### Center for Digital Education Research

# DIGITAL EDUCATION RESEARCH CENTER

We are committed to education for all.





The Digital Education Research Center continues to put all efforts into creating a teaching and learning environment based on intelligence information technology in order to realize a lifelong learning society in line with the national education welfare policy.

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**Current Status of Operation** 

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KOREAN EDUCATIONAL DEVELOPMENT INSTITUTE

# Greetings

The Digital Education Research Center has been actively living up to the value of lifelong secondary education that has taken on a greater significance in our society today.

The Digital Education Research Center has been working hard to expand opportunities for digital-based regular education for the underprivileged and to provide customized education support services based on learner analysis. Moreover, the Center has created a teaching and learning environment based on intelligence information technology in order to offer secondary education suitable for a lifelong learning society. The Korean Educational Development Institute(KEDI) has walked through the entire history of the Digital Education Research Center together, and is very honored and proud to witness the progress the Digital Education Research Center has made so far.

Currently, our society is facing significant changes such as the advent of the 4th Industrial Revolution, decreasing the number of school-age population due to low birth rate, rapid movement towards a multi-cultural society, and creation of favorable environment for inter-Korean cooperation.

Accordingly, the future society calls

for talents with creative and convergent thinking competency who will create value for sustainable development, education reform and innovation. For this, the Digital Education Research Center has set out the vision for 'establishing a customized and open learning system through the convergence of education and intelligence information technology' and stepped up efforts to heighten its status as the central digital education research center in Korea.

KEDI is committed to supporting the Digital Education Research Center as it continues to develop as the hub for educational innovation by taking initiatives in realizing progressive education policies for the underprivileged, as well as connecting Ministry of Education, Metropolitan and Provincial Offices of Education, and schools around the nation.

In addition, we will secure our competitive edge through continuous research and policy development and flexibly respond to the changes in education associated with the 4th Industrial Revolution.

Envisioning a fully inclusive society, we pledge to put all our efforts into creating educational innovation for the underprivileged. We would like to ask you to give us your continued interest and strong support.

President of KEDI Bon, Sanglin

### History

### 1973 ~

- Feb 1973 Set out a plan to reform high school entrance examination system and to establish Open High Schools (Ministry of Education)
- Mar 1973 Consigned research for the establishment of Open High Schools to KEDI(Ministry of Education)
- Mar 1974 Founded 11 Open High Schools (in Seoul and Daegu)

  Implemented the radio broadcasting lecture system and offline classes at Open High Schools
- Sep 1976 Enacted regulations on educational credential assessment test for graduation of students who have completed the Open High School curriculum (Decree of Mistry of Education)
- Feb 1977 Held the 1st graduation ceremony of Open High Schools (Number of graduates: 2,680)











Mar 1987 Established 50 Open High Schools in 26 cities and 1 rural community (Number of students: 48,067)





2004~

Mar 2004 Built the cyber education system at Open High Schools

Ran model schools of cyber education designated by the Ministry of Education, Science and Technology(3 schools)

Mar 2006 Began cyber education system for freshmen at Open High Schools

Abolished the educational credential assessment test for graduation

Mar 2008 Applied cyber education system for all grade levels at Open High School

Founded an Open High School affiliated with Howon High School(Gyunggi) (total number of schools: 40)

### 2011 ~

Jan 2011 Restructured Open Middle Schools' operation system and established the plan to support the underprivileged including dropouts through distance education (The plan to build Open Middle Schools was included, Ministry of Education, Science and Technology)

Aug 2011 Revised the 「Degree on Standards for the Establishment of Open High Schools」 & enforcement regulations (Adopted credit-based certification system (current Learning Experience Recognition System)

Jan 2012 Revised Elementary and Secondary Education act, (No.11219) (Laid the ground for the establishment of Open Middle Schools)

Mar 2012 Began mobile learning services at Open High Schools

Introduced Learning Hours Recognition System in Open High Schools (current Learning Experience Recognition System) and ran model schools (3 schools)

