahi in Bangladesh as well.

Royal University of Bhutan

The Royal University of Bhutan was launched on 2nd June 2003 to provide tertiary education in Bhutan. The Royal Charter and the Statutes provide the legal instruments for the University.

The overall rationale of the University as set out in the Royal Charter and Statutes is the “dissemination of knowledge and the advancement of learning through a balanced, well regulated and sound tertiary education system for the economic and cultural development of the Kingdom of Bhutan and to promote the cultural enrichment, personal development and well being of our people.”

The specific objectives of the University are:

- to develop and provide programmes of study at tertiary education level, of relevance and good quality which will fulfill the needs of the country for an educated and skilled population, and
- to promote and conduct research, to contribute to the creation of knowledge in an international context and to promote the transfer of knowledge of relevance to Bhutan.

Cambodia

Cambodia Development Resource Institute

CDRI Cambodia Development Resource Institute works to produce independent, objective, high quality policy-relevant development research, to maximise its accessibility to policy makers, influencers, and stakeholders and to have it affect policy in five interrelated areas that are key for Cambodia's sustainable development:

- (1) Policy Research in Agriculture and Rural Development
- (2) Development Economics and Trade
- (3) Educational Research and Innovation
- (4) Natural Resource and Environment
- (5) Governance and Inclusive Society.

CDRI's mission is to generate high quality, influential and impactful knowledge through policy research and capacity development to contribute to Cambodia's prosperity. CDRI undertakes its programmes and projects in partnership with Cambodian government institutions and their international development partners, other research and tertiary education institutions and civil society organisations. It disseminates its research knowledge and products through a number of communication strategies: conferences, workshops, seminars, broadcast media, print media, library collection and information sharing, small group communication and interpersonal communication.

CDRI is located in the suburb of Tuol Kork, Phnom Penh, Cambodia. At end of December 2020, it has 71 staff including management, professional and technical staff, administrative and support staff, all of them are Cambodian. It has a strong commitment to the capacity development and professional skills of its staff, many of whom, after being trained at CDRI, go on to contribute to other Cambodian and international organisations involved in their country's development.

India

Convegenius India

ConveGenius is a leading social ed-tech enterprise that has been working to solve educational equity and learning outcomes for children and youth in India. More than 100 Million students in India lack the required assistance to receive good quality education. Most of these students belong to underserved communities and study in government or low- profit private schools. ConveGenius has made it their mission to reduce this learning gap that the 100 Million students have been suffering from. They offer low-cost and high quality ed-tech solutions for students from KG to 12. Today, their AI-based Whatsapp solution is being used by more than 2.5 crore students across the country through nudge theory and assessment based learning.

Indonesia

Paramadina Institute for Education Reform

Paramadina Institute for Education Reform (PIER) is one of the units under the Institution of Research and Community Services of Paramadina University, Jakarta, Indonesia. PIER aims to study and promote innovative and evidence-based ideas for education reform that fosters widespread equity and quality in education. It has collaborated with local and overseas institutions to conduct research in education and carrying out trainings and workshops for teachers in Indonesia. It has worked together with KAS Indonesia conducting teacher training for teaching democracy trainings since 2007 and with KAS Singapore (KASpaces) since 2021.

Japan

Tokai University

Tokai University founded the school in 1942. The following year, 1943, it began with the opening of the Aviation Science College, the predecessor of Tokai University, in Shimizu City, Shizuoka Prefecture (at that time). Then, in 1946, Tokai University was approved by the old university decree. The university approval application submitted to the Ministry of Education at that time states that it will give a firm grasp of the historical, national, and worldviews of the fusion of the humanities and natural sciences. This is the educational philosophy of our university's "fusion of humanities and sciences".

Based on this founding ideal and founding spirit set by the founder Shigeyoshi Matsumae, they aim to develop human resources with a broad perspective and flexible creativity without taking knowledge-oriented education.

As an educational / research institution with human resources, knowledge, technology, and functions, as a comprehensive university with campuses nationwide, they will constantly promote educational reforms, work on the latest research, and strive to return the results to society. increase.

CSO Network Japan

CSO Network Japan (CSONJ) is a Japan-based nonprofit organization, established in 1999. Its mission is aiming at promoting the resolution of social issues through multi-stakeholder participation by identifying valuable initiatives for a just and sustainable society.

In collaboration with Japanese and overseas civil society organizations, intergovernmental and governmental organizations, private corporations and academic institutions, CSONJ works on action-oriented research, information dissemination, policy work and holding events and seminars.

