COVID-19 Response by South Korea and KERIS

Through Online Distance Learning for K-12 (Q&A)

Korea Education and Research Information Service (KERIS)

April 2020

1. How has South Korea responded to the COVID-19 pandemic?

· COVID-19 has brought about an unprecedented health, social, and economic crisis worldwide and South Korea is no exception. South Korea was one of the first countries hit by COVID-19 with the first positive case in mid-January. The spread was swift and relentless, as the positive confirmed cases increased exponentially during Jan-Feb with 909 cases alone on 29th Feb. Following this, the South Korean government raised the national alert level to the highest category and a national health emergency was also declared.

· However, as of mid-April, South Korea seems to be in control of the spread of the virus as the curve is in steady decline and the number of positive cases and deaths over the past few weeks have exponentially decreased.

Confirmed cases in the Republic of Korea (20 April 2020)
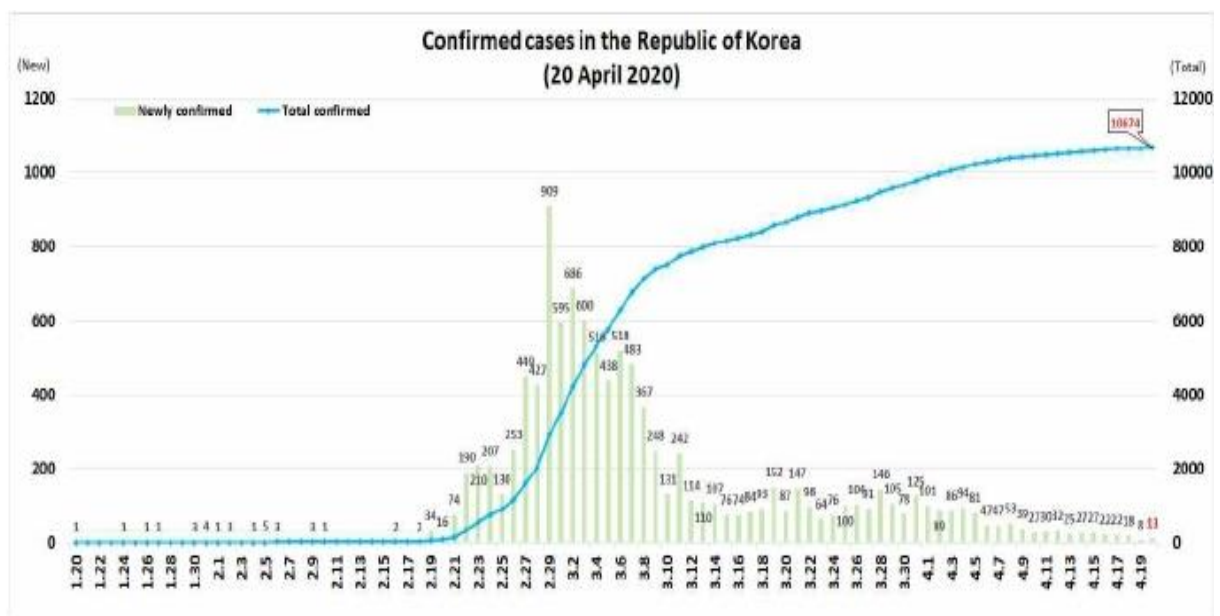
< Source: Korea Centers for Disease Control & Protection >

· There are several reasons behind the success of control such as a high level of testing and diagnostic capabilities combined with over 20,000 tests per day, robust screening and quarantine, and advanced medical care provided to confirmed patients. Additionally, ICT (Information and Communication Technology) played a pivotal role in fighting against the pandemic in South Korea. Through the emergence disaster messaging services, key emergency information such as the outbreak of new confirmed cases in the specific regions was immediately provided to the public. In addition, new mobile applications were developed to not only spread key emergency information to the public, but also to track the condition and movement of infected individuals so that the public can effectively maintain social distancing.

2. How has the South Korean Ministry of Education responded to this crisis?

· On the same day when the highest alert level was announced on the 23rd of Feb, the Ministry of Education (MoE) also announced to push back the opening of schools for the new school year, which was originally scheduled to start on the 2nd of March.

· Delaying the start date of school was not an easy decision to make as it is the first time something of this nature has happened in 59 years in South Korea. Education is so deeply valued in South Korea to the extent that the nation invests one of the largest educational budgets per capita globally, in addition to having the highest percentage of students with tertiary degrees. These are a few reasons why the decision to push back the start date of schools shows how seriously South Korea deemed the situation in February.

· As the virus has not been completely eradicated and public safety has been a constant concern, there were three more delays to opening schools which resulted in the final decision to reopen through online distance learning, which resulted in a 5-week period where schools were not in session.

