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Current

- Director, Higher education and Academic research International cooperation department of KERIS
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Former

- Expert Committee, President's Council of Informatization Strategies

RESPONDING TO COVID-19 : ONLINE CLASSES IN KOREA

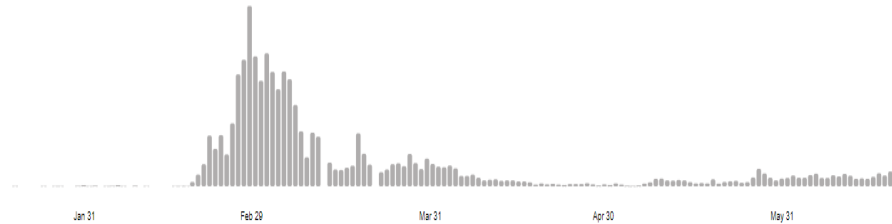## CONTENTS

1. Introduction : Korea's Response to COVID-19

12,421 confirmed cases with **280 deaths** in **Republic of Korea** (Jan-June)
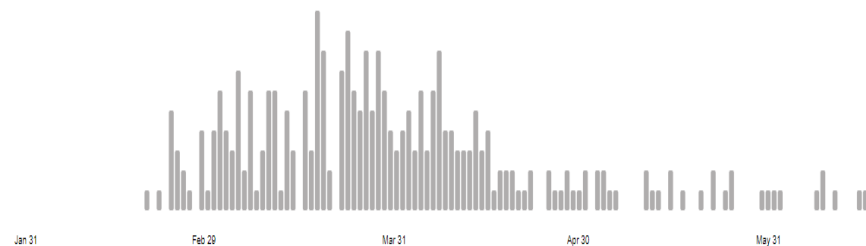
Confirmed Cases Over Time

12,421
confirmed cases

Deaths Over Time

280
deaths

※ Source: COVID−19 Worldwide Dashboard, WHO

1. Introduction : Korea's Response to COVID-19

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                    │   PMO   │                      │   MOE   │
                    └─────────┘                      └─────────┘
    *Prime Minister's Office                              *Ministry Of Education
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PMO — *Prime Minister's Office*

MOE — *Ministry Of Education*

- KEDI
- KICE
- KRIVET
- KERIS
- NILE

*Korea Education Development Institute

*Korea Education and Research Information Sevice

*Korea Institute for Curriculum and Evaluation

*National Institute for Lifelong Education

*Korea Research Institute for Vocational Education and Training
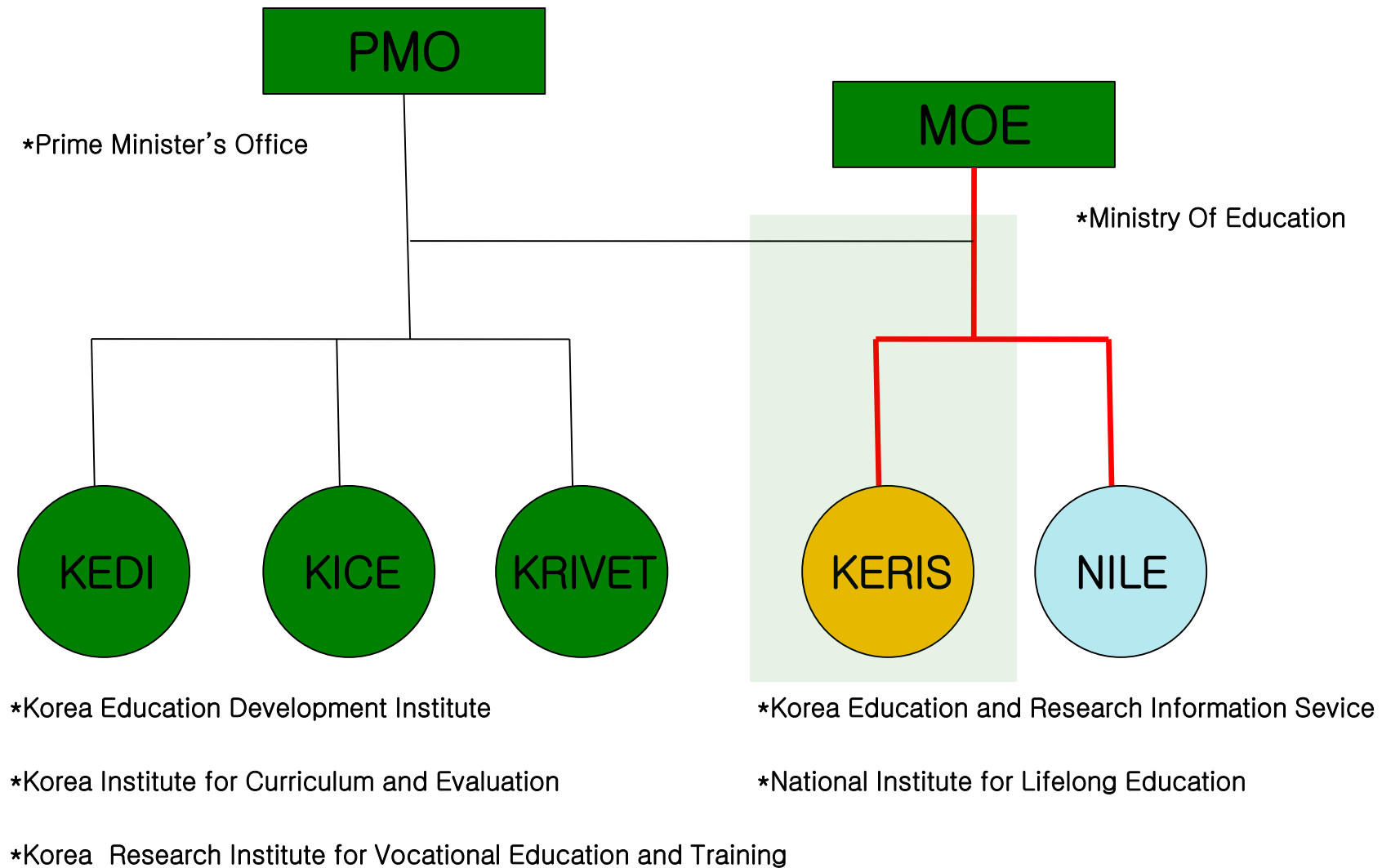
BC(Before Covid-19)
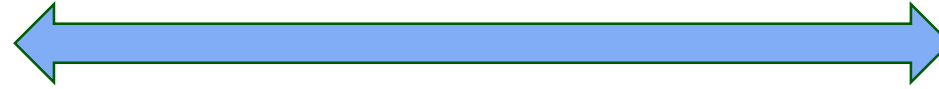
AC(After Covid-19)

