unesco

National distance learning programmes in response to the COVID-19 education disruption

Case study of the Republic of Korea

Education 2030

UNESCO – a global leader in education

Education is UNESCO's top priority because it is a basic human right and the foundation for peace and sustainable development. UNESCO is the United Nations' specialized agency for education, providing global and regional leadership to drive progress, strengthening the resilience and capacity of national systems to serve all learners. UNESCO also leads efforts to respond to contemporary global challenges through transformative learning, with special focus on gender equality and Africa across all actions.

The Global Education 2030 Agenda

UNESCO, as the United Nations' specialized agency for education, is entrusted to lead and coordinate the Education 2030 Agenda, which is part of a global movement to eradicate poverty through 17 Sustainable Development Goals by 2030. Education, essential to achieve all of these goals, has its own dedicated Goal 4, which aims to ***"ensure inclusive and equitable quality education and promote lifelong learning opportunities for all."*** The Education 2030 Framework for Action provides guidance for the implementation of this ambitious goal and commitments.

unesco

United Nations
Educational, Scientific
and Cultural Organization

Education 2030

Published in 2022 by the United Nations Educational, Scientific and Cultural Organization (UNESCO),
7, place de Fontenoy, 75352 Paris 07 SP, France

Cover photo: Farknot Architect/Shutterstock.com
Cover icons: Ralf's Icons/Shutterstock.com; ONYXprj/Shutterstock.com; Aha-Soft/Shutterstock.com; Fahmidesign/Shutterstock.com; iProPav/Shutterstock.com; Vectorr Icon/Shutterstock.com; notbad/Shutterstock.com; makrushka/Shutterstock.com; Robbiya/Shutterstock.com; Blan-k/Shutterstock.com

Coordinator: Fengchun Miao

Designed and printed by UNESCO

Printed in France

ED-2022/WS/25

National distance learning programmes in response to the COVID-19 education disruption

Case study of the Republic of Korea

Acknowledgements

This document is one of several case studies on national distance learning programmes in response to the COVID-19 education disruption. The case studies were designed and conducted by UNESCO's Unit for Technology and Artificial Intelligence in Education within the Future of Learning and Innovation Team. Fengchun Miao, Chief of this Unit, conceptualized the case study series, developed the framework for the data collection, designed the outline of the report of the case studies, and served as the principal editor. Michelle Selinger from ConsultEdu authored the case study of the Republic of Korea. Xianglei Zheng and Glen Hertelendy, Associate Project Officers of the Unit, supported the review and improvement of the drafts and coordinated the production processes.

Gratitude is also extended to Jenny Webster for copy-editing and proofreading the text.

Table of contents

List of figures and tables

Abbreviations

EBS	Korea Educational Broadcasting System
ICT	Information and communications technology
IT	Information technology
KEDI	Korean Educational Development Institute
KERIS	Korea Education and Research Information Service
MOE	Ministry of Education
MPOE	Metropolitan and provincial offices of education
MSIT	Ministry of Science and ICT
NIA	National Information Society Agency

Summary

This study aimed to collect information on national or government-led distance learning programmes that were established in response to the educational disruption caused by COVID-19. The key objective is to enable reflection on these policy responses and their effectiveness in minimizing the disruption and learning loss, and maintaining continuity, quality, inclusiveness and equity.

This case study is on the Republic of Korea. It is based on information and relevant documents supplied by the Korean Government for scrutiny, and reflects a centralized model where the execution of policy is devolved to 17 metropolitan and provincial offices of education.

Korea was well-prepared for pandemic-related school closures in terms of infrastructure with almost 100 per cent of its population having access to high-speed broadband and an excellent mobile network. Ownership of digital devices stands at 118 per cent, and all teachers have access to devices both at home and in school (Kemp, 2021). Collaboration among teachers was widely encouraged for the production of resources. Several important lessons were learnt, which have resulted in further plans to strengthen online learning.

Background and challenges

Before the outbreak of COVID-19, Korea's education system featured in the top ten for reading, mathematics and science in the latest PISA study from the OECD (Schleicher, 2019). The country's digital infrastructure is well-established; however, the digital divide is an issue particularly in relation to the online learning environment. In 2020, household internet connectivity was 99.7 per cent nationally, but for low-income families it was only 87.9 per cent (MSIT and NIA, 2020*b*). This means that some disadvantaged students, who rely exclusively on public education and have no access to private tuition, would have had reduced interaction with their teachers and technical difficulties when engaging in their learning, thereby widening the education achievement gap. Teachers in Korea are familiar with using digital technology in the classroom, but few had experience teaching whole classes online, which posed further challenges.

To respond to the disruptions caused by COVID-19, several objectives were set by the Ministry of Education (MOE):

To ensure the continuity of learning:

1 The provincial offices of education and schools should ensure that the time for distance learning is equivalent to that of regular school hours.

2 The provincial offices and schools should examine students' readiness for distance learning and try to prepare the infrastructure, including resources, access to platforms, a smart-device rental service, and the creation of a supportive environment.

3 Schools should ensure the participation of every student in distance learning, and prevent learning loss by preparing alternative or supplementary learning plans for any students who were unavoidably unable to participate.

To ensure the quality of learning:

4 The provincial offices will monitor the status of each school's preparation for and operation of distance learning and provide consultancy services to support effective teaching and learning and help teachers to manage their online classes.

5 Teachers should provide students with personalized feedback to maintain their interest and achieve learning outcomes.

6 The distance learning plan should reflect the objectives, directions, and content of the national curriculum while guaranteeing students' participation and right to study.

7 Students should be allowed to express their thoughts and present the outcomes of their learning activities.

To ensure equity and equality in distance learning:

8 The provincial offices and schools should ensure fair management in the operation of distance learning, including consideration for vulnerable groups such as multicultural learners and students from low-income families.

9 The provincial offices should consider the type and extent of students' disabilities and, if necessary, devise support measures to make sure they have good and equitable access to learning.

10 In the case of the lower grades in elementary schools, a homeroom teacher will assist students in their growth by giving feedback through various methods, such as counselling with their caregivers.

BELL KA PANG/Shutterstock.com

Governance and implementation strategies

Governance mechanisms

The Republic of Korea began dealing with COVID-19 in January 2020 when the MOE formed a pandemic response team to work closely with the Center for Disease Control and Prevention and the Central Disaster and Safety Countermeasures Headquarters. As the virus spread across the country, the response team was expanded so that an intersectoral approach could be deployed under the leadership of the deputy prime minister. This involved the following departments:

1. Kindergarten and Primary-Secondary School Response Department
2. Higher Education and International Students Response Department
3. Financial Response Department
4. Social Affairs Cooperation Department