Sep 2012 Ran Online Classes (in High Schools)







### 2013~

Mar 2013 Founded Open Middle Schools affiliated with Daegu High School(Daegu), Gwangju Buksung Middle School (Gwangju) (total number of schools:2) Implemented Learning Experience Recognition System at Open Secondary Schools

Mar 2014 Founded 4 Open Middle Schools affiliated with Daejeon Bongmyeong Middle School(Deajeon), Suwon Jeil Middle School, Howon Middle School(Gyeonggi), Kyongwon Middle School(Gyeongnam) (total number of schools: 6)

> Founded 2 Open High Schools affiliated with Sangdong High School and Seohyun High School(Gyeonggi) (total number of schools: 42)

Mar 2015 Founded 6 Open Middle Schools affiliated with Ahyeon Middle School(Seoul). Namchuncheon Middle School & Wonju Middle School & Gangneung Middle School(Gangwon), Jeolla Middle School(Jeonbuk), Jinju Middle School (Gyeongnam) (total number of schools: 12) Established e-School system for student-athletes

May 2015 Established e-School online learning system for student-athletes

Sep 2015 Ran online classes (in Middle Schools)

### 2016~

Feb 2016 Held the 1st graduation ceremony for Open Middle School (the number of graduates: 201)

> Founded 8 Open Middle Schools affiliated with Hwamyong Middle School(Busan), Guwol Girls' Middle School(Incheon), Haksung High School(Ulsan), Sampyung Middle School(Gyeonggi), Mokpo Jungang Girls' Middle School & Suncheonyeonhyang Middle School(Jeonnam), Jeju Jeil Middle School(Jeju)(total number of schools: 20)

May 2016 Established a distance learning system for students with health impairment

Mar 2017 Newly established a youth class in Open Middle Schools affiliated with Jeju Jeil Middle School

> Ran a distance learning class for middle school students with health impairment

Implement e-Schools for student-athletes for Open Secondary Schools in full (the number of schools: 2,370, the number of students who attended: 40,128)

Ran pilot projects to support the unschooled and school dropouts who are subject to compulsory education (6 cities and provinces)

Jun 2017 Ran pilot projects to support Online Common Education Course (6 cities and provinces)

Jul 2017 Opened e-School run-up courses for studentathletes (to meet basic academic capability)

Sep 2017 Ran real-time video conference classes for students with health impairment

Nov 2017 Revised [Enforcement Decree of Elementary and Secondary Education Act<sub>i</sub>(Laid the ground to run a pilot project to support the unschooled and school dropouts who are subject to compulsory education)

Revised <sup>r</sup>Enforcement Decree of Standard for the Dec 2017 Establishment of Open Secondary Schools (President Decree No. 28517) (Laid the ground to shorten and extend the years required for graduation)

> Established the learning management system to support the unschooled and school dropouts who are subject to compulsory education









### 2018~

Mar 2018 Founded 3 Open Middle Schools affiliated with Jusung Middle School(Chungbuk), Cheonan Middle School(Chungnam), Pohang Middle School(Gyeongbuk) (total number of schools: 23)

> Ran pilot projects to support Online Common Education Course (11 cities and provinces)

Apr 2018 Implemented the 1st educational credential assessment of pilot projects to support the unschooled and school dropouts who are subject to compulsory education (4 students' academic achievements were acknowledged)

Oct 2018 Held the 1st distance class offline camp 'Let's go together, friends' for student with health impairment

Dec 2018 Established the online assessment system for online classes

Changed the name of 'distance Jan 2019 classes for students with health impairment' to 'School For You'

> Revised the part of 「Guidelines for managing students' school record (Directive No.280) (set a criteria to record the result of online class completion)

Mar 2019 Founded Open Middle School affiliated with Hongseong Girls' Middle School (Chungnam) (the number of schools: 24)

