Globalization of Korean Education

Education in KOREA

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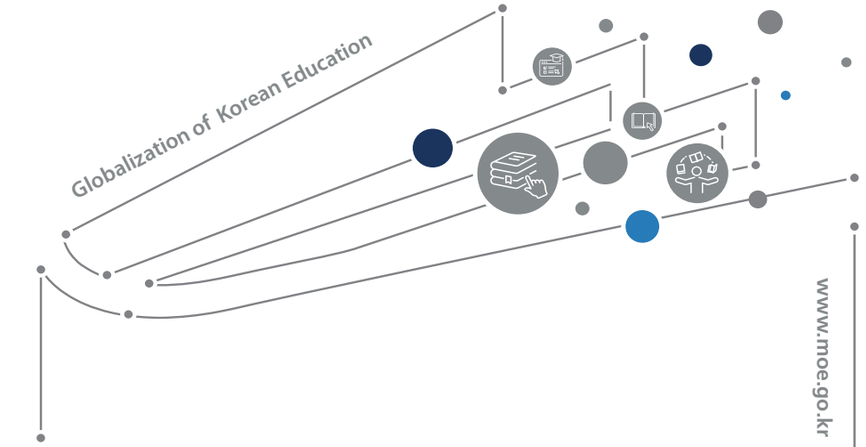

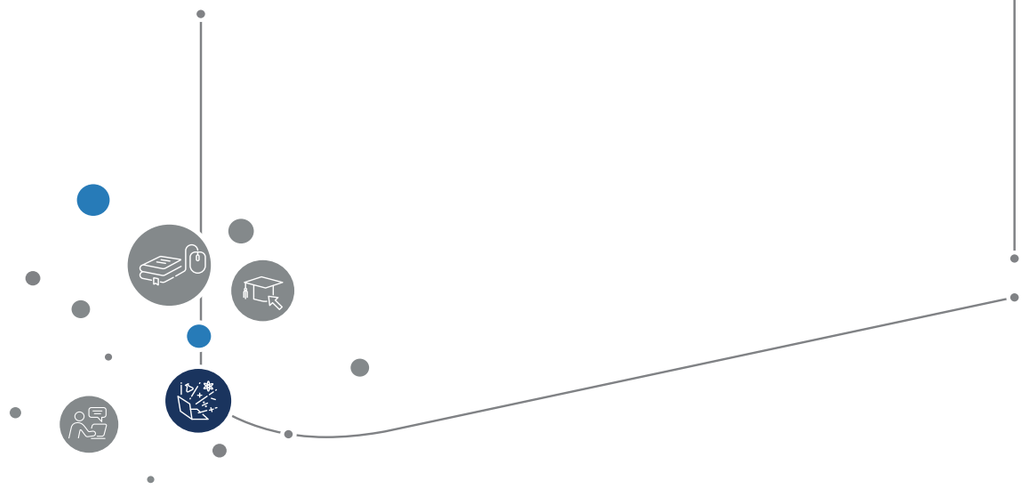

Ministry of Education

Globalization of Korean Education

Education in KOREA

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Education in
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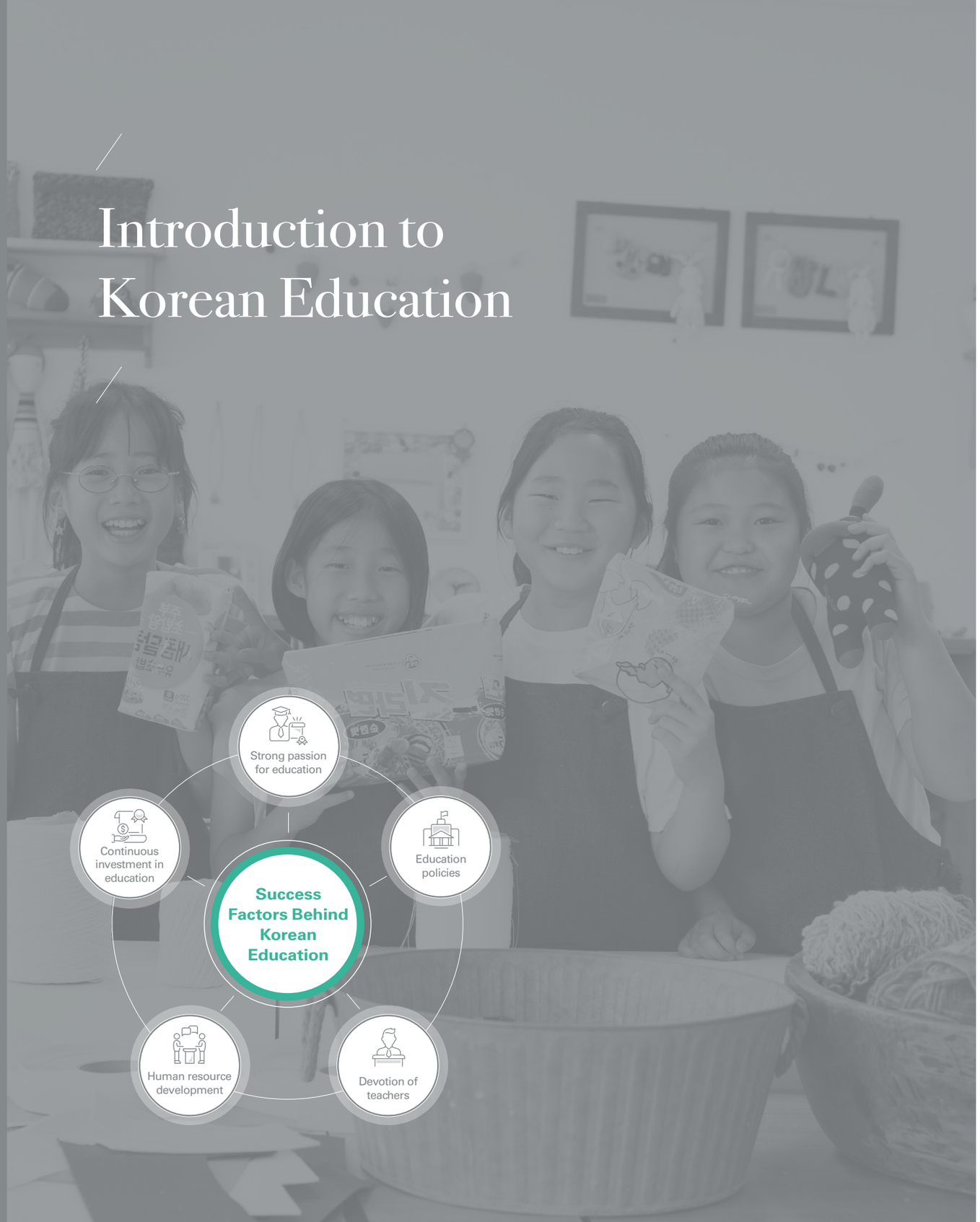
Introduction to Korean Education