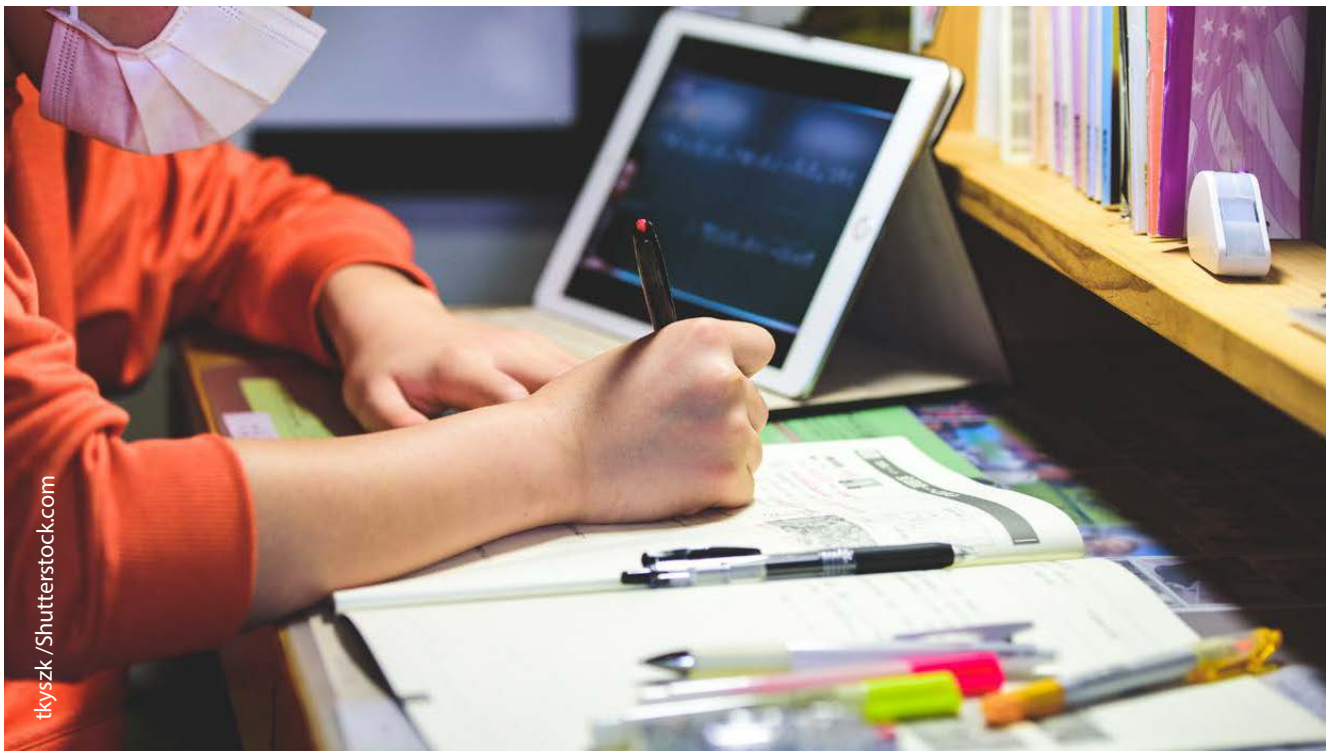
The spring semester was postponed from 2 March to 9 April 2020 as a pre-emptive measure to control the spread of the disease. This decision was based on consultation between the government and the metropolitan and provincial offices of education (MPOEs). The vice-minister of the MOE and deputy superintendents of the MPOEs formed a group to help prepare for the new semester, holding 17 meetings to agree on a distance learning policy and how it should be implemented.

The MOE then produced policy guidelines and monitored progress in each province, while the MPOEs applied those policies so they were context-sensitive to their locality, and shared information about their schools' readiness and plans for distance learning.

To ensure the continuity and quality of learning during the school closures, the different public bodies worked together to support this strategy, each taking on relevant responsibilities.

The Vice-President served as the Head of the School Innovation Support Office composed of three Sub-Offices, namely the:

1. Distance Learning Support Office: headed by the Director of Lifelong Future Education Bureau, which hosts the Distance Learning Support Team.
2. Quarantine Control and Management Office: headed by the Director of Student Affairs Bureau, which includes the General Support team, Goods Supply Team and Situation Monitoring.
3. Student Learning Support Office: headed by the Director of Curriculum Policy, which includes a Learning Support Team, Emergency Care Team and Private Institutions Management Team.



tkyszk /Shutterstock.com

Alongside the MOE and authorities, four other ministries provided additional support in April 2020 as follows:

Technology: The Ministry of Science and ICT (MSIT) provided a rental system for digital devices and free internet for distance learning for those who needed it, with the support of the private sector.

Pastoral care: From March 2020 onwards, an emergency child-care system was set up. While the Ministry of Health and Welfare continued to operate local child-care centres as normal, the Ministry of Gender Equality and Family provided an extended child-care service between 9 a.m. and 7 p.m. During the school closures, more kindergarten and primary school students needed the service, especially for emergencies and situations when parents were not allowed to take leave from work.

Some caregivers were also provided with allowances to cover their children's tuition fees. In addition, guidelines for emergency child care were distributed to kindergarten, primary and special schools to uphold the quality of service. The Ministry of Employment and Labor extended flexible working hours to allow parents to leave work earlier to care for their children.

Supporting teaching and learning: The MSIT and MOE developed '10 rules for successful online classes' to be shared with teachers and students to ensure smooth operation and security in online classes, while the MOE focused on management and established two new divisions for distance learning.

Public-private partnerships

In April 2020, the government held a consultation meeting with private companies to gather their views on distance learning content and the online platform. While high-quality public content was made available through the platform, private companies wanted to provide their content free of charge due to the needs related to the unprecedented large-scale transition to distance learning. For example, in 2020, Naver[1] hosted 3,000 audio clips and 306 videos validated by the MOE. Many companies also participated by offering technical support and distributing devices to ensure the smooth operation of the platform. For instance, companies such as LG CNS helped to operate an online class monitoring team, and Samsung-LG provided 36,000 digital devices in 2020. Also, mobile phone companies supported communication expenses for students with financial difficulties starting in April 2020 (MOE, 2020*b*). In the same month, the MOE held coordination meetings with private academies to provide guidelines on preventive measures and with the Association of Education Technology companies to share opinions on the smooth implementation of online classes.

Distance learning roll-out plan

On 9 April 2020, final-year students in middle and high schools began to shift to online classes, and on 16 April, their first- and second-year peers did as well, along with fourth to sixth-year students in elementary schools. The first- to third-year elementary school students completed the roll-out to fully online education for all K-12 students on 20 April. Figure 1 shows the time lapse between the school closures and the move to distance learning.

Figure 1 **Timeline for the implementation of distance learning for different school levels**

Year Level (Key Grades)		April 6-8	April 9-10	April 13-15	April 16-17	April 20~
High School	3 (K12)	Break (3 days)	Adjustment period	Online classes (April 9~)		
	1,2 (K10-11)		Break (7 days)		Adjustment period	Online classes (April 16~)
Middle School	3 (K9)	Break (3 days)	Adjustment period	Online classes (April 9~)		
	1,2 (K7-8)		Break (7 days)		Adjustment period	Online classes (April 16~)
Elementary School	4-6 (K4-6)		Break (7 days)		Adjustment period	Online classes (April 16~)
	1-3 (K1-3)		Break (9 days)			Online classes (April 20~)*

Source: MOE (2020*b*), p.4

* Kindergartens were closed until physical attendance was allowed, due to the nature of their highly interactive teaching and learning activities.