> Developed elementary school courses for School For You

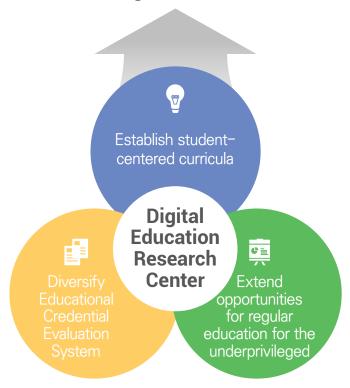
Extended pilot projects to support the unschooled and school dropouts who are subject to compulsory education (15 cities and provinces)

Ran pilot projects to support Online Common Education Course (17 cities and provinces)



### **Vision and Objectives**

# Establish a customized open learning system by integrating education and intelligence information technology

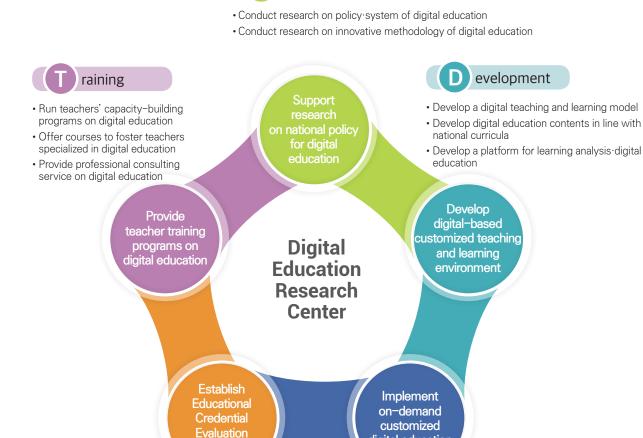


### Key initiatives

- Boost the Center's standing as a central digital education research center
- Facilitate the effectiveness of student-customized online education curriculum following the introduction of High School Credit System
- Establish an education support service model for customized education based on learning analysis
- Facilitate the Educational Credential Evaluation System which recognizes extra-curricular learning
- Extend the role of Open Secondary Schools by being open to school
   age students and switching to digital schools
- Conduct a feasibility study on the establishment of a digital school as a regular school

### **Roles and Functions**

### **R&D** for ICT



esearch

- ertification
- Set guidelines such as digital learning assessment criteria

System

- Evaluate and designate learning programs to be recognized as educational credentials
- Acknowledge curricular extracurricular learning as educational credential



digital education

- Support Open Middle · High School operation
- Offer elective subjects and curricula for students who did not complete their elementary middle high school education
- Protect the right to learn for students with health impairment, student athletes and school dropouts through digital education

### **System and Organization**



Metropolitan and Provincial Offices of Education Administrative and financial support

Future Education Research Division

### **Digital Education Research Center**

system and

infrastructure

- Oversee and support the Center's projects
- Support basic research
- Run a Research School
- Run an evaluation committee for learning experience recognition system

- $\bullet$  Provide consulting service for the establishment and operation of Open Middle High Schools
- Plan and support academic affairs of Open Middle High Schools Support Open Middle High School's related personnel association
- Run Open Middle High School's learning experience recognition
- Advertize Open Middle High Schools

- Plan Open Middle·High School's curriculum
- Develop and disseminate Open Middle·High School's contents
- Provide support for enhancing basic academic capability of Open Middle High Schools

- · Operation and maintenance of cyber education system
- · Operation and maintenance of IT Infrastructure/security
- Support for Open Secondary School students' capability to utilize ICT

- · E-school for studentathletes
- · Learning support for the unschooled/dropouts

- · Online classes
- Distance learning classes for students with health impairment

 Operation of Online Common Education Course

### **Projects**

The Digital Education Research Center has pushed ahead with education support projects for the underprivileged.