AI
Bigdata
Cloud
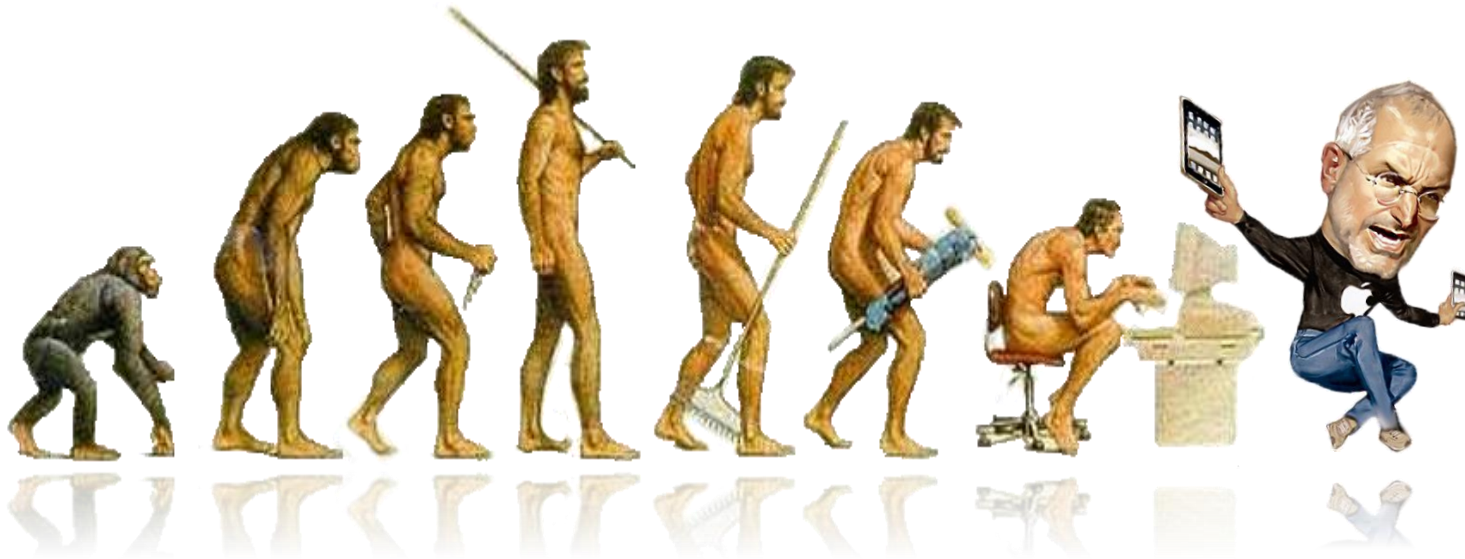
1. Introduction : Korea's Response to COVID-19

Empty lecture room

Distance learning Using Edutech
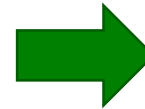
Hybrid(Mixed) Learning