CSONJ is currently engaged in the following main activities: (1) promotion and support of responsible corporate business (2) development of sustainable communities (3) practice and dissemination of program evaluation and (4) promotion of the strengthening of civil society through these activities.

Malaysia

Penang Institute

Penang Institute is one of Malaysia's major think tanks. Funded by the Penang state government, it was established in 1997 (as SERI, the Socio- economic and Environmental Research Institute), and underwent a name change in 2011 as part of a rebranding exercise to reflect the heightened ambitions of the state to secure Penang's reputation as an intellectual hub and as the culture capital of the country, and to enhance Penang's reputation in ASEAN and beyond.

With the tagline "Making Ideas Work", Penang Institute encourages bold and innovative thinking not only in academic disciplines but also through the support it gives to literature and culture by way of events such as book launches, public literature seminars; through participation in the annual George Town Literary Festival; through its public policy briefs, ISSUES, Monographs; through interviews with notable personalities on current state of affairs and trends, Penang Institute Chats; and through its renown magazine Penang Monthly and the Penang Book Prize. In times of crisis, Penang Institute will contribute to the management of such crisis by publishing informed papers on the local situation and on how this relates to events and initiatives undertaken in other parts of the world.

Nepal

National College, Kathmandu University

National College, since its beginnings in 1996, has maintained the same education philosophy that some timeless attributes of leadership, skills, intuition, ambition and humility will always be the pillars of developing better human resources. Their approach in pursuing this philosophy is evident in the approach they have adopted in offering path breaking interdisciplinary courses that bring on faculties from diverse walks of life. This in tandem with field studies and opportunities in participating in training, workshops and seminars of national and international level has the potential of transforming you in realizing your ambitions.

They believe interdependence, agility and flexibility would be the new norms. Their flawless efforts in conducting online classes and evaluation and smooth research activities are standing testimony of collaboration even in crisis. Every crisis is an opportunity to learn, unlearn and relearn. This is the aptitude that they have been trying to inculcate in our students. They are honored in having like minded institutions as collaborators and partners and are thrilled by the good news we get every year of their graduates doing well at home and abroad.

Centre for South Asian Studies

The Centre for South Asian Studies (CSAS) is a fully independent, non-political, secular, research think-tank based in Kathmandu, Nepal. It organizes conferences and conducts research in areas of South Asian regional cooperation, peace and conflict in South Asia, small arms proliferation, trade and connectivity and strategic issues concerning South Asian countries as well as Nepal's conduct of international relations. CSAS is also involved in research, dissemination and deliberation on Nepal's current peace process and constitution drafting with several programs on federalism and integration. In partnership with the Konrad Adenauer Stiftung, a German political foundation, CSAS has been implementing 'Nepal's National Interests' project for the year 2010.

Pakistan

Forman Christian College University

FCCU was founded in 1864 with a vision to impart quality education to the people of this region and to contribute to their academic, economic, and social development. From the premises of a small college, FCCU has grown into an academically robust university that offers a wide range of opportunities to its students to grow and reach their full potential. FCCU welcomes students from all backgrounds and all regions of Pakistan and abroad to a University where they live, grow and learn, meet some of the greatest thinkers in their chosen disciplines, and make lifelong friendships- a place they can truly call home.

FCCU's genuine American-style, Liberal Arts curriculum gives students the freedom to choose from a holistic range of 22 majors. FCCU also offers a robust financial aid and merit scholarship program that helps students complete their studies without financial constraints. The engaging student life experience at FCCU with international exchange opportunities, career, health, and counseling services, student-run societies, and sports facilities ensure that learning and growth continue outside the classroom. FCCU's Postgraduate programs provide a unique experience to students, including the opportunity to conduct research with leading academics and state-of-the-art facilities.

Philippines

Synergeia Foundation

Synergeia Foundation is a non-profit organization registered with the Securities and Exchange Commission. It has been accredited by the Philippine Council for Accreditation, the BIR, and the Department of Interior and Local Government. Its mission is to transform how leaders govern and to empower communities to create a better life for themselves and their children. Its programs are community-based, demand-driven and performance-oriented. Synergeia's uses the education of children as its entry point in governance and community development. The education of children requires developing an entire eco-system: health care, nutrition, responsible parenting, responsive barangays, effective principals, competent teachers, sanitation, infrastructure, a clean environment, and instructional materials, a peaceful community, among others. The governance skills, values, and processes that Synergeia develops among local governments have empowered them to competently manage major development challenges. They become strategic, systemic, data-driven, and participatory in their overall governance

Synergeia started with 7 local governments as partners in 2002. Its membership has expanded to 426 local governments. Synergeia has partnered with international organizations like the USAID, the World Bank, and UNICEF in attaining several goals: increasing access to quality basic education, transforming local institutions, and supporting the rehabilitation of communities that suffered from domestic conflict such as Marawi City. The most recent support it has received is from GCERF in the prevention of violence and radicalism in Mindanao. Corporations and individuals support Synergeia's programs in reading, health promotion, infrastructure development, and promotion of good local governance.