#### Projects for those who do not obtain middle school diploma

### Projects executed by pen Secondary Schools

#### Establishment and Operation of Open Secondary Schools

- Establish operation systems of Open Secondary Schools
- Analyze prospective students and provide consulting services for the establishment operation
- Offer specialized programs considering the characteristics of students
- Provide education curricula that correspond with the characteristics of Open Secondary Schools
- Create and operate the Credit Recognition System for extracurricular learning experience
  - Introduce the Credit System and offer flexibility in duration required for graduation

### Projects for school-age students enrolled in Open Secondary School

Offer online classes to strengthen the right to learn and select subjects



Projects to facilitate online classes

- Address the problems of general middle and high school students not completing the required curriculum and to offer additional subjects to choose from
- Set guidelines for online classes consigned by Metropolitan and Provincial Offices of Education
- Improve the criteria and method of assessing online class achievement
- Determine what and how to record in the students' school record for online class achievement



- Provide online classes to fulfill the right to education for student-athletes
- Enhance student-athletes' lowered academic ability caused by their absence from class
- Provide programs to assist students who lack basic academic ability



- Fulfill the right to education and help students get back into learning
- Improve the quality of education for students with health impairment
- · Help students gain emotional stability
- Set up a system tailored to students with health impairment



- Strengthen the right to select subjects for students who have chosen unavailable subjects and those who live in rural area
- Offer a two-way, real-time online education system for 24/7 access
- Have the Credit System in place as a groundwork to support education policies and strategies

#### Projects for the unschooled and dropouts

Support and recognize their academic achievement



- Provide opportunity to gain recognition and develop programs to support learning for out-of-school students
- \* Set criteria and system to acknowledge academic achievement for out-of-school students
  - Form·run a committee and procedures of Educational Credential Evaluation
- Establish criteria and system of learning support program for out-of-school students
- Form run a committee, indicators, criteria, and procedures of designation

### For students without secondary education qualification

### Open Middle·High Schools

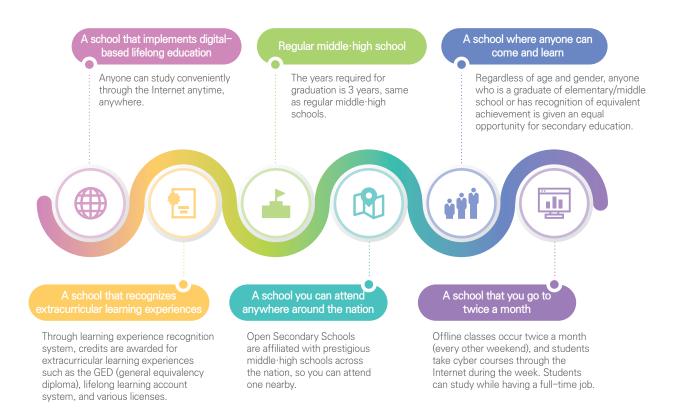
Open Middle·High Schools are established as affiliated schools at 66 public middle·high schools across the nation in order to provide learning opportunity for those who do not have secondary education qualification.

\*\* Relevant grounds: Article 10 of 'Degree on Standards for the Establishment of Open Middle School and Open High Schools\_

Target

Those who have not completed secondary education (who did not obtain middle school or high school diploma)

### **Operation Method**



## Educational Method



Students have face—to—face classes with teachers by attending classes twice a week and experience other various school programs including entrance ceremony, graduation ceremony, picnic, field learning, festival, intramural athletics, school trip, school competition, paper, and examination etc.



Customized Education Programs

### ▶ Learning Support Programs for Open Middle·High Schools

- Support students in learning subjects in regular curricula such as English and Math
- Provide Online Tutoring Services
- Implement Basic Academic Capability Assessment
- Provide contents tailored to individual levels and real-time video lectures



#### ▶ ICT Classes in Open Middle Schools

- Provide Information Technology education to new students at Open Middle Schools
- Offer on-site consulting services delivered by professional instructors
- Provide basic computer skills





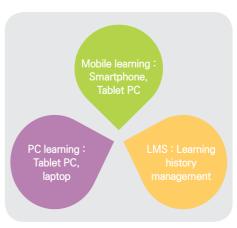
Smart learning environment is available through various learning media such as PC, and smartphone etc. Students can learn easily and conveniently - anywhere, anytime!