1 See http://www.naver.com

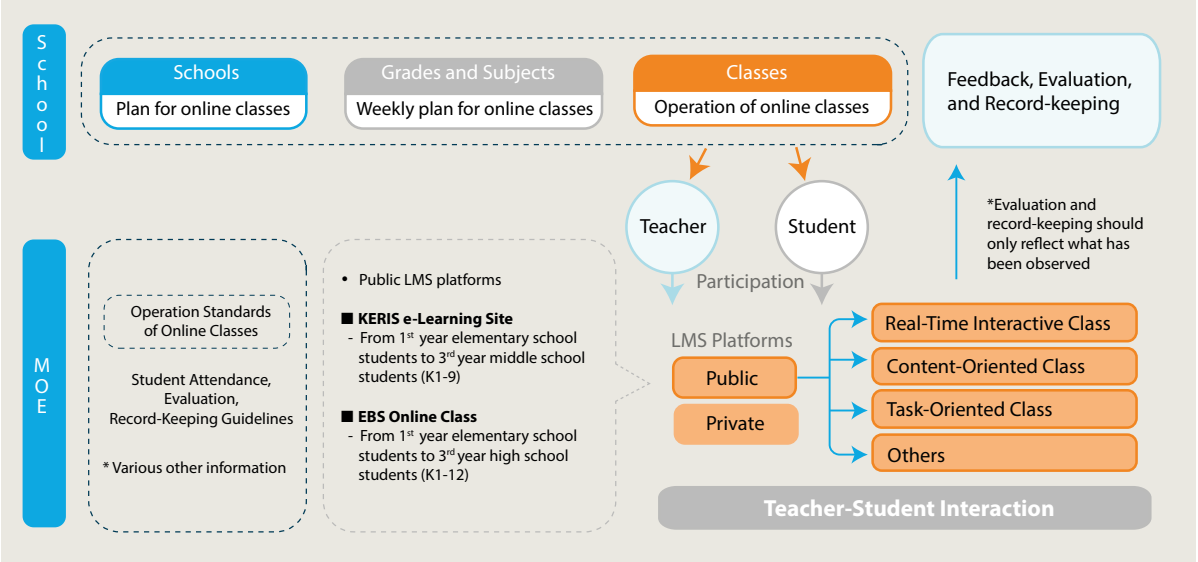
Implementation strategies

While the MOE developed a general policy to guide the direction of distance learning, the MPOEs were responsible for implementing it and adapting it for their local context. The MPOEs provided information to the MOE on their districts' readiness and plan for the roll-out, including loans of devices for students, so that each area could be equipped with resources when required. The MOE monitored the progress of distance learning in each province to ensure a smooth policy implementation. Korean Educational Development Institute (KEDI) planned, conducted and supported the roll out of online classes as well as managed online subject-specialist teachers. Schools were responsible for providing guidance and enrolling students in online classes, managing and evaluating students and preparing a school record (if necessary), and dispatching co-teachers to strength the teaching force during the distance learning period.

To guarantee students' right to study, the time allocated for distance learning was mandated to be equivalent to regular school hours, and teachers were expected to provide students with personalized feedback to maintain their interest and motivation. The MOE implemented some policy research on the effectiveness of distance learning so that they could make informed decisions on a more resilient and effective distance learning system for the future.

The flow chart in Figure 2 illustrates how policies were adopted. Online devices were not used with the youngest students in the first two years of elementary school. Instead, printed learning materials were provided and the Korea Educational Broadcasting System (EBS) TV channels transmitted programmes for these students.

Figure 2 **Operation of online classes**



Source: MOE (2020*b*), p.9

Phasing the roll-out plan helped all agencies involved to focus on the key grades, so that students in examination years missed as little education as possible. Providing child-care support reduced anxiety for parents and carers of kindergarten-age children and allowed them time to help with their children's education. Of the nation's elementary, middle, and high school students, 5.34 million or 98.9 per cent were participating in online classes by 20 April, and since they took place in school hours, there was no loss of learning recorded apart from the few days between schools closing and moving to online provision as shown earlier in Figure 1 (MOE, 2020*b*).

Four rounds of public funding

To enable the provinces and regions to allocate additional funds according to the needs of their pre-, elementary, middle and high schools, local education grants totalling 253.4 billion won (US$220 million) were agreed in early March 2020, as an expansion of the 2019 budget, to be used in response to COVID-19. A further supplementary budget of 287.2 billion won (US$245 million) was approved at a plenary session of the National Assembly on 17 March 2020 under the jurisdiction of the MOE. Additionally, an operational fund of 32 billion won (US$2.8 million) was deployed to ease the financial burden on working parents of kindergarteners whose school reopening was postponed from 23 March to 6 April 2020 (KEDI, 2020*a*).

Table 1 indicates the allocations in four rounds of government funding to support schools and universities, the digital infrastructure, students' home learning, and teacher capacity building for teachers, and provide personal protective equipment.

Table 1 **Proportion of stimulus budget allocated for the move to online learning (in million USD)**

Rounds	Total Amount of Stimulus	Education-related Amount	Descriptions
1st round (17 March 2020)	9,396.55	29.14	Support for kindergarten Support for online university courses
2nd round (30 April 2020)	6,896.55		Cash transfers to families (max 1 million won per 4-member family)
3rd round (3 July 2020)	13,620.69	435.60	Deployment of digital infrastructure for primary and secondary education (connectivity, replacement of old devices, etc.)
			Support for universities' remote learning provision
			Strengthening of online education for national universities (replacement of connectivity, distance education centres)
			Strengthening of teachers' capacities for remote work
			Support for university students' tuition
			Development of KMOOCs (online content)
			Purchase of masks and personal protective equipment for K-12
			Recruitment of online course support staff for universities
4th round (22 September 2020)	6,724.14	1,095.60	Support protection and care of 5.32 million children and students (out of school due to closures)
			Remote learning support for 1.38 million middle school students (aged 12-14), at 150,000 won per student
Total	**36,637.93**	**1,560.34 (4.26%)**	

Data Source: UNESCO (2020), p. 13

Plans for periodic monitoring and updating

When online learning began, EBS and KERIS deployed on-site troubleshooting teams to respond to technical problems, and the MOE and the MPOEs operated technical helplines to give immediate assistance to teachers, parents and students. The provincial and local offices of education were tasked with ensuring the quality of distance learning, monitoring progress and reporting to the MOE. These offices communicated directly with teachers, students and parents, covering issues such as schools' disease-prevention policies, curriculum implementation, online class support and the operation of IT equipment.

Additionally, a consultative body was created between the MOE and provincial offices to report on urgent matters and response measures. The MOE held 37 meetings with all 17 provincial offices from March to September 2020, where they discussed and monitored how each region had been responding to local transmissions in their own contexts (MOE, 2020*b*).

The consultancy was provided on teaching and learning, and on student management, as well as reviewing the appropriateness and quality of online classes for each subject to ensure there was no learning loss caused by the shift to distance education. Multiple methods were used to gather feedback, support future planning, and determine the best calendar for the academic year:

1. Each school selected a teacher representative to communicate directly with the provincial offices of education and help in solving problems quickly.
2. On-site inspections were carried out so that any areas requiring improvement could be addressed.
3. A survey was conducted among teachers to gather their opinions and concerns.
4. Webinars and meetings were held with teachers and parents to listen to their challenges and concerns regarding distance learning and assist in providing solutions.

Plans for the return to school

With the government's decision to ease social distancing measures in daily life, the MOE organized a phased approach to reopening schools, starting with third-year high school students on 20 May 2020. By 8 June, all schools had reopened nationwide. Dates for reopening were staggered in different regions depending on circumstances to minimize student contact in schools, and blended learning was put into operation. An efficient management system led by a pan-government team was established to provide supervision and assistance to international students before their arrival and prevent them from being denied entry into the country.


Casezy ideas/Shutterstock.com

Distance learning solutions

Technological solutions

School e-readiness

Schools in the Republic of Korea were better prepared than in many countries due to the introduction of the previous national masterplan's 'SMART Education 2011–2015' initiative, which had a strong focus on the integration of digital technology. 'SMART' in the title stands for self-directed, motivated, adaptive, resource-enriched, and technology-embedded, which reflect the goals of the strategy. The initiative enhances the agenda for schools and educational policies by promoting digital technology as a primary source of learning, rather than a supplementary one (UNESCO, 2019). It consisted of five key tasks, which aimed to add to the preparedness of schools for pandemic-related school closures:

1. Development and application of digital textbooks to overcome the limits of printed textbooks, improve teaching in the classroom, and support the implementation of personalized learning.
2. Institutionalization of online classes, which were to be as recognized as in-person classes, and the introduction of online evaluation systems to ensure the best learning options for students.
3. Creation of an environment for the public use of educational content and reinforcement of media literacy and ICT ethics.
4. Strengthening of teachers' competencies to put SMART education into practice.
5. Practical use of the content created by public agencies and individuals through a cloud-computing-based environment in every school, and collaboration through collective intelligence and social learning.

