Response to COVID-19: Preparing for School Re-Opening

The Case of South Korea

East Asia and Pacific Education Briefing Note

May 8, 2020

In this Note you will learn:

- The new school year began with online classes for the first time
- How the MOE and local education offices secured digital devices to lend to students in need, and schools prepared online class guidelines, including the class hours, format, attendance, and evaluation.
- How the government mobilized academia, government-led institutions, and the private sector to overcome technical problems, increased burden of teachers, and equity issues in learning from online classes.
- In preparing for the physically reopening of schools, it is important to prepare strategies to respond to any additional extended breaks if the virus comes back and to enable local authorities and schools to develop their reopening plans to prioritize the needs of students and the local community, and implement it working with the community partners.
- Using this crisis to build an education system that can reach everyone and be resilient and sustainable in a time of crisis.

Status

The Republic of Korea was one of the most-affected countries in the initial period of the COVID-19 epidemic, with 10,694 infections and 238 deaths reported as of April 22, 2020. With the country of 50 million, the daily cases soared to its peak to 909 on February 29, after just two months of the first case in January. However, with multi-level and innovative approaches for managing crisis, which included developing a drive-through testing facility and using Big Data to track the routes of infected individuals, the country has managed to flatten the curve to daily cases of around 10.
As part of efforts to mitigate the impact of the epidemic, the Ministry of Education (MOE) had initially postponed the start of the new school year three times from March 2 to April 6. On March 31, given the continued clusters of infections, the government announced the new school year would begin with online classes on April 9.

Table 1. Postponement of the New School Year in 2020

<table>
<thead>
<tr>
<th>The 1st order of postponement (February 23)</th>
<th>The 2nd order of postponement (March 2)</th>
<th>The 3rd order of postponement (March 17)</th>
<th>The decision on the online school opening (March 31)</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 2 → March 9</td>
<td>March 9 → March 23</td>
<td>March 23 → April 6</td>
<td>Gradual opening from April 9</td>
</tr>
</tbody>
</table>

Source: Ministry of Education

The MOE has been consulting with the Korea Centers for Disease Control and Prevention (KCDC) and the Central Disaster and Safety Countermeasures Headquarters to monitor the progress and adjust the reopening of school. The Ministry has been considering the following factors for the reopening:

(i) The trend of daily cases by province
(ii) Control over epidemic in schools under the current medical system
(iii) If the general public agrees with the reopening of schools
(iv) The readiness of schools, including the quarantine manual and emergency response measures

Considering the continued community infection and public opinion on the further postponement of school reopening, MOE announced it would begin the new school year with online classes in all elementary, middle, high, and special education schools nationwide for the first time.

Policy Response

Formation of “New Semester Preparation Committee”

The “New Semester Preparation Committee,” headed by the Vice Minister of Education, was organized by the MOE and Metropolitan and Provincial Offices of Education. Formed initially with two divisions of quarantine management and student learning support, MOE newly established the “Distance Education Support Division” to prepare the online classes. The division monitors the online education system and platform and develops measures for possible problems from schools. The committee holds a weekly meeting to check the response and preparation of the local education offices and schools, including their academic support and quarantine management.

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2 Ministry of Education, Elementary, middle, high and special schools start new semester online for the first time (COVID-19), March 31, 2020. [https://www.moe.go.kr/boardCnts/view.do?boardID=294&boardSeq=80160&lev=0&searchType=null&statusYN=W&page=1&s=moe&m=020402&opType=N](https://www.moe.go.kr/boardCnts/view.do?boardID=294&boardSeq=80160&lev=0&searchType=null&statusYN=W&page=1&s=moe&m=020402&opType=N)


The MOE will also work with the Ministry of Science and ICT and Ministry of SMEs and Startup to set up an EdTech Task Force (TF) to form mid- and long-term strategies, which will be announced in the latter half of this year.\(^5\)

### A gradual approach to online school opening

The online school opening has been carried out gradually by the grades in schools. Students in the third and final year of middle and high school began their classes on April 9. Those in the first and second years of middle and high school, as well as fourth to the sixth year of elementary school, started online learning on April 16. The youngest group - first to third graders in elementary school - joined the scheme from April 20. Kindergartens will remain to be closed, while most universities have already switched to online learning.\(^6\)