Distance Learning

Integrated Space

Infra/Hardware

Classroom

Cyber space

Classroom

Learning space

Education Space

Living Space
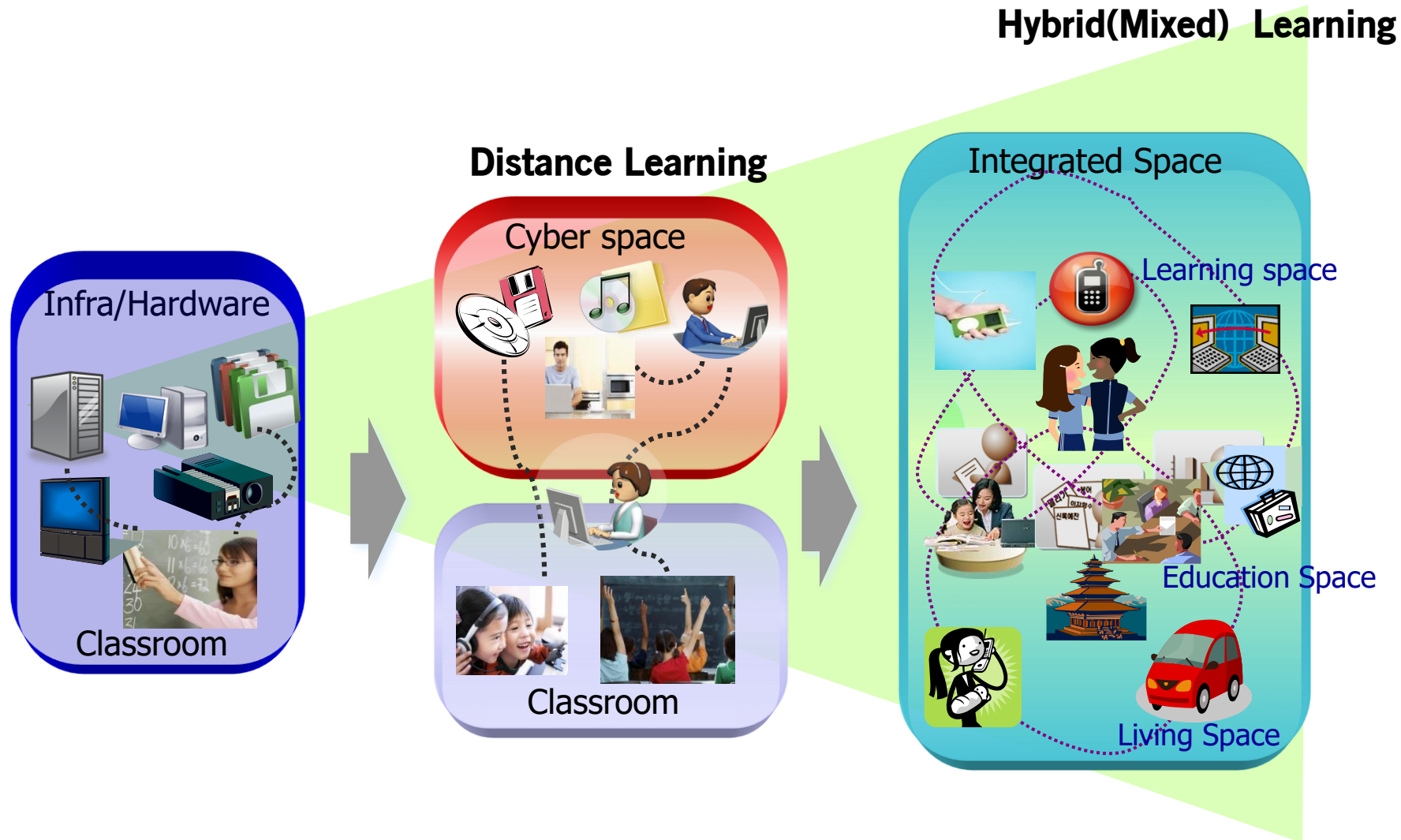
2. School Closure and Preparing for Online Classes

01 Decision-making for School Closure and Online Classes

A close coordination by the Ministry of Education with the government, CDC and the public since the outbreak

School classes began on April 9 with online class
* Academic Year in Korea : March–February of next year (Two–semester system)

	Elementary school	Middle school	High school
Year Level (Grades)	**1st - 6th** (1 - 6)	**1st - 3rd** (7 - 9)	**1st - 3rd** (10 - 12)

2. School Closure and Preparing for Online Classes

02 Phased Opening of Online Classes

Year Level (Grades)		April 6-8	9-10	13-15	16-17	20~
High School	**3**(12)	Break	*	Online Classes		
	1,2(10-11)	Break			*	Online Classes
Middle School	**3**(9)	Break	*	Online Classes		
	1,2(7-8)	Break			*	Online Classes
Elementary School	**4-6**(4-6)	Break			*	Online Classes
	1-3(1-3)	Break				Online Classes

* : Adjustment period

▶ A special school on the day of its online class opening ceremony

▲ The online class monitoring room

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3. Two Main Online Learning Platforms for K-12 in Korea