Prior to the pandemic, distance education had been put in place for nearly 10,000 secondary school students who, for various reasons, were unable to attend school (MOE, 2021*a*). This meant that some teachers and students were already well versed in the practicalities of distance education. Since 2012, the MPOEs had been jointly conducting online asynchronous lessons to ensure learning opportunities for students who had failed to complete the curriculum, e.g. due to natural disasters, illness, exclusion, relocation overseas, and work or child-care commitments. For students in agricultural and fishing villages, a joint online curriculum provided interactive distance classes to give them a choice of subjects and access to teachers. Across the country, most teachers were equipped with ICT skills, but not all of them were accustomed to using digital devices for online learning. Those who were having difficulties with the ICT were offered further training.

There were various types of distance learning classes conducted in collaboration with the MOE, MPOEs and related organizations, such as the e-school programme for student athletes in middle and high school, the School For You service for students with health conditions, and a support system to increase the academic skills of those who were not attending or had dropped out of school. Together, the experience and know-how generated by these initiatives made it easier to develop relevant guidelines for the COVID-19 crisis.

Teachers and students had also been provided with some digital skills training due to a previous MOE recommendation for curriculum expansion running to 2025. This stipulates that schools should teach digital skills to elementary and secondary school students for one to two hours per week. The ICT curriculum for secondary students will also be expanded to include: information culture, information and data, problem-solving and programming, computing systems, and artificial intelligence (AI).

Home e-readiness

The broadband infrastructure in the Republic of Korea is pervasive with no significant gaps in the speed of connectivity; household internet penetration was 99.7 per cent as of January 2021, and 5G is being rolled out rapidly. The country's rate of smartphone ownership is one of the highest in the world at 118 per cent (Kemp, 2021), meaning some people have more than one device. The 2020 Internet Use Survey Statistics Table shows that 95.9 per cent of those aged under 19 have a smart device (MSIT and NIA, 2020*a*).

Although all teachers have a computer and internet access at their homes, the MOE provided 200,000 new PCs to replace outdated models and make sure they were able to teach online. In addition, new tablets were distributed to 400 schools that were pioneering the use of online textbooks (MOE, 2020*a*).

While internet access charges are very affordable at around US$0.03/1Mb, low-income families receive government support to pay them. A scheme was launched for the rental of digital devices which was able to supply all 283,000 students who applied, and for the 174,000 students who did not have an internet connection at home, they received either their internet subscription fees or mobile Wi-Fi routers (MOE, 2020*a*).

Furthermore, for students who were unable to participate in online classes, educational TV channels were expanded, and printed learning packs were sent to them by post. Non-financial support for students on low incomes also came from the private sector. Korea's three major telecom companies (LG, KT and SKT) decided not to charge a data fee for accessing educational websites and content.

Centralized distance learning platforms

Distance learning solutions were largely centralized, and involved a mix of different technologies. To enable blended learning, various instruction models were introduced according to grade and subject. From March to April 2020, ahead of the online learning roll-out, the MOE doubled the number of servers so that all 3 million students in elementary, middle and high schools nationwide could simultaneously access digital materials across all modes, levels and subject matters through *e-Hakseupteo* ('e-learning system'),[2] EBS Online Class,[3] and Korea Education and Research Information Service (KERIS).[4] Another tool was School-On,[5] an integrated platform designed to allow teachers to create online classrooms, support their students' learning with daily instructions, and provide counselling. It was launched on 10 March 2020.

The most frequently used public platforms were EBS Online Class (used by 35.1 per cent of students), and the Wedorang Learning Community and *e-Hakseupteo* developed by KERIS (31.8 per cent). Learners also used domestic private platforms including Naver Band, Kakao Talk, and Schoolbell-e (18.2 per cent), and global ones such as Google Classroom and Microsoft Teams (14 per cent) (MOE, 2020*b*). Usually, a school leader or a teacher could choose which platform to use throughout the course of the distance learning period. The two public platforms, EBS Online Class and KERIS *e-Hakseupteo*, were expanded to allow 6 million students to access them simultaneously and enable all primary and secondary students to participate in real-time interactive classes (Table 2). Teachers tended to use Naver Band for interaction as well as, to a lesser extent, other global applications such as Zoom, Google Hangouts/Meet, YouTube Live, and Cisco WebEx Meetings (MOE, 2020*b*).

Table 2 Central online platforms

Name (weblink)		Main functionalities	Main subjects and grade levels covered	Number of synchronous users accommodated	Percentage of users
1	EBS Online Class (https://www.ebsoc. co.kr)	Synchronous and asynchronous learning, formative tests, chat/messaging, checking students' rates of progress, etc.	All subjects & grade levels	9 million	35.1%
2	KERIS e-Hakseupteo (https://cls.edunet.net)			1.5 million	31.8%

Data source: MOE (2020*b*)

2 See https://cls.edunet.net
3 See https://oc.ebssw.kr
4 See https://www.keris.or.kr/eng/main.do
5 See http://onschool.edunet.net

Table 3 **Types of online classes**

Types		Description	
Real-time Interactive Classes		A video-conferencing platform enables real-time discussions and exchange of feedback between teachers and students. • Examples of video-conferencing platforms: Naver LINE WORKS, Gooroomee, Google Meet, Microsoft Teams, Zoom, Cisco WenEx, etc.	
One-way Classes	Content-Oriented Classes	Lecture type	Teachers provide pre-recorded video lectures and/or learning contents to students. They monitor whether students are watching and reply to student's questions.
		Lecture + Activities type	After watching the lecture, students engage in online discussions by exchanging opinions with their peers about what they have learned.
	Task-Oriented Classes	Teachers assign tasks for self-directed learning and monitor student's progress based on achievement standards for each subject.	
Others		Schools can adopt other types of online classes depending on the circumstances of the district offices for education and schools.	

Source: MOE (2020*b*), p.10

Provinces were allowed the freedom to design their own online classes and they had multiple formats, including pre-recorded lessons and real-time interaction. The usage of the various platforms and applications is summarized in Table 3.

Readiness of digital content

Three types of distance learning were introduced to elementary, middle and high schools: 1) synchronous interactive classes, 2) asynchronous content-based classes, and 3) independent assignment/activity-based classes. Teachers cooperated in the development of materials and established plans for collaborative teaching to support each other and develop pedagogical methodologies for online learning.

The government eased copyright regulations until the end of the pandemic to facilitate this development of teaching materials, in consultation with the Ministry of Culture, Sports and Tourism and copyright-advocacy organizations, and published FAQs for teachers on using distance learning. The relaxed regulations say that specific photos, video clips and written material from school textbooks can be used without restriction, and private music and video recordings can be used if this does not damage the original author's interest. The MOE is preparing a more permanent law on distance learning so that teachers will not have to worry about copyright regulations.

TV programmes played a large part in provision; EBS transmitted programmes via terrestrial channels, satellite and cable, websites, mobile internet, and IPTV, as illustrated in Table 4.

Table 4 **EBS TV programmes**

Channels of the Korean National Educational Broadcasting System	Main contents	
EBS 1	Knowledge/democratic education	
EBS 2	Creative/convergence education	
EBS+ 1	High school/ College Scholastic Aptitude Test (CSAT)	
EBS+ 2	Elementary/middle/vocational education	
EBS English	English	
EBS Kids	Infants'/kids' content	
EBS FM Radio	Liberal arts/culture	
EBS programme	Contents	Media
School life (1st year of elementary school) Basic knowledge (2nd year of elementary school)	Guidance on what to expect in classes, at meal times, etc. Korean and Math	TV broadcasting
Live class (first year of elementary school to final year of high school)	Korean, English, Math, Social Studies, Science (synchronous lessons)	YouTube channels
Class for middle school students	Korean, English, Math, Social Studies, Science	EBS Online Class

Source: UNESCO (2021)

Data management and security

Online security was taken very seriously, and special cybersecurity officers were deployed to strengthen responses to hacking, service attacks and other incidents. The MOE's Cyber Safety Centre prepared measures to check for security vulnerabilities and bolster the operation of websites for online education. Its other tasks include responding to internet violations, preventing information security breaches, and protecting users' personal data. Data on learners' achievement of outcomes was only provided to teachers with learners' agreement, for the purpose of working out their rate or level of progress and/or checking attendance and participation rates. Additionally, before collecting students' information, the consent of guardians had to be obtained.