· To mitigate any unforeseen issues, the online implementation of classes was scheduled in a phased opening- meaning that grade 9 and 12 students in middle and high school will start first, and other grade levels will follow in the days and weeks to come. As of April 9th, the online semester officially began for grades 9 and 12, and remaining grade-level implementation phases are indicated in the following table:

School Level	Grade	April 9-10	April 13-15	April 16-17	April 20
High School	12	Adaptation Period			
		Reopened online			
	10-11	School closed		Adaptation Period	
				Reopened online	
Middle School	9	Adaptation Period			
		Reopened online			
	7-8	School closed		Adaptation Period	
				Reopened online	
Elementary School	4-6	School closed		Adaptation Period	
				Reopened online	
	1-3	School closed			Reopened online

< Source: Press release by the Ministry of Education of Korea, 31st March >

- There are 3 types of online distance learning: (1) Interactive learning between teachers and students; (2) Content based learning; and (3) Task/Assignment based learning. In the transition, interactive online classrooms are the closest means of carrying out classes when compared to the typical physical learning environment, as the interaction only shifted from offline to online. Yet, given the number of restrictions to this (technology issues, etc.), schools and teachers can alternatively manage their classes by posting adequate learning contents following the national curriculum, as well as posting assignments and providing comprehensive feedback when completed.

3. After schools shut their doors for social distancing measures, what approaches have been taken to ensure the continuation of primary and secondary education in South Korea?

- The Ministry of Education of South Korea decided to implement online distance learning in response to COVID-19 for protecting students' health and ensuring that education continued. Actions taken by the MoE after the breakout of COVID-19 can be divided into three categories: 1) Expanding the budget; 2) Supporting students in low-income families without devices or internet access; and 3) Supporting teachers.

- After the COVID-19 breakout, the MoE appropriated 250million US Dollars, which is about 0.4% of the annual education budget. The majority of the funds are distributed to the 17 regional education offices for supporting distance learning, including the purchase of equipment such as digital cameras, installing wi-fi access to more classrooms, and so on.

- Second, in cooperation with the Ministry of Science and ICT and 3 major telecommunications companies in South Korea, all students in across the nation can get unlimited free data access to services such as digital textbooks and online classroom platforms provided by KERIS and the EBS (Educational Broadcasting System) until the end of May. Furthermore, students without digital devices can freely loan them from their school as the MoE secured 300,000 devices, partly owned by the MoE, regional education offices, schools, and some donated from Samsung and LG. Also, for students from low-income families without internet access, the government installs internet and provides a 17 US Dollar monthly stimulus payment to cover basic internet fees.

- Lastly, in supporting teachers, the MoE has been making major efforts to provide teachers with the tools and knowledge they need to bring their classes online. Some teachers, especially those less familiar with the use of ICT, have had difficulty in bringing their classes online. Soon after the COVID-19 breakout, the MoE and KERIS launched an online website called *School-on* – a platform where teachers can share useful information related to prepping and managing online distance learning – which includes

items such as a video instruction of how to set up and run online classes. Further, there is a voluntary group of teachers who can assist their colleagues in need of help through remotely accessing their computers and providing 1:1 advice related to online learning and solving technical issues. Also, the MoE has urged administrators to minimize unnecessary paperwork for teachers so they can spend more time focusing on managing their online classes.

4. What is KERIS?

· KERIS stands for the "Korea Education and Research Information Service" and is a public institution in the field of ICT in education working under the Ministry of Education of South Korea. Established in 1999, KERIS conducts a wide range of research from digital literacy and teacher professional development to designing future classrooms. Also, KERIS is providing a number of key ICT education services to the public including Edunet T-Clear, Digital Textbook, NEIS(national education information service), RISS(research information sharing service), KOCW(Korea open courseware), and so on.

## 5. What are the major services provided by KERIS that focus primarily on online distance learning?

· One of the flag-ship public services KERIS is providing is called *Edunet T-Clear* – T-Clear stands for Teacher Curriculum, Learning, Evaluation and Activity Resources. This is a portal primarily targeting teachers where they can attain information related to teaching materials, education policy, training sessions, and so on. Also, the portal allows access to many other online services including digital textbooks and online classroom platforms.

· Two main online classroom platforms being used as the primary means to delivering distance learning are *e-Hakseupto*[1] and *Wedorang*[2]. While both of them function as an online classroom, the former is more content-oriented, while the latter can be considered as more of an online learning community platform. With these online classroom platforms—which can be accessed through *Edunet T Clear* with the same ID and password—teachers can search, classify, and upload relevant learning materials, and also post assignments. At the same time, students can start learning in video or document format, and share thoughts with peers and teachers by simply adding comments in their online classroom chatroom while doing their assignments. Teachers can instantly give feedback and check each student's learning progress through this

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[1] "e-Hakseupto" – KERIS's online cyber learning system embedded with LMS functions