Korea has achieved remarkable growth in the last 50 years. Education has been the main force behind Korea's rapid growth by quickly supplying outstanding human capital that was capable of absorbing advanced technology and developing its own technology in both quantitative and qualitative terms.

For the last 70 years since its liberation in 1945, Korea has successfully achieved economic growth and democracy with the development of its education system. Korean education has achieved high scores in the Program for International Student Assessment(PISA) and has attracted the attention of the international community, which has watched Korea's meteoric rise and considers it one of the most successful development models.

The Korean people's strong passion for education, continuous investment in education, the government's spearheading of education policies, human resource development on a national level, and the expertise and devotion of teachers are the success factors behind Korean education.

Korean people's passion for education

Education held an important place in Korea's Confucian tradition, which reveres learning. Parents' interest in and passion for their children's education was tremendous.

The following description by a French soldier, who experienced the 1866 conflict when France invaded Korea, clearly shows the Korean society's enthusiasm for education.

"We could not help but be amazed by our discovery, but at the same time, it hurt our pride that there are books in the home, no matter how rich or poor they may be. Almost everybody knows how to read, and illiteracy is held in contempt by the neighbors."

In the late 18th century when the status system was beginning to crumble, education became a means to move up the hierarchy. And after independence, the sorrow and loss felt by the uneducated led them to quench the thirst and caused an education boom.

During Korea's industrial era, continuous economic growth opened up employment opportunities, and under the merit system, people could take advantage of education to become successful. In Korean society, education was the most legitimate means for an individual's self-realization and for them to climb up the socioeconomic ladder, and was at the same time a positive factor that contributed to economic growth.

The government-led education system built and operated

The Korean education system was built and operated systematically by the government. Education programs, curricula, teacher policies, higher education policies, and so on. The whole education system was systematically controlled by the government.

The government expanded finances for education and made efforts to increase the proportion of the education expenditure in the total government budget and the GNP. The establishment of an "education tax" and the "Local Education Subsidy Act" secured stable funding for education.

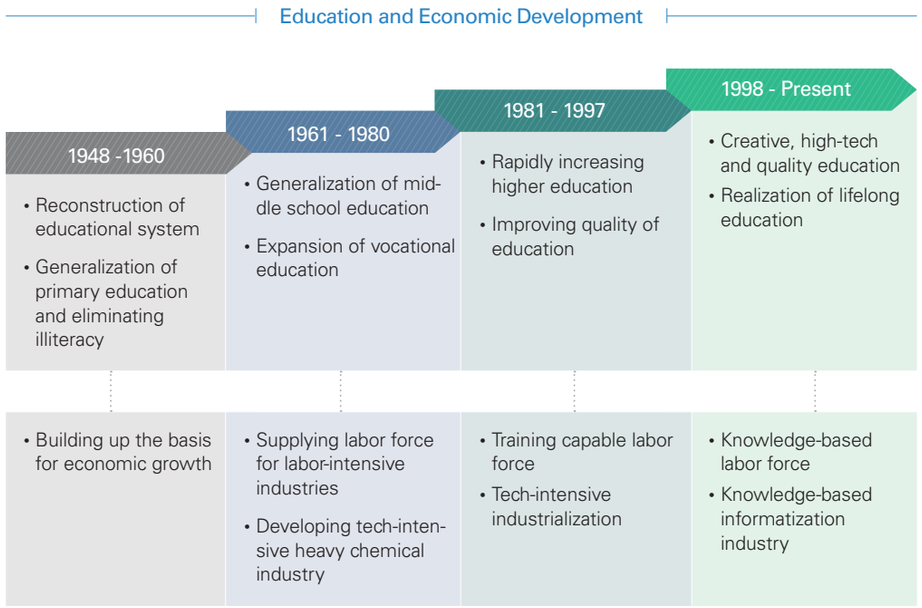
To satisfy the people's thirst for education, the government chose policies to educate more students at minimum cost.

Its strategy had the more capable teacher take charge of more students. The student-to-teacher ratio remained high, but the wages for teachers were also kept relatively high. This incentivized more capable manpower to enter the teaching profession. Thanks to the high student-to-teacher ratio, the school attendance rate remained high despite the low investment in public education. Given the limited budget, the more effective strategy to enhance the quality of education was to boost teacher competence rather than bringing down the student-to-teacher ratio.