To effectively respond to cyberthreats, the MSIT and National Police Agency worked together and conducted security vulnerability checks. They focused on threat actors targeting remote education commercial sites and shared information with the MOE on weaknesses and the latest information security trends. The MOE strengthened the 'emergency response and information sharing system' for educational institutions by cooperating with KERIS, MPOEs, and private security companies, and running a hotline so that information about security threats could be shared with the agencies involved. The National Police Agency also created a welfare monitoring system to check the whereabouts and safety of students who were absent from school for an extended period and conduct a further investigation if their status was unclear.

The MSIT and MOE further supported data security by developing ten rules to be shared with teachers and students to ensure the smooth operation and security of online classes (KEDI, 2020*a*), such as the following:

- Protect personal information: taking or distributing photos of teachers or friends during class is prohibited; delete personal information after using public computers and digital devices;
- Enhance video conference security: set a classroom password, privatize links, and allow only invitees to enter to prevent unauthorized access;
- Use safe software programs: refrain from using video conferencing applications and websites that are vulnerable to security risks, such as personal information protection, or use them after installing security patches and software; and
- Be vigilant for unknown information: do not open and delete emails, URLs, and links whose sources are unclear.

Training and support for teachers

Teacher training

In 2020, the government hired an additional 30,000 teaching staff, including retirees returning to service, to cover a range of duties during and after school hours (KEDI, 2020*b*). The MOE had already established the use of digital technology as a requirement for teacher education in universities since the beginning of the 21st century and had provided various training sessions for teachers to improve their competence in this area. Further training was given from 2017 to 2020, and Table 5 highlights the main topics that it covered.

Table 5 Types of training courses for teachers between 2017 and 2020

Areas		2017		2018		2019		2020 (up to September)	
		Number of courses	Number of trainees who completed courses	Number of courses	Number of trainees who completed courses	Number of courses	Number of trainees who completed courses	Number of courses	Number of trainees who completed courses
ICT in primary and secondary education	SW and AI education	3	512	6	5,217	4	2,475	5	1,300
	Digital textbooks	1	78	6	699	11	1,344	3	229
	ICT ethics and prevention of cyber-violence	1	80	2	73	1	170	1	417
	Copyright related to education	0	0	0	0	1	67	1	48
	EdTech (Knowledge Spring)	-	-	-	-	-	-	43	170
ICT in academic research		0	0	13	434	13	438	-	-
ICT in educational administrative and financial services		2	74	2	120	2	122	1	65
Others (training in content development, international forums, ICT utilization, etc.)		2	44	-	-	2	104	1	17
Total		**9**	**788**	**29**	**6,543**	**34**	**4,720**	**55**	**2,246**

Data Source: Adapted from MOE (2021*a*), p.105

MPOEs had worked together since 2012 to produce pre-recorded classes to guarantee that students who could not attend face-to-face education had access to classes. They also trained for those teachers who wanted to record their classes.

Sharing of best practices

To build teachers' online skills, the MOE made use of the distance-learning expertise of 495 pilot schools[6] that shared their resources and ideas. The pilot schools were selected by MPOEs to implement distance learning before

6 NB this is a different piloting programme than the one mentioned earlier in section 4.1.2, in which 400 schools participated.

other schools and serve as a model. These schools also encouraged the use of online teacher communities and professional training bodies to aid and improve online classes, such as 'The Community of 10,000 Teachers', 'School-On', and 'The Knowledge Spring' (*Jisik Saemteo*) (MOE, 2020*a*). After participating in training, teachers are provided with follow-up programmes in which they can use self-directed materials to strengthen their competencies in designing and facilitating distance learning, and they can share their experiences with other teachers through these online communities.

Offline support

The MOE recognized the benefits of offline mentoring for teachers as well, and encouraged 1,827 pioneering teachers and 300 teacher trainers to provide in-person or outreach consultation to help in the production of better online materials (MOE, 2020*a*). This was permissible in lockdown because the Korean government allowed up to four people to gather (and in the capital area, up to two). These peer coaching services became integral and official parts of the new formal teacher training body, The Knowledge Spring, which was established in September 2020 to make funding and support more efficient.

General guidelines

Teachers with previous experience, knowledge and skills in educational technology helped in the development of relevant guidelines for managing distance education during the school closures. A guide to distance learning was produced for teachers and distributed through the School-On platform and a YouTube channel.[7] The MOE published guidelines for elementary, middle, and high schools on 27 March and 7 April 2020 outlining criteria for recording students' achievement, attendance, and evaluation. These aimed to ensure that online learning was as equivalent as possible to in-school education.

Social care for students

Social care for students at home covered three areas:

1 **Maintain social development during distance learning.** Students had real-time meetings twice a day with their homeroom teachers and classmates to support their emotional stability and continue the development of their social skills. For periods of distance learning lasting more than a week, teachers were asked to connect with students and parents/carers through either the telephone or the messaging services facilitated by e.g. Kakao Talk and Naver Line. One school broadcasting club made a video clip describing high school life for their first-year peers who were unable to begin their high school experience due to COVID-19. This video includes footage of the school building, rules, convenience facilities, music room and science labs, and the infection control measures they should maintain at the school.[8]

2 **Improve students' mental health and well-being.** Mental health was considered as very important. To relieve stress and anxiety, newsletters and brochures were published with details on how to prevent infection, and school websites posted relevant information to improve people's understanding of the pandemic. Students were informed of various remote counselling tools, including phone calls, mobile chats and online bulletin boards. The MPOEs established support centres to aid students by connecting them to mental health professionals.

3 **Ensure nutritional health.** With the discontinuation of the lunch service during the school closures, the MOE established a plan to use the budget for school lunches to deliver fresh agricultural produce to the homes of primary and secondary school students free of charge. To guarantee the quality of the produce, the Ministry of Agriculture, Food and Rural Affairs undertook inspections before sending the packages. The MOE, MPOEs and local governments worked together to provide this service either by delivering the packages to students' homes or by giving them vouchers with which food could be bought, depending on the local context.

Support for caregivers

Without teachers and students having adequate digital competence, any move to distance education is limited from the outset. Moreover, digital competencies are necessary for caregivers who support learners at home. The parents of secondary school students (grades 7 to 12), although digitally literate overall, were unfamiliar with online education and were invited to contact their children's teachers by phone at any time to ask questions and to discuss their concerns. Schools distributed information on their distance learning plans to both students and parents, including details of the curriculum, teaching methods, assignments and safety precautions.

7 See http://youtube.com/c/onlineschool
8 See http://youtube.com/watch?v=vql3rmN4014

Strategies for ensuring inclusiveness and equality

Equitable access to internet and digital devices

As mentioned above, in terms of access to digital devices, all students could borrow tablets provided by private companies at no cost as the budget for these was covered by the MOE as described earlier. As of 16 April 2020, approximately 280,000 students had borrowed digital devices, which is 5.3 per cent of all students (MOE, 2020*b*). Students from low-income families without digital devices (e.g. recipients of education grants), as well as those from families with multiple children, single parents, grandparents as primary carers, and multicultural backgrounds were given priority in borrowing tablets from their schools. Additionally, the MOE subsidized internet subscription fees for economically disadvantaged students in cooperation with the MSIT, Statistics Korea, local governments and the MPOEs, as well as private companies.