KERIS

Korea Education and Research Information Service

- A public institution, with key focus on ICT in education

- Manages the public online learning platform, digital textbook, EMIS(NEIS, K-edufine), etc
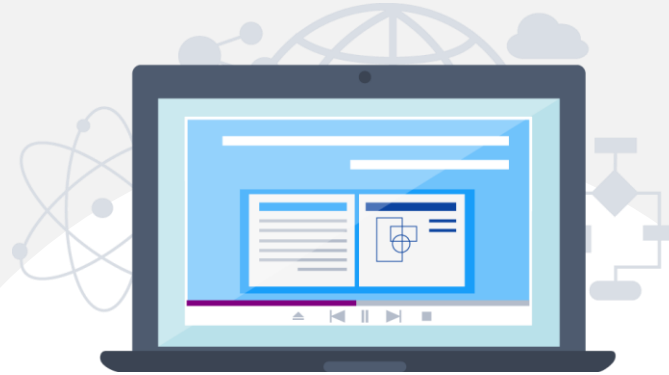
EBS

Education Broadcast System

- A TV/Internet and radio broadcasting company with a large volume of multi-media education content

- A key repository for distance learning content

4. Systematic Preparation for Online Classes

01 Expanding Public Infrastructure

02 Supporting Teachers' Capacity Building

03 Revising Online Education Systems

4. Systematic Preparation for Online Classes

01 ▸ Expanding Public Infrastructure

| The Korean government's preparation for full-scale online classes

* 99.7% of Korean households already have access to the Internet(Ministry of Science and ICT, 2019)

1) Expansion of public infrastructure

- to simultaneously host 6 millions users

KERIS e-Learning Site	Seven–fold expansion of infrastructure in two weeks	**March 23 ǀ 470,000**	**April 8 ǀ 3 million**
EBS Online Class	300–fold expansion of infrastructure in a month	**March 2 ǀ 10,000**	**April 8 ǀ 3 million**

2) New EBS TV channels

- to meet specific needs of different school years

* e.g. 1st, 2nd grade students with low familiarity with digital devices

4. Systematic Preparation for Online Classes

01 Expanding Public Infrastructure

3) Linking and expanding online learning resources

Public Content

5,500 content on KERIS e-Leaning Site; 43,000 content on EBS; government approved and authorized textbooks in e-book(497 books); and digital textbooks(134 books)

Private Content

Audio textbooks on Naver; KERIS e-Learning Site uploads(3,000 content in Korean language, English, mathematics, social studies, science and history); video lectures, etc.

4) Relaxed regulation of copyrights
- to provide broad access to copyrighted materials to teachers

4. Systematic Preparation for Online Classes

02 ▸ **Supporting Teachers' Capacity Building**

1) 495 pilot schools for online learning
   - to share the best practices of online learning with other teachers

2) Teachers' voluntary movement

School-On : website to provide teachers with information regarding online platform and tools, and to share ideas of teaching and classroom management

Teacher-On : service to support teachers experiencing technical difficulties by remotely connecting to their devices

* Remote Call + Mobile Solution : A support solution service that remotely connects to the PCs and/or mobile devices of the users to resolve any technical difficulties

| Access to 'Teacher–On' Website | ▸ | Request for Remote Support | ▸ | 1:1 Consulting (Via Chat Room) | ▸ | ① Remote Access to Devices (PC, Mobile Device) ② Support Via Voice Call |

02 **Supporting Teachers' Capacity Building**

3) **The Community of 10,000 Representative Teachers**
- 1 teacher from each of the roughly 10,000 schools
- shares ideas and information with the MoE, the 17 Metropolitan and Provincial Offices of Education, KERIS and the EBS to share ideas / information

Accumulated No. of Content Developed by Teachers as of April 21

KERIS KOREA EDUCATION AND RESEARCH INFORMATION SERVICE **e-Learning Site** **1,758,198**

- 63,648
- 152,401
- 315,015
- 495,159
- 815,163
- 1,088,708
- 1,434,200
- 1,758,198

| 4.9 | 4.10 | 4.13 | 4.14 | 4.16 | 4.17 | 4.20 | 4.21 |

EBS **Online Class** **537,349**

- 73,809
- 145,241
- 231,620
- 317,120
- 385,479
- 448,409
- 500,036
- 537,349

| 4.9 | 4.10 | 4.13 | 4.14 | 4.16 | 4.17 | 4.20 | 4.21 |

4. Systematic Preparation for Online Classes

02 **Revising Online Education Systems**

1) Online class standards in practice & guideline

- prescribing the concept of online learning, principles and basic rules of online class and school **management** (attendance, evaluation, record-keeping of school transcripts)

▲ Disinfecting school facilities

▲ Online class opening ceremony and monitoring

4. Systematic Preparation for Online Classes

03 Revising Online Education Systems

10 Rules for Successful Online Classes

Service Stability

- Use wired or wireless(WiFi) Internet for online classes
- Access and log-on to the KERIS e-Learning Site and EBS Online Class in advance
- Be flexible with class hours based on individual school conditions
- Produce educational content in the standard-definition level(480p, 720×480) or lower
- Recommended to up and down-load educational contents a day earlier(preferably after 5pm)