Taking a distance learning class



Smart learning environment

### ▶ Self-understanding Program for Open Middle Schools

- Help students adapt to school life
- Conduct a survey on students
- Provide professional instructors' explanatory lectures on results
- Offer student-led activity programs

### Classes for Character Building · Career Path

- Enhance students' ability to learn and adapt
- Conduct personality test-career test for students
- Analyze how mature students are in terms of personality development and provide counseling



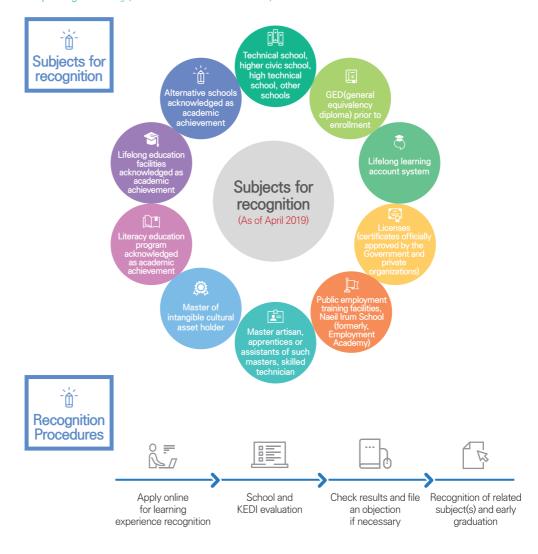


### Recognition of prior learning

When students of Open Secondary Schools have learning experiences outside of school, they can get their experiences evaluated to see if they can get them recognized as the equivalent of a related open secondary school's course.

For subjects recognized and assigned to the 3-year courses, students can get excused from a class or exam. If students earn many credits awarded for extracurricular learning experiences, they can graduate up to a year earlier.

※ Relevant grounds: Article 3–2 of 「Degree on Standards for the Establishment of Open Middle School and Open High Schools」 (Presidential Decree No. 24423)



### E

### For enrolled school-age students

### **Online Class**

Middle School High School ms.onlineschool.or.kr hs.onlineschool.or.kr

Online class, or distance learning system is designed to fulfill the right to learn and the right to choose subjects for transfer students by providing online classes for subjects that is difficult to delivered.





### **Target**

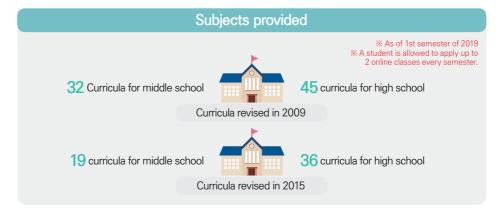
Middle and high school students who are transfer students who need to complete some elective subjects

### **Features**



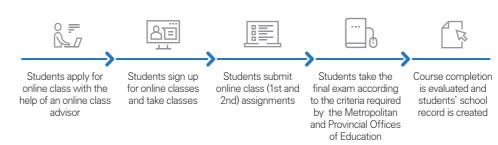
## Details of Online Classes

Utilize education contents based on regular middle·high school curricula (utilize online lectures of Open Middle·High Schools)



### **Procedures**

\* Schedule: From April to July during the 1st semester / From September to December during the 2nd semester



### For enrolled school-age students

### e-School for student-athletes

Middle School High School ms.e-school.or.kr

e-School is designed for student-athletes who have missed classes due to athletic competition and practice sessions.

\*\* Relevant grounds: Article 6 and Article 11 of 「School Sports Improvement Acts」



### **Target**

Middle High Schools in which student-athletes are enrolled

### **Features**



Provide academic courses suitable for regular curriculum(provided by Open Secondary Schools)

# Offer online learning programs customized for student-athletes

Help student-athletes make up the work they may have missed due to athletic competition and training

# Enhance the efficiency of learning

management and guidance for student-athletes

Provide online

Tlearning resources\_ and

written confirmation on

learning\_



Make it easy and convenient for students to learn – anywhere, anytime

Allow student to study by using PC, mobile device and tablet PC anywhere and anytime