From the 1950s to the 1970s, programs such as maximizing the number of students per class, multiple-shift classes(two to three shifts), and night schools were all part of the low-cost approach to satisfy the fast-growing demand for education.

A virtuous cycle between education and national growth

Education raised people's competence, which brought about economic, political, social and cultural growth in Korea, and the resulting enhanced national competence



brought about educational growth. Within this virtuous cycle, education and national growth created a synergy effect.

Industrial market demand was satisfied by people who were trained and acquired skills through the public education system. Five-year economic development plans began in the 1960s, and an education plan to produce the manpower needed was drawn up accordingly to go hand in hand with the national development plan.

Equal education opportunities and the belief that your success depends on your effort and that "you will succeed if you study hard" made the meritocracy a reality, and led the way to social integration.

And education was the force behind the citizenship that achieved political democracy. Expanded education opportunities boosted the education standard and thus heightened people's political awareness.

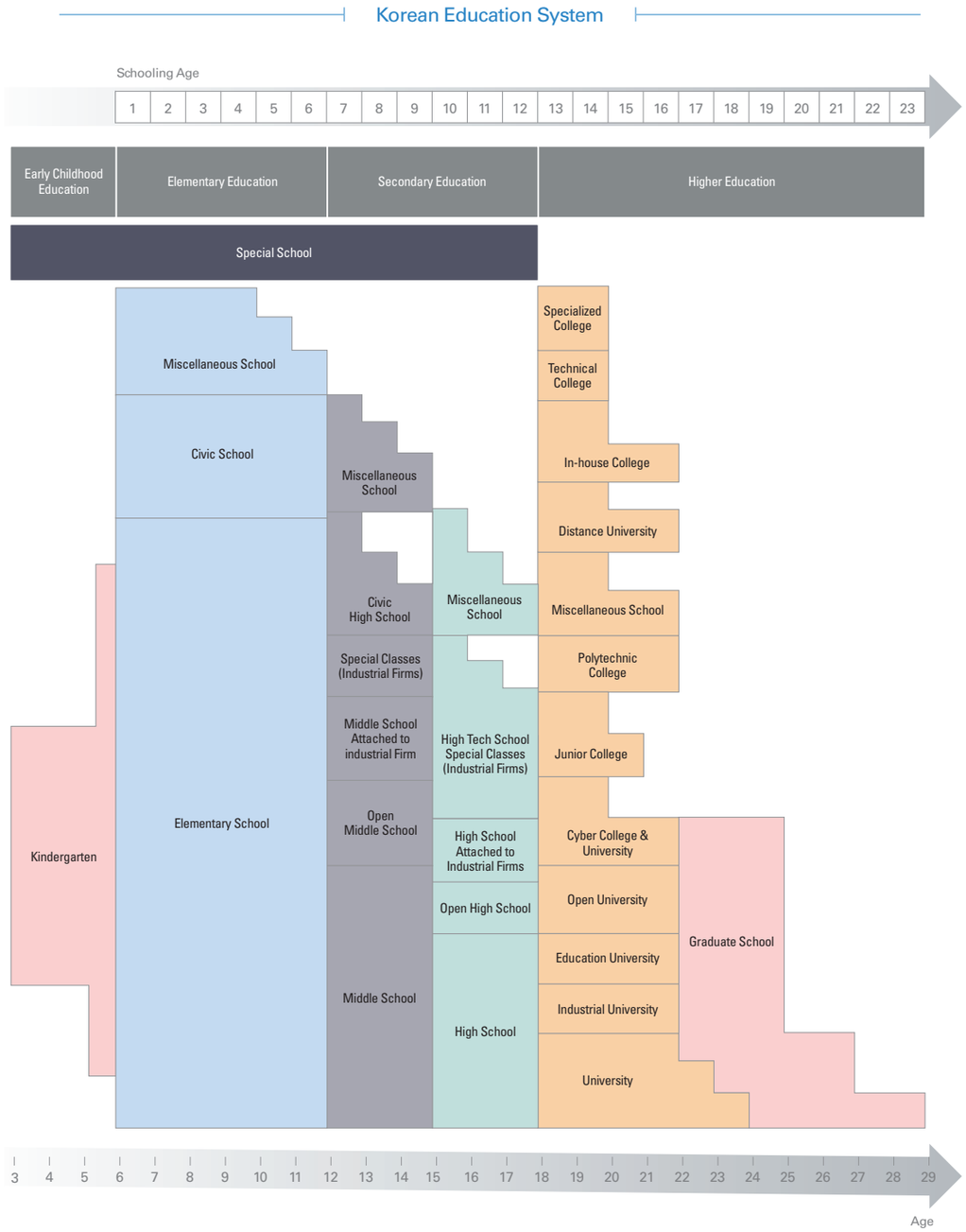
The talented individuals who grew up with the education system made efforts to introduce Korean culture to the whole world. And with K-pop and Hallyu(the Korean Wave), Korea's image was enhanced in many countries around the world.

Shift in the education paradigm: Happiness education, creative and converged talents

Korea's economic development has led to an expansion in education finance so that the government is now able to employ different education policies that cater to the educational demands of individual students, break away from the uniform competition for better grades, bring out the abilities and characteristics of each individual and realize each individual's happiness.

Student-centered education, such as well-rounded education that allows students to learn in safe and happy schools, has taken root.

We are faced with a variety of changes in society and outside the education environment, such as a low birth rate, aging society, global education competition, the advent of a knowledge ecology-centered informatization society, and so on. To meet these changes head on, it is necessary to shift to an education system that emphasizes creativity, cooperation, communication, and regard for others. And to that end, the following are the key assignments that Korean education is focusing on: Producing creative and converged talents, expanding convergence character education, expanding education welfare, global education cooperation, and building a lifelong learning society.