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\(^5\) Yonhap News, "Gradual online school opening is from April 9, but the kindergarten is still closed," March 31, 2020, [https://www.yna.co.kr/view/AKR20200331078600004?input=1195m6](https://www.yna.co.kr/view/AKR20200331078600004?input=1195m6)

\(^6\) Ministry of Education, Elementary, middle, high and special schools start new semester online for the first time (COVID-19), March 31, 2020, [https://www.moe.go.kr/boardCnts/view.do?boardID=294&boardSeq=80160&lev=0&searchType=null&statusYN=W&page=1&s=moe&m=020402&opType=N](https://www.moe.go.kr/boardCnts/view.do?boardID=294&boardSeq=80160&lev=0&searchType=null&statusYN=W&page=1&s=moe&m=020402&opType=N)
The MOE continues to monitor the infection cases and readiness of schools to adjust the academic plan, including the convergence of both online and offline classes.

**Narrowing the digital gap**

According to the MOE and local education offices, there were 223,000 students (about 4% of all students in elementary, middle, and high schools) who are not equipped with smart devices for online classes. The MOE secured 321,000 devices to lend to students. Among the devices, 230,000 units were prepared by the local education offices, 55,000 units were from the MOE, and 36,000 units were donated by Samsung Electronics and LG Electronics. The equipment was given priority to low-income families, and students in need with the discretion of school principals.

To reduce the family burden of smart devices, the MOE developed a new curriculum for first and second-grade students. Together with the state-run Educational Broadcasting System (EBS), the MOE introduced customized content that can be viewed on a cable channel (EBS Plus 2), as well as on a major public network (EBS 2TV). A study package consisting of home-study materials was also mailed to each home, and teachers have been checking on students' attendance and progress using the text messages with their parents.

**Preparation by Schools**

The schools have been preparing an operations plan for online classes. They formed a Remote Class Management Committee, consists of school faculties from different departments, to reorganize the curriculum, develop class guidelines, and establish an emergency communication system for teachers, students, and parents. They set 2 days after the school opening as the adjustment period to test the class contents and support students to adapt to the platform. Table 2 shows an example of preparation guidelines by a high school in Jeollanam-do Province.

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7 Yonhap News, “School opens online for the first time tomorrow, but the concern on infrastructure continues,” April 8, 2020, https://www.yna.co.kr/view/AKR202004080824000047?input=1195m
Table 2. Preparation of online school opening by Nokdong High School

<table>
<thead>
<tr>
<th>Classification</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subject Teachers</strong></td>
<td>1. Prepare a class plan</td>
</tr>
<tr>
<td></td>
<td>2. Upload the class contents and inform the class materials before the class</td>
</tr>
<tr>
<td></td>
<td>3. Check the student’s attendance, learning progress, and assignment</td>
</tr>
<tr>
<td></td>
<td>4. Prepare a class report</td>
</tr>
<tr>
<td><strong>Homeroom Teachers</strong></td>
<td>1. Check the student’s registration on the online class platforms</td>
</tr>
<tr>
<td></td>
<td>2. Organize a class assembly everyday, and contact the absent students</td>
</tr>
<tr>
<td></td>
<td>3. Encourage student’s participation in the class, and confirm the reasons for absence</td>
</tr>
<tr>
<td><strong>School</strong></td>
<td>1. Organize the meetings of Remote Class Management Committee</td>
</tr>
<tr>
<td></td>
<td>2. Check the status of an internet network</td>
</tr>
<tr>
<td></td>
<td>3. Prepare the online class equipment, including laptop and Wi-Fi</td>
</tr>
<tr>
<td></td>
<td>4. Announce a school schedule</td>
</tr>
<tr>
<td></td>
<td>5. Send school announcements via text messages</td>
</tr>
<tr>
<td></td>
<td>6. Lend smart devices to students</td>
</tr>
<tr>
<td><strong>Students and Parents</strong></td>
<td>1. Prepare online classes according to the school guideline</td>
</tr>
</tbody>
</table>

Source: Nokdong High School

**Teacher training**

The MOE and local education offices are providing online teacher training to support their class preparation. “MOE TV,” a MOE YouTube channel, has been introducing the guidelines for class management, attendance checks, evaluation, and student records. Seoul Metropolitan Office of Education also provided training with YouTube on (1) how to use the Google classroom; (2) producing video materials with a smartphone; (3) making a class scenario using Learning Management System (LMS); and (4) how to use EdTech effectively. The training was managed by the Education Training Center of Seoul Metropolitan Office of Education, and they provided certificates of job training to teachers⁹. The schools also provided online courses that support the teachers on the design of class content and its delivery.