# Details of e-School

#### Regular Curriculum Run-Up Curriculum Programs are given during winter Help student-athletes make up the class missed vacation to ensure basic academic Details due to athletic competition and training, Provide capability underachieving studentprograms for supporting learning on a regular basis athletes Student-athletes in middle schools who score Middle-High Schools in which less than 40% of the average score, student-**Target** student-athletes are enrolled athletes in high school who score less than 50% of the average score Middle school(5 subjects): Korean, English, Autonomous assignments from regular curriculum Math. Social Studies, Science contents provided by Open Secondary Schools High School (3 subjects): Korean, English, Social Studies (classes are subject to change.) Summer vacation: 3rd week of July ~ From March to August during the 1st semester/ September Schedule From September to the end of December during Winter vacation: 3rd week of December ~3rd the 2nd semester week of February in the next year

### **Procedures**



### For enrolled school-age students School For You

(students with health impairment)

Middle School **High School** 

s4ums,onlineschool,or,kr s4uhs.onlineschool.or.kr

School For You refers to an online learning system which is designed to help students with health impairment who have difficulties in attending schools, allowing them to pursue their educational experience.

※ Relevant grounds: Article 3 and Enforcement Ordinance No. 10 of ¹The Act on Special Education for Disabled Persons, and Enforcement Ordinance No. 48-1 of Felementary and Secondary Education act,



### Target

Middle High school students who are identified as having health impairments by Metropolitan and Provincial Offices of Education or who are found eligible for School For You because of long-term medical treatment

### Features



- · Students can begin right away when they sign up for membership
- · Allow students to access schoolwork 24/7 from anywhere
- · Provide a customized class allowing students to choose subjects and
- · Offer various subjects for each student

### 

- Provide real-time class for major 5 subjects (Korean, English, Math, Social Studies, Science)
- Meet teachers and classmate through a video class system

Easy attendance management

· Students and teachers can check attendance status easily



Learning management and support from online tutors

- Assign a personal online tutor for each student
- Provide learning management and counseling service on a periodic
- · Face-to-face, offline conversation
- · Q&A session via homepage and

### Details of School For You

#### Online class

Utilize contents developed within the framework of regular middle·high school curriculum

#### Curricula revised in 2009

19 curricula for middle school, 45 curricula for high school

15 curricula for middle school. 36 curricula for high school

#### Video-conference class

Real-time video-conference classes developed within the framework of regular middle high school curriculum

- 5 subjects in total (Korean, English, Math, Social Studies, Science)



The 1st semester: Mar 11(Mon), 2019 ~ Jul 28(Sun), 2019 Summer break: Jul 29(Mon), 2019 ~ Aug 18(Sun), 2019 The 2nd semester: Aug 19(Mon), 2019 ~ Jan 12(Sun), 2020 Winter break: Jan 13 (Mon), 2020 ~ Mar 2(Mon), 2020

Video-conference class in the 1st semester(15 weeks): 1st week of Apr ~ 2nd week of Jul

Video-conference class in the 2nd semester(15 weeks): 1st week of Sep ~ 2nd week of Dec

\* Elementary school curriculum developed in 2019 and planned to be implemented in 2020

### **Procedures**









Get evaluation on the eligibility for special education and fill out School For You

Attach medical certificates as well as teacher's opinion and submit them to the Office of an application form for Education under the jurisdiction Take class after signing up for (online tutors, students)

Take measures to get registered as School For You in the Office of Education

### For enrolled school-age students

### Online Common Curriculum

classon.kr

A number of schools sign up to participate in online course-sharing consortium, or Online Common Curriculum. The goal is to provide real-time/interactive online classes registered by a small number of students or faced with challenges in supply of teachers.

\*\* Relevant grounds : Article 24 and Enforcement Ordinance No. 48 of 「Elementary and Secondary Education act」



### **Target**

High school students who wish to take unavailable classes

### **Features**



 Video-centered and one-way class → real-time/interactive class → a wide range of classes including reverse class, blended learning, and discussion etc.