Globalization of Korean Education

EDUCATION IN KOREA

PART 1

Elementary and Middle School Education

The Republic of Korea(hereinafter, “Korea”) is a country that promotes its competitiveness through education. As such, the country now has a greater need for talent with the capability to generate more creative and innovative ideas. The paradigm shifts in the social landscape in the wake of the Fourth Industrial Revolution(4IR) also demand innovation in how Korea approaches education.

Korea’s Ministry of Education(MOE) has accordingly established and implemented policies with effectiveness, aiming to overcome challenges with a quality-driven educational system. Various educational endeavors have been put in place, including the realization of a practical public education system that incorporates the voices of interested parties(teachers, students, and their parents), and the implementation of education, research, and innovation initiatives for nurturing talents who are capable of creative convergent thinking.

1

Robust public education system

The drastic changes are now taking place in technology and in the social landscape in the wake of the 4IR demand innovation in how conventional education is provided. In fact, Korean education is now confronted with a challenging policy environment amidst decreasing national economic growth due to a prolonged low birthrate trend, and a widening education gap as a result of ever-deepening socioeconomic polarization.

The Korean government is committed to overcoming these challenges. It has striven to achieve closer communication with school systems so that a more robust public education program can be provided.

Also, the Administration expedites its efforts for education, research, and innovation for the purpose of nurturing talents who are capable of creative convergent thinking.

Implementation of nine-year compulsory education

Compulsory elementary education in Korea started in 1950. It has taken root systematically over the next 30 years or so. Starting in 1985, compulsory education at the middle school level was implemented systematically as well, with the highest priority given to islands and isolated areas, followed by rural areas and small- and medium-sized cities, large cities, and lastly Seoul Metropolitan City.

The establishment of a middle school system as part of Korea's nine-year compulsory education became 100% complete and fully effective as of 2004.

Building happy schools and custom-tailored education systems

The government is committed to ensuring the value and practicality of compulsory education so that the country can effectively nurture talents who are suitable for the 4IR era and for the future knowledge-based society. Various policy programs are undertaken to overcome the pitfalls of rigidity and exclusivity characteristic of the public school system due to the innate uniformity and generality therein, to meet the needs of a more diversified society and of the more varied clientele(learners), and to realize happy schools where learning can actually be fun. Schools across the nation are actively implementing relevant initiatives such as the 2015 Revised National Curriculum, which aims at creativity and convergent thinking, the Free Semester(FS) program, which promotes the talent and aptitude of each student, the teaching-learning scheme, which focuses on character education, and the continued development of teacher competencies.

Of these, the Free Semester(FS) program allows middle school students to take a semester or two away from the regular curriculum track that normally emphasizes knowledge acquisition and academic competition and to instead take part in classes that encourage student participation. In the FS, students' performance is subject to process-based evaluation. Students who explore the FS are offered a variety of hands-on activities through which they can develop their talent and determine their aptitude.

Since its full-scale implementation in middle schools around the country in 2016, the FS has been a breath of fresh air for the conventional school systems. The success of the program has helped to expand the implementation of FS to the remaining regular semesters and to other school years as well. Starting in 2018, interested schools may offer their first-year middle school students two successive semesters of free learning, i.e., an expanded/developed form of FS called the Free School Year. The FS program helps students explore their potential within their school jurisdiction and still grow into creative individuals of sound character.

At the high school level, a custom-tailored program has been installed wherein students can take courses they choose according to their talent and aptitude. In this scheme, each school offers courses by taking demand into consideration so that the right of students to choose courses can be broadened. If a school has difficulty offering a course or courses, it can open it/them jointly with other school(s) nearby. Students therefore can still take the classes they want under the joint(common) curriculum track. More recently, the government has extended its efforts to make courses more accessible by allowing the joint curriculum to be operated online. It has established and is currently running an online platform that offers a pilot program for real-time interactive courses. Once the web-based common curriculum has fully settled, youngsters educated in small schools in agricultural, mountainous, and fishing communities will have more choice in course offerings. The online scheme is also expected to help operate a high school credit system that will be introduced in a few years.

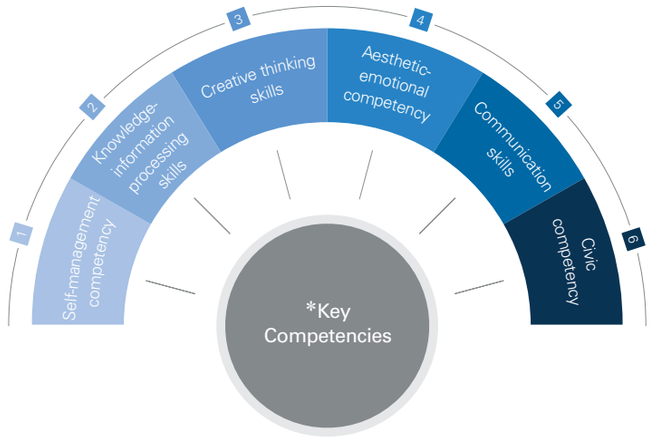
Meanwhile, the Administration is expanding the subject-specialized high school program. Under this program, participating high schools operate curricula with an emphasis on international affairs, a second foreign language, or any other specific subject matter. Students can study the subject(s) they are interested in with greater depth in these subject-specialized high schools, which offer programs designed specifically for subject areas related to students' future careers.