**Class management**

The schools are required to prepare a class according to the mandatory class hours (40 minutes for elementary school; 45 minutes for middle school; and 50 minutes for high school), but it can be adjusted according to the level of contents, condition of the school, and burden of students. The types of the online class include¹⁰:

1. Real-time interactive class: Using a remote learning platform with instant communication between teachers and students
   
   *Example: Naver Line Works, Google Hangouts, Microsoft Teams*

2. Content-oriented class: (Lecture type) Students will watch the recording of lectures or other learning content, and teachers will check their learning progress and provide feedback.


(Lecture+activity type) Conduct online discussion after watching the learning content

Example: EBS video

3. Task-oriented class: Assign tasks that enable student's self-learning and provide the feedback

Example: Assignment such as book report, home-study materials

4. Others: Each local authority and the school can develop other activities.

An example of a weekly class plan by an elementary school in Busan is in Table 3.

Table 3. A weekly class plan for sixth-grade students by Yeonpo Elementary School

<table>
<thead>
<tr>
<th>Class</th>
<th>April 20 (Monday)</th>
<th>April 21 (Tuesday)</th>
<th>April 22 (Wednesday)</th>
<th>April 23 (Thursday)</th>
<th>April 24 (Friday)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Society: Overview of Chapter 1</td>
<td>Korean: Poetry reading</td>
<td>Music: Singing with the right position</td>
<td>Society: Understanding the “4.19 Revolution”</td>
<td>P.E.: Recording leisure activities</td>
</tr>
<tr>
<td>2</td>
<td>Korean: Usage of a metaphor</td>
<td>P.E.: Planning the leisure activities</td>
<td>P.E.: Experiencing leisure activities</td>
<td>Practical course: Understanding me and my relationship with family</td>
<td>Science: Understanding the integrated research - Part 3</td>
</tr>
<tr>
<td></td>
<td>YouTube</td>
<td>EBS</td>
<td>Video from i-Scream</td>
<td><a href="http://www.%ED%95%99%EA%B5%90%EA%B0%80%EC%9E%90.com">www.학교가자.com</a></td>
<td>Digital textbook</td>
</tr>
<tr>
<td>3</td>
<td>Korean: A poem with a metaphor</td>
<td>Math: How to express “natural number÷natural number” to a fraction</td>
<td>Korean: Poetry and painting</td>
<td>Practical course: Discussion on the role of family members</td>
<td>Math: Understanding “mixed fraction÷natural number”</td>
</tr>
<tr>
<td></td>
<td><a href="http://www.%ED%95%99%EA%B5%90%EA%B0%80%EC%9E%90.com">www.학교가자.com</a></td>
<td>Khan Academy</td>
<td>E-learning center</td>
<td>E-learning center</td>
<td>E-learning center</td>
</tr>
<tr>
<td>4</td>
<td>English: Overview of Chapter 1</td>
<td>Ethics: How to live independently</td>
<td>English: Introducing people around you</td>
<td>English: How to make an introductory speech</td>
<td>Korean: Understanding the flow of events in a story</td>
</tr>
<tr>
<td>5</td>
<td>Art: Exploring my features</td>
<td>Science: Understanding the integrated research - Part 1</td>
<td>Creative experience class: Special activity of our class</td>
<td>Math: Understanding “fraction÷natural number”</td>
<td>Music: Singing the chorus part</td>
</tr>
<tr>
<td></td>
<td>YouTube</td>
<td>Digital Textbook</td>
<td>Zoom</td>
<td>Khan Academy</td>
<td>Video from i-Scream</td>
</tr>
<tr>
<td>6</td>
<td>Art: Making a name tag with my features</td>
<td>Society: Understanding the “4.19 Revolution”</td>
<td>Science: Understanding the integrated research - Part 2</td>
<td>Creative experience class: Special activity of our class</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Zoom</td>
<td>Zoom</td>
<td>Zoom</td>
<td>Zoom</td>
<td>Zoom</td>
</tr>
</tbody>
</table>