Safe Use

- Set password for video-conferencing room and do not disclose the link to the public
- Do not use insecure video-conferencing apps(or webs), unable to protect personal information, and install security patch before the use
- Install security vaccine programs on the PC and digital devices
- Do not open e-mails or text messages sent by unidentified individual
- Do not distribute photos of teachers and students that have been screen-captured during online classes without permission

Online Classes Operation System

SCHOOL

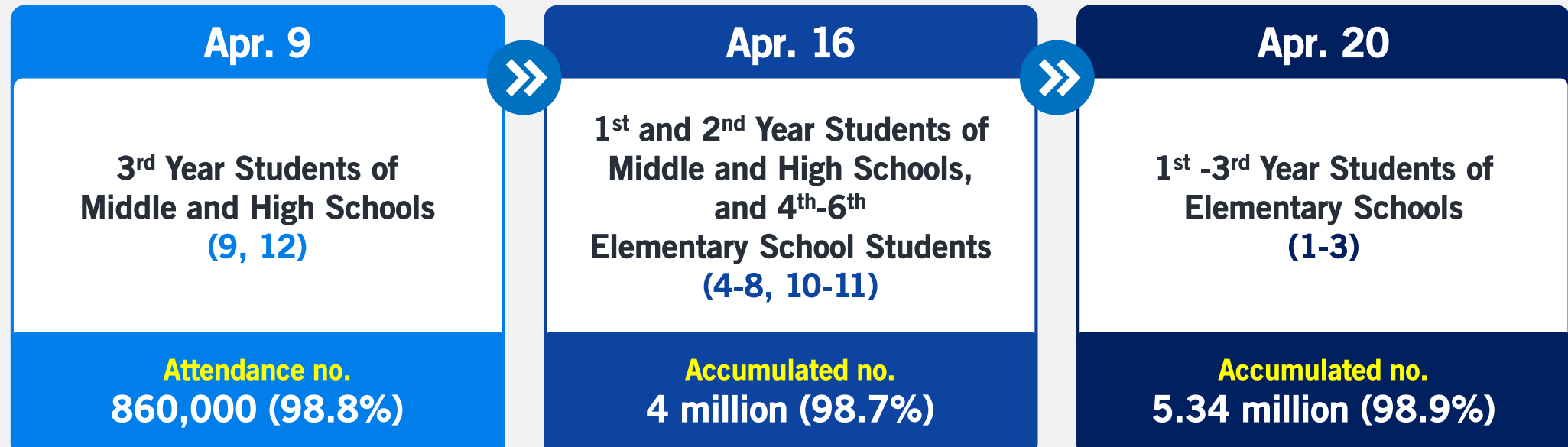| Schools	Grades and Subjects	Classes
Plan for online classes	Weekly plan for online classes	Operation of online classes

Feedback, Evaluation, and Record-keeping

Teacher   Student

Participation

MOE

Operation Standards of Online Classes

Student Attendance, Evaluation, Record−Keeping Guidelines

* Various other information

* Public LMS platforms

● **KERIS e-Learning Site**
From 1st year elementary school
students to 3rd year middle school students(1−9)

● **EBS Online Class**
From 1st year elementary school students to 3rd year high school students(1−12)

LMS Platforms

Public

Private

* Evaluation and record−keeping should only reflect what has been observed

Real−Time Interactive Class

Content−Oriented Class

Task−Oriented Class

Others

Teacher-Student Interaction

19

5. Online Classes in Practice

01 Online Class Participation

Apr. 9	Apr. 16	Apr. 20
3rd Year Students of Middle and High Schools (9, 12)	1st and 2nd Year Students of Middle and High Schools, and 4th-6th Elementary School Students (4-8, 10-11)	1st -3rd Year Students of Elementary Schools (1-3)
Attendance no. 860,000 (98.8%)	**Accumulated no.** 4 million (98.7%)	**Accumulated no.** 5.34 million (98.9%)

About 470,000 online classrooms were created on the KERIS e-Learning Site and EBS Online Class (more than one by each teacher)
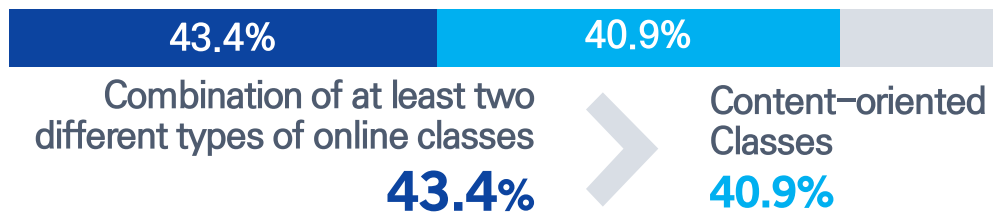
5. Online Classes in Practice