National curriculum – a skillfully choreographed balance between commonality and diversity

Korea operates a national-level curriculum in its elementary and middle schools. The one that is currently implemented was subject to a full-scale revision in 2015(the "2015 Revised National Curriculum"). It is implemented on a yearly basis and is to continue until 2020.

The 2015 Revised National Curriculum aims to nurture talents with creative conversion-thinking abilities, who are well-rounded with both humanistic imagination and scientific and technological creativity.

Of note, the latest curriculum has presented anew the key competencies* that are required for each and every Korean student who will lead Korean society in the future. The key competencies are designed to foster practical abilities that will help young minds carry on into the future.



At the high school level, the 2015 Revised National Curriculum offers a wide range of electives(93 subjects) in addition to the common(core) courses, allowing students to choose classes according to their career plans and aspirations. The aim is to operate a more custom-tailored curriculum.

Furthermore, the latest curriculum intends to avoid uniform operations overly in line with the national-level framework. As safety measures, achievement or performance standards for each subject are presented as the key considerations, while communities and schools are given more freedom and power to implement the national curriculum to ensure that it is operated suitably for individual communities and schools, thus keeping the diversity intact.

Dispersing autonomous and innovative education

Korea has witnessed a continuous increase in social demands that the severely standardized and performance-oriented education system be mended and the public's trust in public education be increased, as the conventional system reflects excessive competition for elite university entrance. Accordingly, the latest curriculum supports Innovation Schools, a model geared toward reforming Korea's public education. Innovation Schools are currently implemented autonomously by each municipality and province.

As a model for school system reforms, Innovation Schools envision creative, democratic citizens who are nurtured through reforms in the curriculum and school administration as supported by the participation of and cooperation among communities and schools. Specifically, the model aims at the democratic administration of schools based on shared visions and responsibility; the operation of curricula with an emphasis on core competencies; the implementation of a teachers' learning community program for joint research and operation of curricula; and the creation of a school culture that honors student autonomy.

To spread Innovation Schools, an implementation entity for Innovation Schools was put together with the aim of policy cooperation and liaison between local governing bodies and parents' networks. The entity also serves as the basis for enabling discourse between the central and local governments. Specifically, the implementation entity is involved in reflective evaluation of how Innovation Schools are operated, in the sharing of exemplary case studies from cities and provinces to help spread the outcomes of the program, and in the recruiting and supporting of future-minded Innovation Schools to upgrade the quality of the current ones.

Preparing for the introduction of a high school credit system

The high school credit system is a curriculum track program where students get

to choose and complete a wide variety of subjects/courses according to their career aspirations that are recognized for a high school diploma when the accumulated course credits reach a predetermined level. In this program, the curriculum is laid out based on credits. Details on how it should be implemented vary according to each school's operating conditions.

The high school credit system allows students to choose the subjects they want in line with their career plans, aptitude, and academic performance. The system is a departure from the conventional standardized education that emphasizes competition among students for securing higher education at elite universities. The credit system supports career and professional growth planning by students, guiding them away from the overemphasis currently placed on college entrance preparation. Moreover, the intention is to supplement the limitations of the leveling or equalization program currently in place at the high school level. High schools strive to accommodate the increasingly more diverse demands of their students and to incorporate the resulting diversity into the curriculum.

Introducing the credit system would require an overall overhaul of the current high school system, hence systematic preparation and review must precede its full-scale introduction. The Administration is accordingly preparing the introduction. It is expanding students' choice of subjects/classes with the diversification of the national-level curriculum, as exemplified in its implementation of research and pilot case studies. The Administration is conducting comprehensive research on teachers, school facilities, and other related factors. It also is implementing the process of turning the issue into a national-level discourse(in forums, etc.).

Bolstering educational autonomy

To realize autonomy in education in general, and specifically in democratic public schools, it is necessary to clarify the authority that is assigned respectively to the government, the office of education at municipal and provincial levels, and each and every school in the country. Also, a framework needs to be provided such that the interested parties cooperate with and support one another as equal participants.

The government is streamlining regulatory elements such as laws, guidelines, and programs that restrict school administration, educational activities, and the autonomy of municipal and provincial education offices. The intervention intends to reform the conventional practice and culture in Korean public education where too much emphasis is placed on control and management. In parallel, improvement of the public education system is underway according to the feedback received from the education offices and interested parties so that autonomy can be exercised in school administration.

Of note, the Administration intends to support the 17 municipal and provincial education offices in their endeavor for autonomous administration with the notion that the central government and local self-governing bodies enjoy an equal, cooperative relationship. The Administration also intends to empower the municipal and provincial education offices so that they can actively support the democratic education initiatives of each and every school to help ensure autonomous school administration with practicality.

Ensuring quality and practicality of democratic citizen education

Korean society is in the midst of dramatic changes that are bringing about various social dilemmas and issues. Therefore, democratic citizen education is necessary for society to respond adequately to these varied and complex dilemmas and to promote social unification and continued development of democracy.

Democratic citizen education from schools is the purpose of the Korean public school system, as stated in Article 2 of the Framework Act on Education. This education helps students to promote an aptitude that befits democratic citizenship, to instill in themselves a balanced attitude and values, and to practice their ideas and beliefs in their everyday lives.

The Ministry of Education(MOE) is promoting democratic citizen education by strengthening the expertise of teachers and by supporting initiatives for creating a democratic school culture. The foregoing entails ensuring the value and practicality of democratic citizen education within the curriculum; the provision of a variety of education contents; the implementation of teacher training/education; and the establishment of teachers' networks in each school district.

2

Providing equal opportunities for education

The Korean government envisions education that promotes learning and growth for all students. This vision entails the provision of equal opportunities for education starting as early as the first years of the learners' lives.