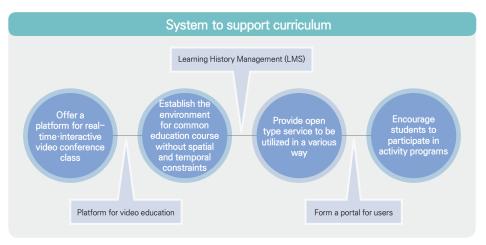
 Remove spatial and temporal constraints by using IT technology — Provide a wider range of academic options, a wealth of learning opportunities which will fit students' skill, interest, and career path

### Details

#### Provide a wealth of learning opportunities with students

 Offer real-time/interactive, student-centered and intensive courses with a small number of students such as discussion, project activities etc.

## Operation System



### **Procedures**



For the unschooled and school dropouts

### Support for the unschooled and school dropouts www.educerti.or.kr

Support for the unschooled and school dropouts is aimed to provide various learning support programs and award credits for extracurricular experience for the unschooled or school dropouts who are subject to compulsory education but have difficulties in getting back to schools, thus enabling students to pursue their study and get recognition of academic achievement.

\*\* Relevant grounds: Article 29, 96, 97 and 98-2 of Enforcement Ordinance of Felementary and Secondary Education act

### Target

Those who have not advanced to elementary or middle schools aged under 24 years old

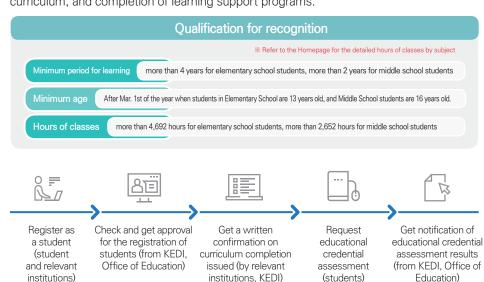
#### **Features**



Recognition of Academic **Achievement** 

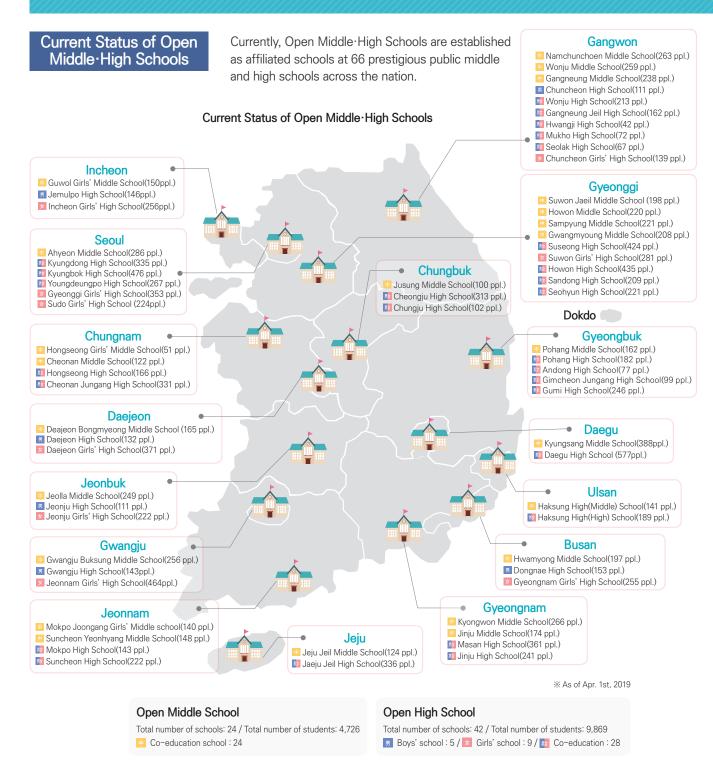
**Procedures** 

Students can gain recognition for their elementary and middle school diploma through educational credential assessment with licenses, learning experience for regular curriculum, and completion of learning support programs.