Synergeia has been conferred the Ozanam Award by the Ateneo de Manila University in 2017 for its distinctive and continued service to their fellowmen. In 2012, it received the Peace Award from the Ateneo de Zamboanga University for its Education Program in Muslim Mindanao.

South Korea

Chung-Ang University

Chung-Ang University, Seoul, Korea is a private institution with 30,000 students and 982 faculty members. It consists of 10 undergraduate colleges and 16 graduate schools. It operates two campuses, in Seoul and Anseong, Korea.

Established in 1918, CAU has endured through the painful course of Korea's modern history, upholding its ideal of «Justice and Truth». Since then, CAU has taken a leading role in nurturing intellectuals of the nation. Respected as leading institution providing quality education, CAU has sped up the pace of innovation in local education.

Fully accredited by the Ministry of Education of Korea, CAU offers a wide range of bachelor's, master's and doctoral programs including a law school, global MBA programs and a medical school. Thanks to these schools' vibrant activities, CAU gained top recognition in the nation from the MEST for the last eight years.

Furthermore, CAU is recognized as the nation's best in the fields of pharmacy, culture and art education. With the help of its schools of art and culture, the university stands at the center of the Korean culture wave, currently sweeping Asia and beyond.

As a major private institution, Chung-Ang University is fully committed to guiding its Korean and international students to envision their life goals and achieve their maximum potential in the increasingly competitive global society.

Taiwan

D-School, Taiwan University

Established in spring 2015, “inspiring societies to change our world for better futures” is the mission of Innovation and Design School at National Taiwan University (henceforth, D School). We provide hundreds of co-teaching classes to serve thousands of students campus-wide.

User-oriented design thinking and place-based field thinking construct the core knowledge of D School. We commit to creating a learner-centered education embodying transdisciplinary pedagogy. Responding to the University’s vision of future-oriented higher education, D School serves as the sandbox college to pioneer borderless curricula transformations, blending learning models, community participatory teaching, and SDGs-bonded research and design programs.

In 2021, D School lunches the first transdisciplinary bachelor’s degree that allows college students to customize their learning and invent degrees according to their eagerness. By doing so, we aim to support all colleges at NTU to transform into cutting edge vehicles to carry young talents leading the world.

ZA Share

ZA Share is a Taiwan-born social enterprise that makes experimental and prosocial lifelong learning a new attitude and style of living, with a dream to see societies becoming sandboxes for co-learning and co-experimentation. Since its birth in 2015, Za Share has engaged the participation of more >1.5k change agents, >200k participants, and >120m internet traffic, which greatly contributed to the emergence of “educational alternatives” and “experimental education” as a trendy fashion in Taiwan.

By providing a platform for new media and organizing large-scale exhibitions, ZA Share creates a multi-dimensional ecosystem for innovation in education that keeps pace with the rapidly emerging future and supports passionate individuals and organizations to meet the demands of society and to address the common good.

Through digital democracy, ZA Share integrates crowd-generated educational content with entertaining or engaging forms of new media to communicate with the public effectively and bridges their initiatives to the multifacet resources in the industry, government, academia, and the people. Offline, ZA Share organizes the largest expo in Asia on innovation in education every year. In addition to the expo itself, international forums, lectures, workshops, arts, and cultural activities, business matchmaking, and “demo days” are also included as part of the overall program.

On one end, ZA Share assists changemakers, industries, and non-profit organizations and helps meet the growing demand for lifelong learning amongst the general public. On another end, ZA Share connects Taiwan to the world and builds a mutual learning and support system for all the non-conformist educational alternatives that share common values.

Awakening Cooperative Lab

Awakening Cooperative Lab (or Awakening Co-op Lab, Awakening Lab) is a grassroots think-and-do-tank founded in Taiwan, which takes a critical and systems-conscious approach to research, education, and social design, with the aim to sow seeds for convivial, regenerative, and healthy societies.