The vision also embraces children who have difficulty with learning(underperformers, dropouts, etc.). To realize such a vision, the Administration extends its support to ensure that the Korean education system provides opportunity and hope to all citizens.

Nuri Curriculum – high quality education for all children, Year 3 and beyond

The Nuri Curriculum, a core(common) education program for children ages 3-5, has been put in place. The curriculum, now keen on ensuring its quality and practicality, aims at the early prevention of academic deficits(i.e., failure to master the same grade level materials before advancing to the next grade) which could start at a very early age. Nuri also provides a combined framework for day care and early childhood education to ensure that any Korean child can benefit from high quality education from the first years of their life and beyond.

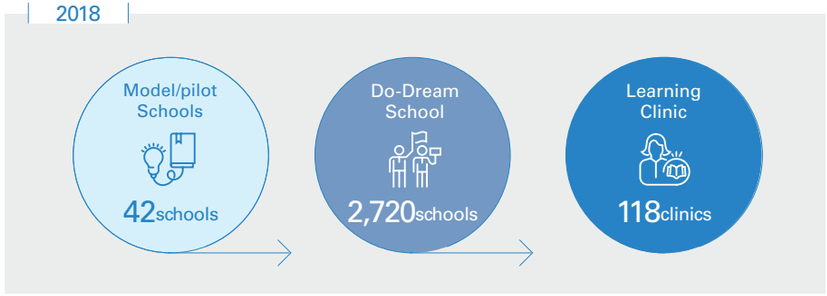
In parallel, the Administration promotes the "Eommapum"("In Mom's Arms") Full-Day Child Care program, offering care to preschool children from morning until late evening. Moreover, the authorities recruit and support government-subsidized private kindergartens that provide high quality care at reasonable costs so that infants and preschool children from low-income families can secure chances for early childhood education.

Government support to ensure basic academic skills

The government has recruited and disseminated exemplary case studies related to the operation of model/pilot schools that aim to provide one-on-one education for underperforming students in the classroom(42 such schools as of 2018). The custom-tailored program is part of the government's initiatives for creating safety nets in and outside of school to ensure that all students have basic academic skills.

Furthermore, every school in the nation is implementing the Do-Dream School project(2,720 participating schools as of 2018). The project supports young learners with a wide variety of programs that are customized to suit the needs of individual students. Do-Dream Schools use multidisciplinary collaborative teams created to provide support(homeroom teachers, special education teachers, school counselors, day care teachers, etc.).

Moreover, the Administration is providing in-depth support with the establishment of the Learning Clinic, a support system franchise available outside of school(118 such clinics as of 2018). The aim is to help students who need more support than what is provided by the regular school system alone.



Additionally, the authorities are planning to continually support a basic academic skills diagnostics and calibration program that offers customized assistance based on a scientific approach starting from the diagnosis of the cause of academic underperformance to its calibration and management.

Customized education for academically vulnerable students

Meanwhile, the government is offering support for students from multicultural and multiethnic backgrounds through customized education services such as Korean classes for returnees and foreign students and mentoring by college students. The support encourages multicultural/multiethnic students in Korean society to put their abilities to full use and grow to be talents in their communities.

For North Korean refugee students, the Administration is strengthening its support through customized programs that incorporate the educational demands of the defectors based on their diversity. Moreover, a multiple-phase counseling program(from early asylum stage to transition phase and settlement period) has been established. The program aims to provide psychological and emotional support as necessitated by the traumatic experience the students endured in the course of escaping from North Korea, and the resulting anxiety and conflicts with their parents.

For students with disabilities, operation of the Free Semester(FS) program for special education schools is greatly expanded to provide customized career education for these students. Furthermore, more autonomous public high schools are designated to help increase the academic capability of regions that are at a disadvantage in education. As for agricultural, mountainous, and fishing communities, community-based specialty schools receive government support such as dormitory construction, etc.

Regarding students at risk of discontinuing their education or who have dropped out of school, the Administration offers programs suitable for their circumstances by sharing relevant information about the students with the competent authorities(municipal and provincial education offices, Ministry of Gender Equality and Family, etc.). For those who have difficulty returning to school, the government finds ways to provide them with stepwise learning interventions(compulsory education) outside of school, and

with opportunities to acquire academic skills. Continued school education, therefore, is feasible for at-risk students as well. A deliberation period of one to seven weeks is granted to at-risk students to help them adjust to the school system and to allow them to carefully reconsider their expressed desire to quit school. A custom-tailored support service for at-risk students is available in the form of continued counseling and management(hands-on career exploration and arts and athletic programs).

Establishing a fair selection process and reducing education costs

In selecting first-year high school students from applicants, the social integration model was expanded by using general high schools and Meister high schools in non-equalized regions(school districts) as the focal point. The selectee pool was also expanded to include recipients of educational stipends. For college application, efforts are made to continually increase opportunities and fair chances for all students, and a quota is implemented such that a minimum of 50% of newly recruited pre-med students and the selectees in other favored departments are from non-Metropolitan Seoul areas. If a student applying for the College Scholastic Ability Test(CSAT) is from a low-income family(up to the legally defined "second-lowest income bracket"), his/her application fees are exempted. Once the student enters a higher education institution, the tuition and housing expenses are reduced by increased government funded work-study scholarships, the Happy Dormitory franchise, etc.

A new scholarship program called Dream Ladders has been established to support financially disadvantaged students with potential and a will to learn in their academic endeavors so that they can grow to become talented young leaders of their community. First-year middle school students who meet the selection criteria can apply for Dream Ladders with a recommendation from their school principal. Those chosen are provided with various forms of support including scholarships and education camps at middle and high school levels so that they can study without worrying about the expenses.