Source: Yeonpo Elementary School
Attendance and evaluation

The schools can check students’ attendance either in real-time or after class. Teachers can use the LMS, text message, and phone call for the real-time check, and the supporting documents such as parent confirmation and learning report can be used after class. According to the MOE guideline, the content learned during online classes will be assessed after the offline class is resumed. However, the assessment is allowed for an interactive class that can observe the performance of students in real-time. If the online classes are conducted for the entire semester, adjusted evaluation guidelines will be prepared by each local education office.

The government also announced the College Scholastic Ability Test (CSAT) set for November 19, 2020, would be postponed by two weeks. Considering the concern over the delay in midterm and final exams and shortened summer vacation, which increases the burden of students from lack of preparation period, the CSAT is now scheduled for December 3, 2020. Korea Institute for Curriculum and Evaluation (KICE) announced the “Plan for the 2021 CSAT” on March 31, 2020, which includes the content and level of the test following the MOE guideline. As the exam was delayed, the schedule for completing the students’ school records, college application, and the announcement of successful applicants were all adjusted.

Challenges and Lessons Learned from the Online School Opening

The technical issues in the remote class system

For each group of the online school opening, students witnessed the unstable network connection resulted from the heavy traffic. Especially at the beginning of each class, a video was frequently cut off, and students had difficulty in logging in to the LMS. Students in remote islands such as Baengnyeongdo Island and Daecheongdo Island in the western sea also had trouble attending the class. Due to the nature of the island area using a microwave wireless network, it is difficult to transmit high-quality data such as video compared to land-based optical cables or wired networks.

In response to this challenge, the local education offices and schools have been preparing alternative plans for continued learning. Gyeongsangnamdo Office of Education instructed schools to use the Social Networking Service (SNS) such as Kakao Talk and Band applications and text messages to keep the communication within the class in case LMS does not work. Dosan Middle school, located in Tongyong, sent two weeks' worth of study materials for each subject to student’s homes as the supplements to the online classes. Hoehwa Middle School, located in Goseong city, is conducting home visits by the teachers and also mailing study materials to students who are eligible for special education.

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11 Ministry of Education, Elementary, middle, high and special schools start new semester online for the first time (COVID-19), March 31, 2020, https://www.moe.go.kr/boardCnts/view.do?boardId=294&boardSeq=80160&lev=0&searchType=null&statusYN=W&page=1&s=moe&m=020402&opType=N
13 Joongang Daily, “The schools open online from April 9 and the CSAT sets for December 3 with two weeks of delay,” March 31, 2020, https://news.joins.com/article/23743670
**Difficulty in content development**

Unlike a private lecturer on the broadcast, who has a team of 3-4 people working together to produce one video content, most of the school teachers were concerned about creating all class contents by him/herself. The process of searching and using online content also required a lot of time due to the copyright issue.

To support the content development by teachers, the Ministry of Culture, Sports and Tourism is working with the Korea Arts and Culture Education Service to make customized contents for culture and arts education. Utilizing the materials such as recording of professional performances and Virtual Reality (VR) of the exhibition, students can access the contents to experience cultural arts at home during the art class16. The private sector is also developing content. Shinhan Bank will provide financial education videos for teachers. It consists of animations that teach concepts such as deposits, savings, and currency exchange to elementary school students, and career videos of daily life and work of bankers for middle and high school students. Teachers who want to use this video content can apply at the website operated by the MOE and on the Shinhan Bank's social contribution website17.

**Perception and burden of teachers**

Changing the teacher’s perception of an online class was as challenging as the technical issues. There were strong objections and pressure to the fact that classes will be opened online, and the student’s families can see them18. Teachers continued to participate in related training and communicated with parents to help them to understand the difficulty teachers and students are facing.

As an online class has a physical distance between the teachers and students, which cannot be filled by face-to-face interaction as an offline class, teachers have to prepare a class scenario by each minute. They try to use a variety of videos, photos, and ppt materials to grasp the attention of the students and to structure the class content more detailed than the offline class19. Above all, it was important to form a consensus with students and parents that an online class is not supplementary learning but a formal class. So it was the teacher’s willingness and commitment that were more important than video and internet equipment to overcome the challenge.