Assistance for disadvantaged students

Those students who were unable to access online learning received alternative or supplementary learning plans. Extra teaching support was made available to help students with distance learning, including after-school classes, and an emergency child-care service was set up and open to those students who applied. MPOEs and schools were tasked with ensuring equal opportunities for learners from vulnerable groups, and they were provided with tailored one-to-one support outside class time and supplementary instructions for using digital devices.

The MOE hired part-time instructors to help 29,000 underprivileged students at elementary schools, while other teachers were assigned to work one-on-one temporarily with about 2,300 high schoolers who were struggling (CNBC, 2020). After-school instructors were on hand to assist students with online learning tasks and queries on how to access websites and upload assignments.

Assistance for multicultural students

The Multicultural and Receptive Education Model was disseminated to more than 660 schools in Korean during the year of 2020. Students from multicultural families were supported in the following ways:

+ Distance learning materials in three other languages (Chinese, Russian, and Vietnamese);
+ Interpreting services in cooperation with the support centre for multicultural families in each MPOE;
+ Intensive face-to-face Korean language classes, either one-to-one or in small groups;
+ Learning packs, materials and resources for each subject; and
+ Services and guidelines to support use of the distance learning technology.

The Republic of Korea has long believed in gender equity, so this was not identified as a particular issue for attention in terms of facilitating special assistance.

Support for students with disabilities

The MOE established a targeted website[9] where it published guidelines to support students with disabilities and uploaded various resources in cooperation with on-site teams in the MPOEs. Home visits were organized for them, together with mental health support, and their learning progress was monitored.

Furthermore, customized learning was provided according to the nature of their disability, and an online room for disabled students was set up where they could get accessible content.

Targeted actions for students with disabilities include:

+ EBS Online Class materials were made available in Braille for students with a visual disability;
+ Subtitles and sign language were available for EBS Online Class for students with a hearing disability;
+ Assistive technology and smart devices including notebook computers and tablets were distributed to students with a physical disability;
+ Special education teachers visited students with disabilities regularly to provide either one-to-one or two-to-one teaching; and
+ Specialized learning packages were produced so that students could participate in task-based learning at home.

9 See http://www.nise.go.kr/jsp/onlineedu/index.jsp

Evaluating distance learning strategies and programmes

A comprehensive team was formed to monitor distance learning during COVID-19 and to identify any difficulties in implementing online classes. The team carried out regular field inspections of schools to ensure that the online learning was of the highest quality and guidelines were issued to all teachers, which included the recommended amount of time for virtual classes and content based on students' developmental level.

Statistics for online classes drawn from the two public platforms, EBS Online Classes and KERIS *e-Hakseupteo*, revealed aspects such as the participation and satisfaction rates, and the proportion of teacher-developed classes. A survey was conducted by the MOE through the Online Education Administration Platform, with the help of the research institute Real Meter, and secured responses from 297,535 students (from third grade up to high school), 32,133 teachers and 422,792 parents (MOE, 2021*b*). At all school levels, the findings revealed that:

- The participation rate for online classes in April 2020 was 98.9 per cent, with a student satisfaction rate of 81 per cent as of November 2020 and parent satisfaction rate of 56.7 per cent. About 1.1 per cent of students were unable to attend class, due to e.g. illness or temporary internet disconnection.
- The proportion of distance learning materials created by teachers reached 75.3 per cent between March and June of 2020.
- 69.2 per cent of respondents perceived online classes as being effective in enhancing students' ability to undertake self-directed learning, with 56.7 per cent of students and 69.2 per cent of teachers wanting online classes to continue.
- 177,300 students were enrolled in emergency child care, and 99.3 per cent of parents whose children have disabilities were satisfied with these services.
- 180 out of Korea's 182 special education schools provided full-time face-to-face learning, while the remaining 2 offered blended learning.
- 124.86 million pieces of digital content were uploaded by teachers.


allensima/Shutterstock.com

Good practices in social care, teaching, learning and assessment

Online learning and caring programmes for kindergarten children

One good example of online learning and caring was Kindergarten in my Home, a live EBS broadcast for kindergarteners, based on the national curriculum (see Figure 3). The programme was on from 9:40 to 10:30 a.m., Monday to Thursday, and included singing, dancing, cooking, crafts and animation. It taught them skills for online learning such as how to communicate with their teachers through video calls. Worksheets and guidelines on follow-up activities were made available through the internet so that students and parents could try them after watching the programme.[10]

Figure 3 Screenshot from Kindergarten in my Home

The use of online communities of practice to support and coach teachers

The Community of 1,000 Representative Teachers, a voluntary community of teachers to support online learning, played a significant role in developing teachers' confidence in distance education. The just-in-time, just-enough support that such communities of practice bring has long been recognized and it is commendable that the MOE positively encouraged this to the extent of setting up a permanent entity to support teacher development. By April 2020, there were nearly 9,000 teachers in the Community of Representative Teachers.

Another peer support mechanism was Teacher-On, which featured 180 teachers who were recognized as being competent and innovative in teaching with technology. They were asked to develop resources that showcased their ideas and practice in order to assist less confident teachers, particularly in all aspects of online teaching. This service was launched on 16 March 2020 and helped teachers set up remote access to their PC, open and operate online classrooms, and use the digital materials.

Moreover, 100 teachers gathered to create an e-learning content hub website for collaboration called *Hakgyogaja*[11] ('Let's go to school'), in response to COVID-19. This site requires no login and is accessible from any device. It covers school levels from kindergarten to middle school. In less than two months, the site achieved 20 million views and 100,000 user visits per day (Vamvakitis, 2020). There is also a complementary YouTube channel containing interviews with celebrities and teachers highlighting best practices. The teachers hold regular video meetings to make decisions and brainstorm ideas to improve the site.

Solutions for assessment and national examinations

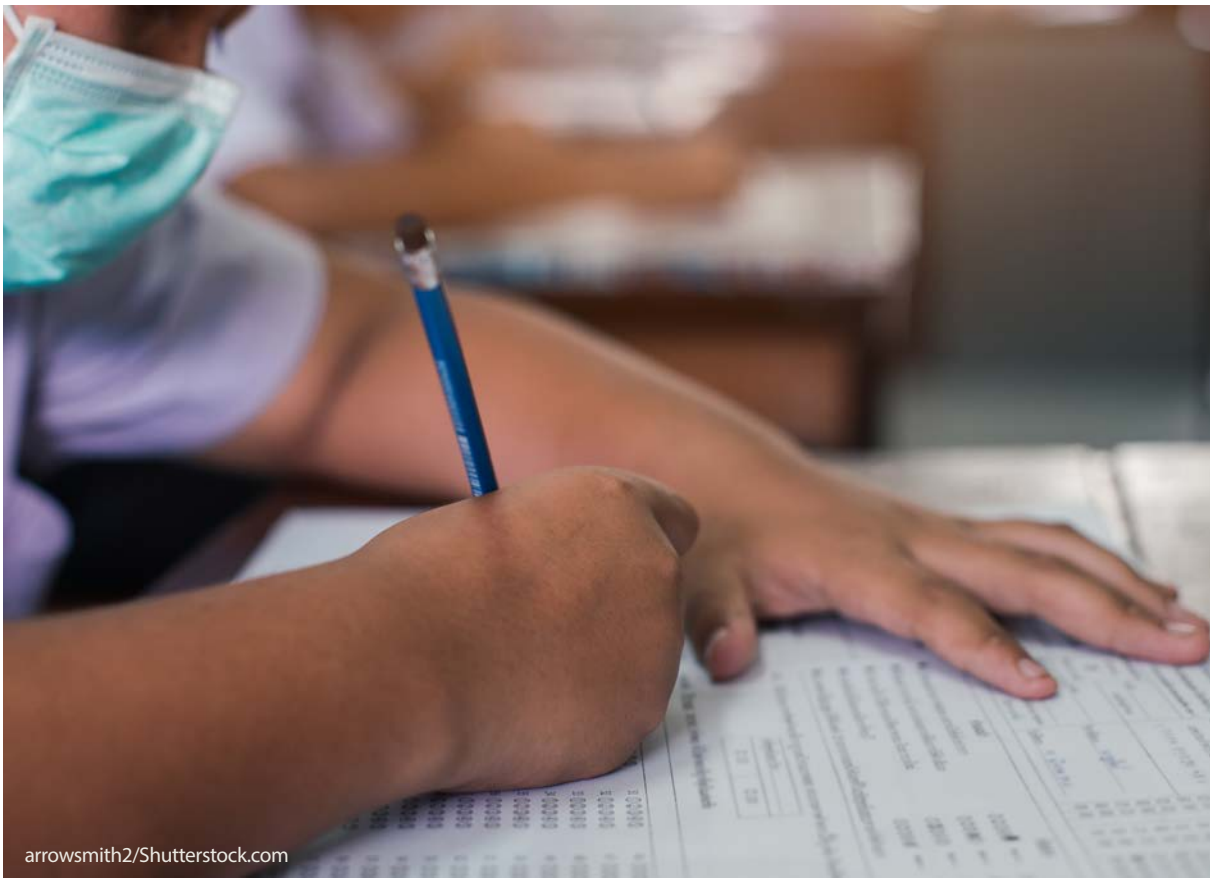
Students traditionally do paper-based and performance-based assessments. It was decided that paper-based assessments would not be carried out until after students returned to school, but would cover their period of online studies. Performance evaluations were carried out for online classes based on teachers' observation of students' participation, including in synchronous debates and discussions, and recorded videos of presentations, physical activities or musical performances.