3

Increasing the expertise and morale of teachers

There is a saying, "Education is only as good as its teachers." The role of teachers in education is that important.
As a matter of fact, the dedication of outstanding teachers with expertise and professionalism played a significant part in the realization of the "Miracle on the Han River" for postwar Korea, a country lacking both natural resources and capital. Competent teachers promoted the capability of the human resources for their country, which in turn contributed to national competitiveness.
Accordingly, the Korean government implements a wide range of teacher policies to encourage talented applicants to join the profession, and to support teachers in their work so that they can focus their professionalism and expertise on nurturing young minds.

Producing and qualifying teachers

Teachers in Korea are required to acquire a teacher's certificate issued by the government(up to secondary education) and to meet predetermined standards in order to obtain the qualification required of a teacher. Those who satisfy the foregoing enjoy a high social status and are treated with prestige. To take the national-level elementary or secondary teacher employment examination, an applicant must be a graduate of one of the state-approved institutions with courses for teachers(teachers' universities, education colleges, graduate schools of education, and curricula for teaching professions offered by colleges/universities). He/she also must acquire the teacher certificate granted upon graduation from such an institution. Naturally, competition among the applicants is fierce. The teacher certificate is categorized into

regular teacher(Grade I and Grade II), and Grade I and Grade II school counselor, librarian, school nurse, school nutritionist, kindergarten teacher, etc. Promotion for certified teachers is based on the consideration of their educational background, obtainment of a master's degree, re-education or re-training, and other factors.

Continued development of teacher competency

To ensure the successful implementation of various forward-looking education policies, the curriculum of state-approved teacher education institutions has been reformed into one that emphasizes the improvement of classroom expertise of student teachers and their increased ability to respond to changes in the future education landscape, and the strengthening of their field capabilities.

With these reforms, the government is increasing the competency of teachers and at the same time revising the national-level elementary/secondary teacher employment examination with an emphasis on effective teaching practice. Furthermore, the Administration supports the continued competency development of newly hired teachers by providing training programs for new teachers, in-depth training sessions for senior teachers, etc.

Teacher training is roughly divided into the following three categories: qualification training that aims at obtaining a certificate/license as a principal, deputy principal, head teacher, school librarian, school nurse, etc.; the on-the-job training(OJT) for subject teaching, student guidance, etc.; and special training such as sabbatical years and overseas teacher training.

Starting with first- and second-year elementary school children in 2017, the 2015 Revised National Curriculum has been implemented successively in elementary and junior high classrooms. Teacher training has accordingly been carried out since 2016 in close alignment with the latest amendment of the National Curriculum. The aim of this is, first and foremost, to strengthen the competency of teachers so that their classroom performance and practice can be enhanced to help promote student capabilities that are essential to Korean society in the 4IR era, where the focus is on creativity and collective intelligence(CI).

Teacher training addressed in the 2015 Revised Curriculum sets itself apart from previous training schemes in many ways, e.g., training method, training content, and trainees.

Specifically, the latest curriculum-mandated teacher program is a departure from the simpler, conventional top-down approach that conveys training from the Ministry of Education(MOE) to municipal/provincial education offices, and then to municipal/county education offices and to each school in that order. In the new scheme, about 13,000 core teachers or leaders directly trained by the MOE assume the role of training expert. As such, they visit each school for training and/or offer first-hand training to subject teaching faculty members in cities and counties. Therefore, the content pursuant to the latest curriculum is introduced more vividly, and strategies for classroom implementation are sought.

Moreover, the latest teacher training model avoids the one-way, lecture-based conveyance of knowledge and information. Rather, it focuses on participation by teachers through debate and practice. Since the goal is to make a transition to classrooms with student-participation, teachers are required to first practice what they are going to teach by participating in a training program that involves debates, first-hand exploration/research, experiments, and practicums.

Teacher evaluation system

The teacher evaluation system is at the core of increasing the expertise, professionalism, and performance of teachers and ensuring students' right to learn. Every year, all teachers in elementary and junior high schools(both public and private) throughout the country are subjected to evaluation. The evaluation is implemented in each school in two categories, performance(assessment of teacher achievements) and expertise/professionalism(assessment of teacher competency development). The former is conducted by the principal, deputy principal, and multiple fellow teachers, while the latter is executed by peer appraisal and student and parent satisfaction surveys. The performance evaluation is based on legal grounds and addresses academic and non-academic guidance, job obligations, expertise development, and appropriateness of character and attitude as a teacher in accordance with the regulations and procedures stipulated by the MOE and municipal and provincial education offices. The evaluation results are used for promotion and other human resources affairs. The expertise/professionalism evaluation, on the other hand, appraises principals and deputy principals for their overall school governing, and teachers for their academic and non-academic guidance.

Master teacher system

The master teacher system, put in place in 2011, assigns a teacher with outstanding expertise in teaching his/her classroom subject(s) a role that is related to the expertise in question. The system ultimately aims at increasing the expertise of the teacher and improving the quality of education throughout the school. The main activities assigned to the master teachers include providing consultation to new hires and junior teachers on classroom teaching and student guidance and counseling. Any teacher with a minimum of 15 years of experience in the field can apply for the master teachership based on a recommendation from the school. The selection and appointment of master teachers entail document appraisal and peer evaluation, in-depth evaluation of competency, and qualification training. Renewal of the master teachership is repeated every four years through evaluation. Moreover, master teachers receive support in the implementation of their job duties, such as a reduced number of teaching hours and extra funds for research and related activities.