**Equity issues in learning**

Apart from the disparity in digital devices, experts pointed out that due to the nature of online schooling where a young student requires parental care during online class, the gap in education may occur depending on the guardian’s digital literacy20. In the case of grandparents who have to take care of their grandchildren from low-income families, they are not familiar with the online system and often have trouble accessing the platform. In addition, many students are filling their academic gap with one-on-one tutoring and private institutes where daily disinfection is provided. People are concerned it might create more equity issues in learning for underprivileged students.

The Ministry of Gender Equality and Family announced that it would provide support for vulnerable students who have difficulties in online classes. The Ministry will have the instructors to visit the students’ homes to guide them during the online class and help them on the school assignment. The Ministry also operates the “After-school Youth

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18 Mail News, “The case of Sanjayeon Middel School: we can conduct the online classes well,” April 6, 2020, https://news.imaeil.com/Society/2020040118535996451
19 Financial News, “Shinhan Bank provides financial education video content due to the copyright issue. Shinhan Bank will provide financial education videos for teachers. It consists of animations that teach concepts such as deposits, savings, and currency exchange to elementary school students, and career videos of daily life and work of bankers for middle and high school students. Teachers who want to use this video content can apply at the website operated by the MOE and on the Shinhan Bank’s social contribution website.
Academy” at 273 youth training facilities to support the remote learning of a student who cannot take the online class at home21.

Implications for Other Countries on the Physically Reopening of Schools

Forming parallel sets of strategies

There are still many unanswered questions of the COVID-19 and the result of which social distancing measures have been most effective. It also makes it difficult to determine when to ease these measures. Given this uncertainty, the government needs to form the parallel sets of strategies to prepare the reopening of schools. Firstly, continuing the preparation effort of reopening, such as developing an effective guideline and adjusting the academic plan. Secondly, link the distance learning with the formal curriculum to prevent a prolonged learning gap due to the extended break. Lastly, fully prepare the possibility of additional extended break and virus coming back after the opening of school. In the long run, the school needs to consider alternative class models such as a convergence of both online and offline education, and equipping teachers and students with standardized home-based teaching/learning.

Enabling local authorities and schools to carry out the reopening plan

The epidemic cases, level of the medical facility, and needs of students and parents vary across the region. Enable local authorities and schools to develop the reopening plan will help them to prioritize the needs of students and the local community. It will also help them to implement it working with the community partners, such as private educational institutes, businesses, and media. In the case of Daegu city, where the epidemic hit most, and over 150 students and 55 teachers were infected, the Daegu Metropolitan Office of Education had an MOU with four local university hospitals. The MOU will facilitate a hotline on the diagnosis and treatment of a student, support for teacher training on infectious diseases, and provide medical advice on prevention. Given many confirmed cases in Daegu city, the Office of Education also introduced a manual for the psychological support of students and their families, which helps them cope with stress and anxiety in daily life22.

Make it as an opportunity for establishing a more resilient system

Since the outbreak of COVID-19, we have witnessed the change in the functions and roles of traditional schools and education. The government can use this crisis as an opportunity to introduce an education system that can reach everyone and be resilient and sustainable in a time of crisis. The local education offices in Korea have been developing a standardized online class model to ensure their synchronization with the formal classes. They are also preparing a variety of customized courses for high school students in line with a new credit-based high school system, which will be introduced from 202223. With the emergency response fund from the government, universities and professors are transforming their education contents and platform, which was difficult to carry out before the outbreak due to the lack of funds. The crisis moment always presents an opportunity. In the time of enormous uncertainty, we need the wisdom to look after the crisis. The government and school should not slow down investment for the future but build a resilient education system that can prepare for the next change.

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21 Ministry of Gender Equality and Family, Ministry of Gender Equality and Family will start supporting distance learning with the online school opening, April 14, 2020, http://www.moge.go.kr/nw/rpd/nw_rpd_st011d.do?mid=news405&bbtSn=706971


23 The information is from the official guidelines of academic plan from Metropolitan and Provincial Offices of Education.