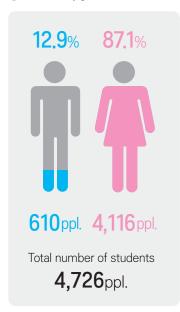
# Current Status of Operation

### **Current Status of Operation**

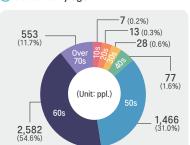


### Open Middle School Statistics

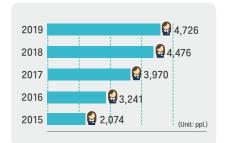
Students by gender(female/male)



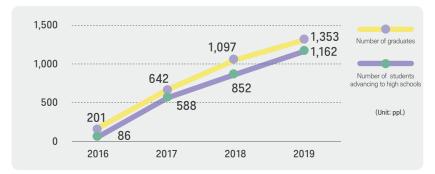
#### Students by age



#### Number of students over the past 5 years

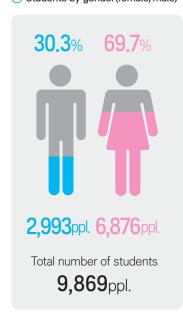


V Number of graduates and students advancing to high schools over the past 4 years

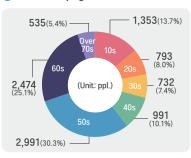


### Open High School Statistics

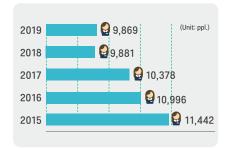
Students by gender(female/male)



Students by age



Number of students over the past 5 years



Number of graduates and students advancing to high schools over the past 10 years



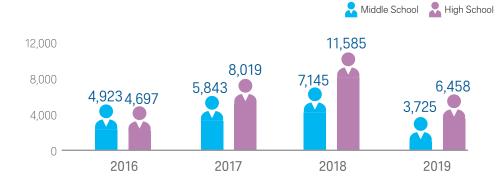
### **Current Status of Operation**

## **Current Status** of Online Class

The number of students who apply for online classes by year

(As of Apr. 2019, Unit: ppl.)

Classi	fication	2016	2017	2018	2019
The number of students	Middle School	4,923	5,843	7,145	3,725
applying for online classes	High School	4,697	8,019	11,585	6,458

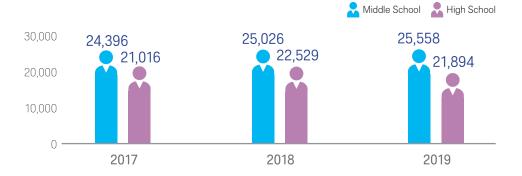


# Current Status of e-School

### The number of students who apply for e-School by year

(As of Apr. 2019, Unit: ppl.)

Classification		2017	2018	2019
The number of students applying for e-School	Middle School	24,396	25,026	25,558
	High School	21,016	22,529	21,894



# Current Status of School For You

### The number of students who apply for School For You by year

(As of Apr. 2019, Unit: ppl.)

Classification		2017	2018	2019
The number Middle School of students		87	277	270
applying for School For You	High School	109	274	317
350			Ridd	le School Righ School
330 Q	<sub>7</sub> 109	277	274	270 317



### Current Status of **Online Common** Curriculum

# Current Status of Online Common Curriculum operation by year (As of May 2019, Unit: ea., ppl.)

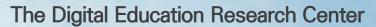
Classification		2018	2018 2018 winter semester	
The number of courses opened		89	11	93
The number of students applying for the course		884	100	868
900	884		The number of cours	ses opened 🙎 High School
0	89	11	100	93
0	2018	2018	3 winter	2019

### **Current Status of** the unschooled· dropouts

### Current Status of the unschooled dropouts by year

(As of May 2019, Unit: ea., ppl.)

Classification		2018		2019	
The number Elementary School		86		4	11
of students	Middle School	154		67	
	The number of students who gain recognition for academic achievement				4
	8	Elementary School	Middle School	Students who	gain recognition for nievement
120	86	12	4	67	
O	201	8		2019	



is committed to being at the forefront of education for all by forming a customized and open learning system with the convergence of education and intelligence information technology in order to provide additional learning opportunities and to fulfill the right to education.





### Center for Digital Education Research