02 > Types of Online Classes

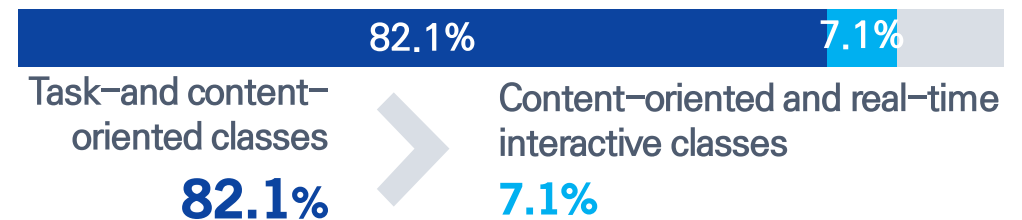| Types			Operation
1. Real-Time interactive Classes			● Real–time interactive online classes allow immediate exchange of feedback, including real–time communications and discussions by using video–conferencing ※ Examples of videoconferencing Platforms : Naver LINE WORKS, Gooroomee, Google Hangouts, Microsoft Teams, ZOOM, Cisco Webex, etc.
One-Way Classes	**2. Content-Oriented Classes**	● **Lecture type**	Content–oriented classes allow students to watch video–recorded lecture and /or learning content, while the teachers monitor how much students have learned and provide feedback.
		● **Lecture + activity type**	After watching the video–recorded learning content, students engage in discussions by leaving comments or asking and answering questions about what they have learned with their peers. * e.g. EBS classes, teacher–developed learning materials
	3. Task-Oriented Classes		● Teachers give tasks for self directed learning and monitor students' progress based on achievement standards of each subject * e.g. A task is presented to students → Students engage in learning activities (e.g. writing an essay, completing an assignment or a task or a learning packet) → Teacher gives feedback
4. Others			● Other types of online classes can be implemented depending on different conditions of Provincial Offices of Education and schools

5. Online Classes in Practice
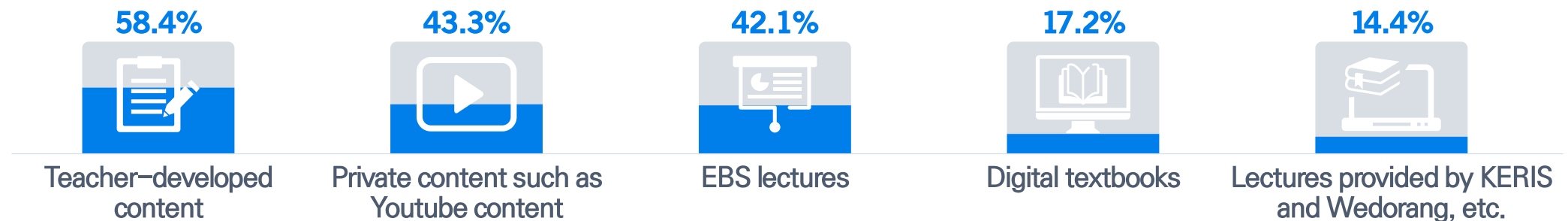
02 Types of Online Classes

The Most Frequently Used Online Class Type

43.4%	40.9%	

Combination of at least two different types of online classes
43.4%

> Content-oriented Classes
> **40.9%**

Combination of Two or More Class Types

82.1%	7.1%	

Task-and content-oriented classes
82.1%

> Content-oriented and real-time interactive classes
> **7.1%**

The Most Frequently Used Online Learning Content

58.4%
Teacher-developed content

43.3%
Private content such as Youtube content

42.1%
EBS lectures

17.2%
Digital textbooks

14.4%
Lectures provided by KERIS and Wedorang, etc.

Online Teacher Survey Conducted by the Ministry of Education (April 27–29)
※ 224,894 Out of 443,132 Teachers of All Elementary, Middle, and High Schools Nationwide Responded

02 Types of Online Classes

| Attendance Check in Different Types of Online Classes |

Types of Classes	Attendance Check								
	Real-time Checking by Teacher	Learning Management System (LMS)					Others (Alternative Checking)		
		Starting Date	Progress	Online Access Record	Learning Time	Uploaded Assignment	SNS	Text Messaging	Document Submitted
Real-time Interactive Class	●			●			●	●	●
Content-Oriented Class		●	●	●	●	●	●	●	●
Task-Oriented Class				●		●	●	●	●
Validity Period	On the Day	On the Day or Within a Week (7 days)							

Evaluation

|	
Written test	taken at schools offline
Performance assessment	based on teacher's observation, both online and offline