Students were also provided with various types of digital quizzes and were able to submit their assignments through the learning management system for feedback from teachers and peers. The KERIS *e-Hakseupteo* platform featured question banks to check students' understanding and explanatory videos that they could watch after attempting to answer the questions.

10 See https://home.ebs.co.kr/livehome/main
11 See http://www.gogo.school

Since March 2019, the EBS-operated DANCHOO program[12] has provided personalized one-to-one tutoring services for high school students preparing for the College Scholastic Aptitude Test (CSAT), enabling them to avoid extra tutoring fees. Using big data and AI, tasks are set to a student's learning level according to their academic records and sample questions from previous CSATs. The service enables students to effectively use self-directed learning and competency-based activities without any help from teachers. The cumulative number of direct visits to the website exceeded 20 million by January 2020 and continued to increase substantially during the school closures and after reopening (MOE, 2021*a*).

Over 420,000 CSATs were taken in 2020. To guarantee that all students could sit the exam in a safe environment, it was rescheduled from 19 November 2020 to 3 December 2020, with more test rooms and supervisory staff. Each candidate's COVID-19 status was classified as 'ordinary', 'under self-isolation' or 'confirmed case', and disease control measures were adopted accordingly. For students in isolation, separate test venues were set up in eight regions across the country. At the request of the MOE, all schools switched to online learning a week before the test to minimize the risk of candidates being exposed to the virus. Additionally, to ensure equal opportunities in college admissions, the MOE changed the screening period, reduced the number of practical exams and lowered the minimum CSAT scores necessary to apply for university (MOE, 2020*a*).



arrowsmith2/Shutterstock.com

12 See https://ai.ebs.co.kr

Lessons learnt

Five key lessons were identified from the country's response to the pandemic:

1 **Build safety nets for school communities.** The MOE put forth its best efforts to protect students' safety, learning and daily well-being through its cooperation with provincial offices of education. In particular, disease control, learning support and child-care services were implemented for students to continue learning in a safe environment. Protective equipment such as masks and hand sanitizer was supplied and workforce disinfection was reinforced; all students monitored their health with a mobile application before attending classes; and social distancing in schools was managed through a blended learning approach. Another aspect of this safety net relates to the quality of learning, with tailored support being provided for each student through AI, technology-led mentoring, and customized consulting. Finally, emergency child care was rolled out thanks to inter-ministerial cooperation. Comprehensive support for parents in need helped to ease the burdens placed on them, and after-school programme teachers and ICT instructors served as online assistants to help students participate in distance education.

2 **Focus on vulnerable students.** Korea focused on supporting vulnerable learners (e.g. students from low-income families, special needs students, students from multicultural families, and students with disabilities) to narrow learning gaps using the various measures outlined in section on 'Strategies for ensuring inclusiveness and equality'.

3 **Support teachers.** The multifaceted roles of teachers were highly valued in Korea's response to COVID-19. In addition to building the capacities of teachers to use online platforms and organize hybrid learning, the government tried to reduce their administrative burdens so that they could focus on delivering teaching and supporting learners' well-being.

4 **Strengthen intersectoral collaboration.** Korea demonstrated that partnership and coordination are the keys to a successful crisis response. For example, the MOE, Ministry of Health and Welfare, Ministry of Labour and Employment, and Ministry of Gender Equality and Family all worked together to offer child-care services. The MOE also cooperated with the heads of MPOEs to create a joint safety net for all students, and the government partnered with private-sector companies such as Samsung and LG to make devices available in a short period of time.

5 **Pay attention to the well-being of learners.** In all response actions, the well-being of students received as much recognition as their learning. This translated into various services and platforms provided for counselling, guidance and communication.

Adoption of blended learning for post-pandemic education

According to the MOE's paper *2020 Education in Korea* (2020*a*), the Korean Government's plan for innovation in the public education sector includes:

- Supporting the development of students' competencies through customized career education.
- Innovating the education system with digital technologies.
- Building teachers' competencies so that they can be the agents of innovation.

The COVID-19 crisis has helped to accelerate these plans. To minimize learning loss and foster the continuity of learning, schools were reopened on 20 May 2020, and hybrid learning with both online and in-person instruction was adopted. The government announced new school operation guidelines and a school reopening plan to encourage compliance with social distancing rules and make sure that the public health measures were understood and schools were clear on the actions they needed to take:

- **The school operation guidelines** aimed to help all schools respond quickly to any learning challenges caused by the crisis. If schools had to close for more than 15 days, they could adjust the timing of summer and winter breaks and reduce the number of school days by 10 per cent (18 days for kindergarten, and 19 days for elementary, middle and high school). Flexibility in documentation and assessment requirements was intended to lessen the burden on teachers.
- **Guidelines on social distancing and density criteria in schools** were established to ensure that learning could continue in a safe environment during the pandemic. The school reopening plan was aligned with the 'Social Distancing Stages' mandated by the central government. The specific details of the reopening measures were left to the discretion of the MPOEs.

Following the distance learning period, the MOE actively solicited feedback from all stakeholders, based on which the following five guiding principles were developed to shape education in the country for the years to come:

1. Ensuring the continuity of learning and growth during a crisis;
2. Guaranteeing education for all without a single student left behind;
3. Respecting teachers' expertise and autonomy and building trust;
4. Pre-emptively responding to changes in the future environment; and
5. Prioritizing students' health and safety.

Based on consultations and feedback from teachers, students, and parents, the MOE also published the top ten initiatives for future education (see **Table 6**).

According to the MOE, in the future, school curricula will focus on teachers and students. Several education policies will be revised such those relating to the high school credit system, secondary-level vocational education, and digital learning content. Pre-service training will be reformed to ensure that it empowers teachers to drive changes at schools and shape a democratic, future-oriented education system. In terms of learning infrastructure, aside from the development of digital-based curricula, old school buildings will be remodelled to create a safe environment for public health crises. As a core principle of education, support for disadvantaged and marginalized groups will be strengthened to put achievement within the reach of all learners.