Founded by teenagers in 2012 and later became an inclusive and democratic registered organization, Awakening Lab's members across the Taiwan Strait have explored global education and youth issues by producing online content and collaborating with mainstream magazines and radio programs, which also included interviews with important leaders such as the late Sir Ken Robinson. Among Awakening Lab's works, *If There is a Reason to Study* is a documentary film that followed 5 alternative school students' lives for 7 years, examined the test-driven education system's impact on students and the risk of alienation with socialization. The film has won awards internationally, influenced education movements in Taiwan, and was lauded the "Epitome of 2016 Taiwanese Movies" and the "Most important film on Taiwanese education."

Based on the involvement of and co-learning with thousands of participants, Awakening Lab developed theories, methodologies, and change models such as Allocation Dependence, Learning by Caring, and Reflexive Media. These developments have helped disadvantaged and marginalized youth to be admitted to highly selective universities without undertaking conventional test preparations or submitting grades, found their own purpose-driven organizations, and some even become recipients of the Presidential Education Award and the Beijing Education Innovation Award. Awakening Lab has also contributed to the policy research and reform of the Experimental Higher Education Act and the facilitation of regional revitalization through critical pedagogic praxes.

Awakening's partners and clients include but are not limited to the National Development Council (Taiwan), Ministry of Education (Taiwan), National Education Radio (Taiwan), National Chung Kung University (Taiwan), Design for Change Taiwan, ZA Share (Taiwan), Commonwealth Education Media and Publishing (Taiwan), Global Views Commonwealth Publishing (Taiwan), Lipao Media (Taiwan), EDiversity (Hong Kong), Ednovators (Hong Kong), Alternative Education Resource Organization (USA).

Thailand

Centre for SDG Research and Support

SDG Research and Support Programme or SDG Move was established in 2016 after the ratification of Agenda 2030 by Thai government. SDG Move was established by Thailand Research Fund (TRF) in cooperation with Faculty of Economics, Thammasat University, to be one of TRF's Strategic Research Issue Unit (SRI Unit). Its functions were mainly to review progress of SDG research and implementation and global level, identify gap, and propose research issues that should be funded by TRF each year. SDG Move also worked with government sector, in particular, Ministry of Foreign Affairs (MFA), National Economic and Social Development Council (NESDC), National Statistical Office (NSO) as well as the Office of Natural Resources and Environmental Policy (ONEP), as well as private sector (particularly UN Global Compact Network Thailand), and Civil Society Organizations and networks.

There were two themes of research we funded in the past 4 years. The first theme was the research on the status of each SDG goal in Thailand. The second theme was SDG localization. Research teams from universities and research institutes all over Thailand submitted proposals and funded for their research. Around 24 research projects were funded through SDG Move.

In the mid of 2019, however, the national research system, of which TRF was a part, was disrupted and reformed. TRF was transformed to be the Office of Thailand Science Research and Innovation (TSRI). SDG Move, as a result, moved back to Faculty of Economics, Thammasat University, and became a programme under Policy Research Centre on Green Economy (PRO- GREEN), Faculty of Economics, Thammasat University.

In 2021, SDG Move is promoted to be a research centre called the Centre for SDG Research and Support (SDG Move), receiving internal grant for research cluster of the Faculty of Economics. SDG Move also played critical role in the Thammasat SDG Committee since the mid-2020 to integrate SDG into the university operations, research and education, and responsible for the university's THE SDG University Ranking.



Photo Credits

Unless otherwise stated below, photos and images are courtesy of the respective partner organisations.

Page 19 bdnews24.com

Page 30 bdnews24.com

Page 71 ETNB Mission

Page 74 ETNB Mission

Page 86 Handayani, 2021

Page 93 Suhirman, 2021

Page 95 Klau (Save the Children Foundation), 2021

Page 97 Zani, 2021

Page 98 Abidin, 2021

Page 100 Handayani, 2021

Page 104 Rohanim (Junior High School Principal, Medan, South Sumatra), 2021

Page 212 Newspaper, "news1", "KUKINEWS" (<http://www.kukinews.com/news-view/kuk20200520027>).

Page 213 Newspaper, "NEWSIS"

Page 287 World Wide Fund (WWF)

Page 288 Foundation for Environmental Education for Sustainable Development (Thailand)

Page 289 left Young Thai Science Ambassador Project

Page 289 right ASEAN Student Science Project Competition

Page 290 Kenan Foundation Asia

Page 291 SCG Foundation

Page 296 Thai Environmental Institute

ISBN 978-981-18-3505-6



9 789811 835056