6. Platforms for Higher Education

Project Overview

- Project Name : Support for Distance Learning in Higher Education (K-OER Project)
- Project Timeframe : (April – August 2020, part of the 1st extra budget approved)
- Project Budget : About 379,396 USD (4.53 hundred million Korean Won)
- Project Scope
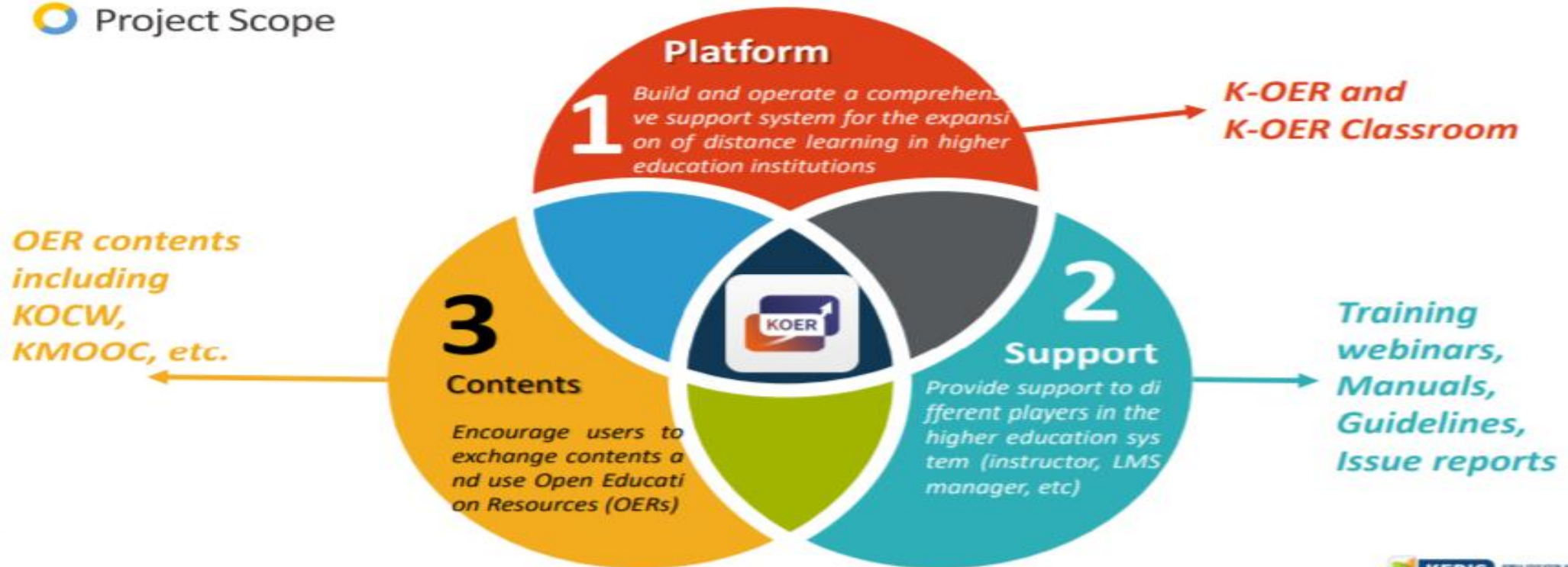
6. Platforms for Higher Education

Main Project Areas
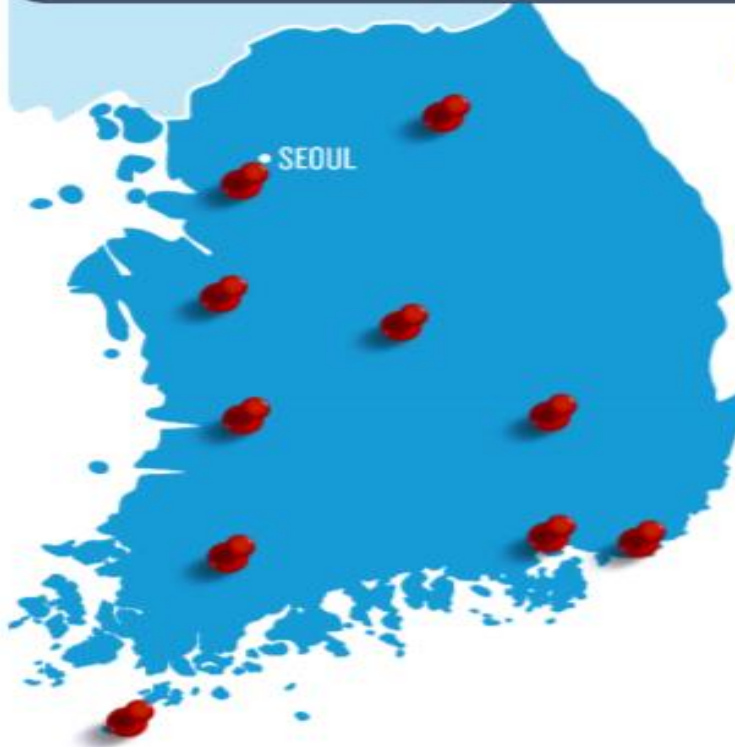
○ **Operate a nationwide network of Regional Distance Learning Support Centers (DLSCs)**

○ Serves as a regional hub to support the online-based teaching-learning activities of higher education institutions within the network