Table 6 **Top ten initiatives for future education**

Classification	Goal	Top ten initiatives
Early childhood, elementary and secondary education	Strengthening accountability and autonomy in education	1. Revising the curriculum 2. Considering a comprehensive reform of the teacher management system 3. Building future-oriented schools by prioritizing students 4. Establishing a safe education system to ensure student learning and development
Higher and lifelong education	Seeking innovation through sharing and cooperation	5. Promoting the advancement of universities and local communities based on collaboration and sharing 6. Equipping students with the qualities that meet the future needs of society 7. Offering advanced vocational education to make graduates job-ready 8. Guaranteeing lifelong learning for all
Establishing a foundation	Establishing a foundation to preemptively address future challenges	9. Laying the foundation for digital transition 10. Facilitating cooperative governance for future education

Source: Adapted from MOE (2020*a*)

References

Bozkurt, A., Jung, I., Xiao, J., Vladimirschi, V., Schuwer, R., Egorov, G., Lambert, S. R., Al-Freih, M., Pete, J., Olcott Jr., D., Rodes, V., Aranciaga, I., Bali, M., Alvarez Jr., A. V., Roberts, J., Pazurek, A., Raffaghelli, J. E., Panagiotou, N., de Coëtlogon, P., Shahadu, S., Brown, M., Asino, T. I., Tumwesige, J., Ramirez Reyes, T., Barrios Ipenza, E., Ossiannilsson, E., Bond, M., Belhamel, K., Irvine, V., Sharma, R. C., Adam, T., Janssen, B., Sklyarova, T., Olcott, N., Ambrosino, A., Lazou, C., Mocquet, B., Mano, M. and Paskevicius, M. 2020. A global outlook to the interruption of education due to COVID-19 pandemic: navigating in a time of uncertainty and crisis. *Asian Journal of Distance Education*, Vol. 15, No. 1., pp. 1–126. https://doi.org/10.5281/zenodo.3878572

CNBC. 2020. *Coronavirus pandemic widens learning gap in education-obsessed South Korea*. Available at: https://www.cnbc.com/2020/10/21/pandemic-widens-learning-gap-in-education-obsessed-south-korea.html (Accessed 15 March 2022.)

KEDI. 2020*a*. Distance learning in Korea in response to COVID-19. *COVID-19 Special Issue No.1*. Chungcheongbuk-do, Korean Educational Development Institute (KEDI). Available at: https://www.kedi.re.kr/eng/kedi/cmmn/file/fileDown.do?menuNo=200017&atchFileId=FILE_000000000001164&fileSn=2&bbsId=B0000008 (Accessed 9 March 2022.)

——. 2020*b*. Reopening Schools in Korea amid the COVID-19 Pandemic. *COVID-19 Special Issue No.2*. Chungcheongbuk-do, Korean Educational Development Institute. Available at: https://www.kedi.re.kr/eng/kedi/cmmn/file/fileDown.do?menuNo=200017&atchFileId=FILE_000000000001237&fileSn=2&bbsId=B0000008 (Accessed 15 March 2022.)

Kemp, S. 2021. *Digital 2021: The Republic of Korea*. Singapore, Kepios. Available at: https://datareportal.com/reports/digital-2021-south-korea (Accessed 10 March 2022.)

MOE. 2020*a*. *2020 Education in Korea*. Sejong, Ministry of Education (MOE). Available at: https://www.moe.go.kr/boardCnts/fileDown.do?m=0502&s=english&fileSeq=0302ac9ce7697c307be13e3e33160195 (Accessed 10 March 2022.)

——. 2020*b*. *Responding to Covid-19: Online Classes in Korea, A Challenge Toward the Future of Education*. Sejong, Ministry of Education (MOE). Available at: https://kosis.kr/files/covid/Responding_to_COVID-19_ONLINE_CLASSES_IN_KOREA.pdf (Accessed 10 March 2022.)

——. 2021*a*. *2020 White Paper of ICT on Education in Korea*. Ministry of Education (MOE). Available at: https://www.keris.or.kr/common/nttFileDownload.do?fileKey=3939b695f942d5c0244b6cc51f065a20 (Accessed 16 March 2022.)

——. 2021*b*. *Survey on the feedback of distance-learning progammes during COVID-19 Pandemic.* Unpublished.

MSIT and NIA. 2020*a*. *2020 Internet Use Survey Statistics Table*. Ministry of Science and ICT and National Information Society Agency. Available at: https://www.nia.or.kr/common/board/Download.do?bcIdx=23270&cbIdx=99870&fileNo=4 (Accessed 15 March 2022.)

——. 2020*b*. *2020 디지털 분할에 대한 보고서* [*2020 The Report on Digital Divide*]. Seoul, Ministry of Science and ICT and National Information Society Agency. (In Korean.) Available at: https://doc.msit.go.kr/SynapDocViewServer/viewer/doc.html?key=53f1aa87b03c4906b878276f9eabc488&convType=img&convLocale=ko_KR&contextPath=/SynapDocViewServer (Accessed 16 March 2022.)

Schleicher, A. 2019. *PISA 2018: Insights and interpretations*. Paris, OECD. Available at: https://www.oecd.org/pisa/PISA%202018%20Insights%20and%20Interpretations%20FINAL%20PDF.pdf (Accessed 10 March 2022.)

UNESCO. 2019. *Classroom revolution through SMART education in the Republic of Korea: case study by the UNESCO-Fazheng project on best practices in mobile learning*. Paris, UNESCO. Available at: https://unesdoc.unesco.org/ark:/48223/pf0000366729 (Accessed 10 March 2022.)

——. 2020. *Fiscal responses to education and training in the context of COVID-19*. Paris, UNESCO. Available at: https://unesdoc.unesco.org/ark:/48223/pf0000374685 (Accessed 16 March 2022.)

——. 2021. *National distance learning programmes in response to the COVID-19 education disruption*. Unpublished (Submitted to UNESCO)

Vamvakitis, J. 2020. *This year, teachers have gone the distance*. Available at: https://blog.google/outreach-initiatives/education/world-teachers-day-2020/ (Accessed 15 March 2022.)

unesco
United Nations
Educational, Scientific
and Cultural Organization

National distance learning programmes in response to the COVID-19 education disruption

Case study of the Republic of Korea

This document is one of several case studies on national distance learning programmes in response to the COVID-19 education disruptions. The case of the Republic of Korea was drawn from the 2020 edition of Mobile Learning Week, organized online in October 2020 under the theme of 'Beyond Disruption: Technology Enabled Learning Futures'. Envisaged to be a continuously enriched mechanism for knowledge sharing and dissemination, the case studies aim to surface best practices worldwide in leveraging digital technology to build inclusive and crisis-resilient learning systems, and to inform the planning of digital transformation of education towards SDG 4 and the futures of learning. Each case study documents governance and funding mechanisms, needs-driven planning of distance learning solutions, evaluation of digital learning's effects on mitigating disruptions and ensuring inclusion, and pedagogical innovations to maintain or improve the quality of learning.

The case study of the Republic of Korea reveals a centralized model where the execution of policy was devolved to metropolitan and provincial offices of education. The country was well prepared to roll out national distance learning programmes as digital technology was integrated into the education system with fully functional centralized platforms and a high level of digital skills amongst teachers and learners. The programmes also adopted an inclusive approach by considering the special needs of different groups and encouraging teachers-led initiatives for peer support and improving the quality of learning content, and the effectiveness of pedagogies.

Stay in touch

Unit for Technology and AI in Education
Future of Learning and InnovationTeam
Education Sector
UNESCO
7, place de Fontenoy
75007 Paris, France

aied@unesco.org
@UNESCOICTs
@UNESCOICTinEducation
en.unesco.org/themes/ict-education

4 QUALITY EDUCATION

Sustainable Development Goals