[2] "wedorang" – KERIS's online student-teacher communication platform that translates to 'we work together'

process. Currently, these are the main online classroom platforms used by schools and teachers, though many other online platforms including Zoom, Google Classroom, MS Teams, etc. are also being used.
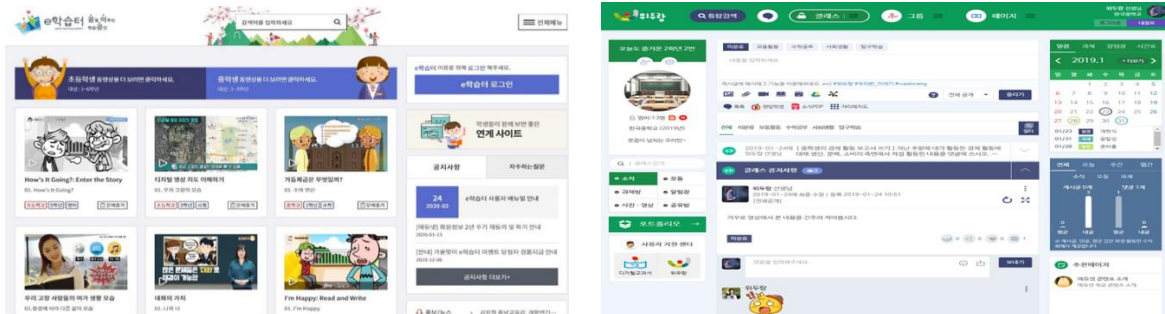
< e-Hakseupto and Wedorang >

6. Does KERIS work with other countries?

- Yes. KERIS also works closely with the international community by sharing the common goal of achieving SDG 4 with the use of ICT and it putting its best efforts forward to bridge the digital divide through multiple ODA projects and joint research. ***Technical Advice Program on ICT in education*** is one of such efforts providing technical and policy advice to partner countries. In 2019, KERIS worked together with Serbia by supporting the management of the Center for Education Technology. This year, albeit delayed due to the COVID-19 pandemic, KERIS has a partnership with Uzbekistan to support the establishment of a Future Education Center.

7. What is EBS?

- EBS (Educational Broadcasting System) is a South Korean educational television and radio network providing distance education contents through television, radio, and the Internet. KERIS and EBS are the main organizations responsible for the online and distance learning in South Korea. Facing COVID-19 response, EBS diversified educational access by forming 5 additional TV channels (each channel is designated for specific school grades) and launched ***EBS Online Class*** (which is another online classroom platform). As of the 18th April, an almost equal number of students (3 million each) logged into e-Hakseupto and Wedorang (KERIS), and the EBS online Class (EBS). By splitting the number of students in half, it was possible to mitigate the burden pressed on each server system. So, in practice, KERIS and EBS are the main two pillars in providing online classroom platforms throughout the country.

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8. What have been the main challenges in adopting online distance learning in South Korea?

- As South Korea has been carrying out the widespread implementation of online distance learning starting second week of April, we have yet to see the full-scale of challenges.

- In the preparation stage, there were a number of issues such as the concern of digital exclusion accompanied by the possibility of causing other forms of education inequality, a proportion of teachers not proficient in handling ICT tools, a need for drawing more specific plans to manage students' learning performance at home, cyber security issues and so on.

- Among the challenges, the potential insufficient volume of internet servers that can handle massive numbers of individuals logging in at the same time has become a real challenge. Although there was an increase in volume of servers for each online learning platform run by KERIS and EBS, the system is not completely stable and there has been a reported number of minor login errors.

- In general, however, there have been positive outcomes from the implementation of online learning. Student attendance records are staying at around 99%, which is one strong piece of evidence potentially showing that online distance learning can work. Also, due to the swift action taken by the MoE, every student now has access to digital devices and the online contents.

9. What are the likely changes in the roles and responsibilities of teachers and students during the educational response to the COVID-19 crisis?

- The inevitability of online distance learning makes teachers become more proficient with their ICT skills and this results in teachers spending more time and effort focusing on their classes. Also, teachers have to find different ways to manage their students through online platforms, as opposed to the ways they typically did in their face-to-face classrooms. For example, teachers might have to come up with more creative ways to motivate students. Additionally, evaluating student assignments or monitoring their progress in general has to be changed to ensure that students follow online and copyright ethics when completing assignments.

- From the student perspective, they have to realize that the way of learning is now changed and that they need to try to become more self-directed. Further, the role of teachers will further change from transmitters of knowledge to mediators of learning.

10. What are the lessons learned from South Korea that could benefit other countries?

· If there is one golden rule that every country must keep in mind, it is to consider education as a basic human right and to ensure the continuation of education for all through safe, distance education during this global COVID-19 crisis.

· No matter how each country varies in terms of the level of ICT infrastructure, teaching-learning capabilities, availability of budget, geographical conditions, education system, and so on, there is one thing we all share together—that our schools are predominately shut down for the foreseeable future and distant learning is the only option left to maintain the valuable human right of education for all. We all have to find the best solution and strategy that fits each of our respective countries. From the case of South Korea, the government has concentrated much of their efforts to prevent school closures and promote online distance learning as a substitute to face-to-face learning.

· Securing the ICT infrastructure and providing at least the minimum level of digital access to children, especially from low-income level families is vital, but the issue of money is almost always a problem. One way to tackle this is to work together and draw support from the private sector just like South Korea did. Major telecommunications companies in South Korea kindly agreed to take the social responsibility by temporarily offering free data costs and made donations of digital equipment.