○ Main responsibilities of a regional DLSC

➢ Build and operate self-creating/general media studios that would serve as a "community media studio" to regional institutions

➢ Build and operate a common LMS to support institutions within network that are not equipped with a LMS

➢ Develop learning contents (OERs) to be shared within/ between networks

SEOUL

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KERIS

01 **Resolving Digital Divide**

02 **Support for Disadvantaged Students**

03 **Technical Assistance with Communication**

7. Overcoming Challenges

01 **Resolving Digital Divide, Increasing the Gap of Achievement**

Free digital device rental : 280,000 students (5.3% of total) applied to rent digital devices as of April 16(2020)

* students from low-income families are given priority

Zero-rating policy : Free temporary access to educational websites

Exemplary Case of Resolving Digital Divide Via Public-Private Partnership

- **Seoul Metropolitan City and Provincial Cities** _Funds to provide online learning devices(laptops) to disadvantaged students
- **Statistics Korea** _10,000 digital devices
- **Samsung·LG** _36,000 digital devices
- **KB Bank** _265 smartphones to Gwangju Metropolitan Office of Education
- **Korea Southern Power Co., Ltd.** _100 digital devices to Busan Metropolitan Office of Education
- **Ministry of Science and ICT· Three Major Telecommunications Companies** _Zero-rating system for data use on educational websites
- **LG CNS** _Technical assistance related to EBS Online Class network overload

Build the special policy for learning gap : 79% from teacher's awareness survey(2020.8)

7. Overcoming Challenges

02 **Support for Disadvantaged Students**

| **1st & 2nd year of elementary schools:** Educational content through EBS TV Channels

| **Students from multicultural families:** Information materials in various languages

| **Students with disabilities:** Special learning packets and materials with home visits

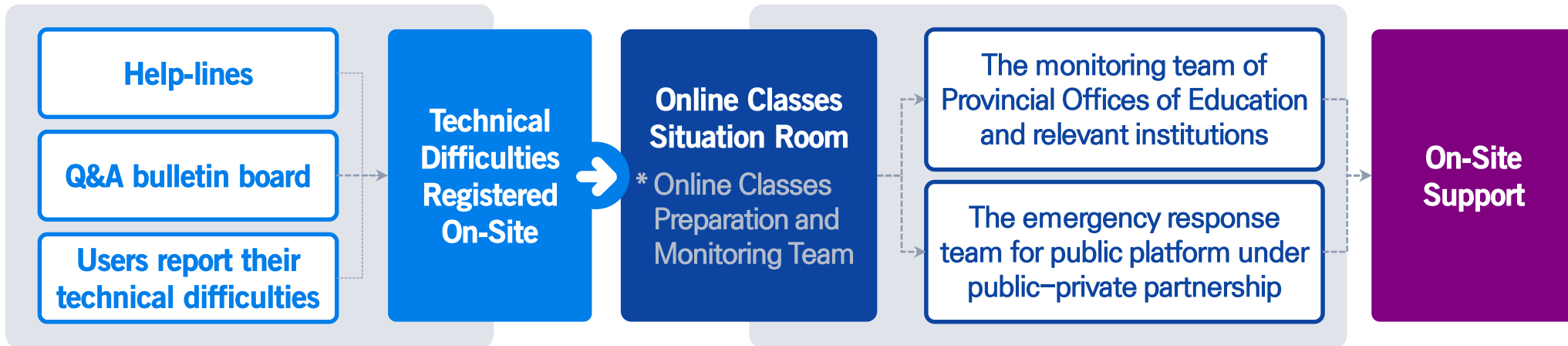## Providing Customized Support for Different Types of Disabilities

Visual Impairment	EBS online content is provided in braille, with learning materials customized and developed in larger fonts and in braille.
Hearing Impairment	Newly developed EBS lectures include subtitles, and the educational content on the Eduable website includes sign language and subtitles, with regional support centers providing sign language and stenography services.
Physical Disability	Learning devices and assistive technology devices are provided.
Developmental Disability	Various forms of distance learning are provided, including a combination of home visits and online learning, as well as content-oriented and task-oriented online classes.

7. Overcoming Challenges

03 **Reinforcing Communication among online class stakeholders**

Running help-lines to give immediate feedback to teachers, parents and students to address any technical difficulties

Online Classes Support System

| Help-lines |
| Q&A bulletin board |
| Users report their technical difficulties |

→ **Technical Difficulties Registered On-Site**

→ **Online Classes Situation Room**
* Online Classes Preparation and Monitoring Team

→ The monitoring team of Provincial Offices of Education and relevant institutions

The emergency response team for public platform under public–private partnership

→ **On-Site Support**

7. Conclusion : Designing the Future of Education

Daunting Challenges

Public Consensus : "Education must not be stopped"

Crisis → Opportunity : Efforts to build a better education system

Plan : Korean online education model equipped with AI and cloud computing

Joint Effort : Global society needs to act together

RESPONDING TO COVID-19 : ONLINE CLASSES IN KOREA

THANK YOU !!

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