Sabbatical year for research

A sabbatical year for research has been implemented to allow elementary and junior high school teachers to take a year off from their job duties and immerse themselves in education-related research in colleges/universities, training institutions, etc. according to research plans they themselves have established. As of 2018, 746 teachers are participating in the research sabbatical system nationwide. Sabbatical year recipients are teachers with outstanding performance in their yearly expertise/professionalism evaluation(assessment of teacher competency development) and are selected through a review of research plans, etc. from each municipal/provincial education office. Through this program, teachers conduct research in the field for one year, combining educational theory and practice, and apply the results to the educational field after they return. The research sabbatical system offers positive feedback that helps improve the quality of school education, in addition to increasing the expertise of participating teachers.

Protecting teachers' rights and creating a culture where teachers are respected

Healing support centers are operated at each municipal and provincial education office to provide teachers exposed to violence and/or trauma while performing their job duties with opportunities for adequate healing and for restoring their rights and dignity. The ultimate goal is to ensure that all teachers can fully commit themselves to teaching while enjoying respect that befits their status. The centers offer phased and comprehensive support to help protect teachers' classroom engagement, from training teachers on preventing violating situations to offering psychological treatment and counseling and legal consultation when there are violating events and offering follow-up care once the teachers return to school. Meanwhile, the authorities are striving to help increase society's interest in and awareness of a culture wherein teachers are honored. From 2016 to 2017, a project for creating a - culture of respect for teachers was implemented with a public testimonial contest("Teachers in My Heart"). Starting in 2018, support is given to municipal and provincial education offices so that they can autonomously implement programs suitable for local conditions for the purpose of creating a culture of respect for teachers, e.g., the Teachers and Students Together program.

Globalization of Korean Education

EDUCATION IN KOREA

PART 2

Higher Education

Higher education institutions are the focal point of the Korean education system, wherein creative talents with convergent and innovative thinking and healthy, wholesome citizens are nurtured and produced. The promotion of outstanding talents is one of the key factors that will determine the country's future global competitiveness. To proactively prepare for future changes, the Korean government provides full-fledged support for collegiate education and research, relevant start-up efforts, and industry-academia-research institute collaborations. Furthermore, the Administration aims at restoring the public nature of higher education institutions and the value of cooperation they represent by supporting the sharing and offering of networks and resources between the national universities. To support the autonomous development of institutions, the conventional standardized quantitative restructuring and evaluation approach has been reformed into the Higher Education Basic Competence Diagnosis. Based on the results of diagnosis, support is offered for the autonomous specialization of schools with a higher education innovation support program offering more general financial stipends.

1

Higher education basic competence diagnosis

Korea's higher education institutions are now confronted with massive risks posed by both internal and rapidly changing external factors in the education sector. For instance, Korea's population of school-age children is dwindling dramatically, investments in higher education stand below the OECD average, and the attritional competition among Korean colleges and universities is worsening, brought on by the previous administration's efforts for higher education reforms, financial support schemes, and other higher education policy implementations. Worse still, the autonomy of Korean higher education institutions continues to deteriorate.

Citizens of Korea, therefore, expect their institutions to tackle these risks wisely and at the same time position themselves as leading institutions in the 4IR era amidst the future changes.
The Administration has significantly improved the existing higher education restructuring and financial support methods. The new approach is to support colleges or universities' autonomous innovation and growth. The ultimate aim is to allow Korean colleges and universities to advance as true higher education institutions amidst challenging environments both at home and abroad.

Upgrading higher education structural reform evaluation to higher education basic competence diagnosis

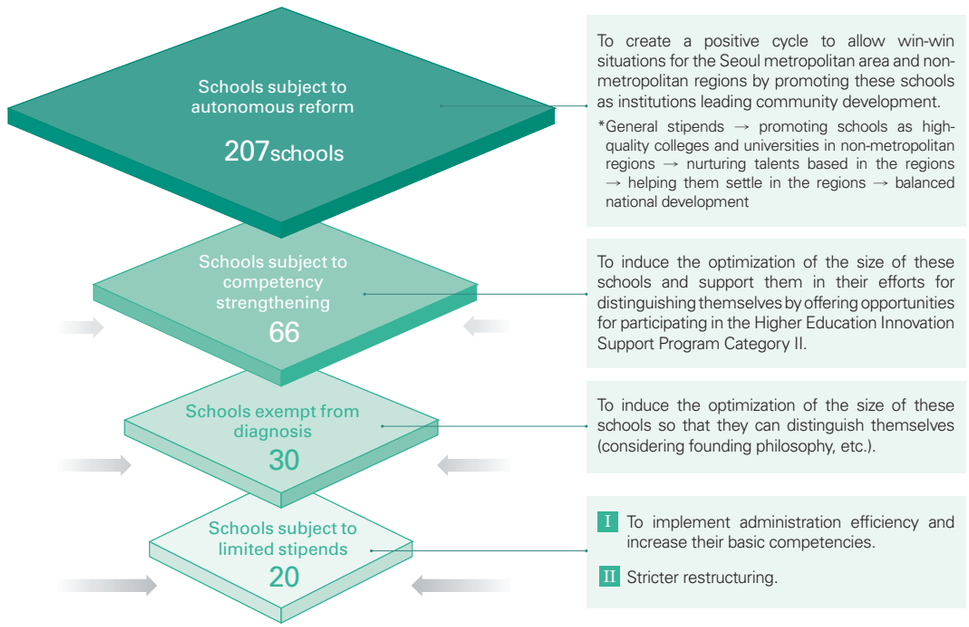
The Administration has improved higher education structural reform evaluation by collecting opinions from a broad range of related fields and upgraded it to the higher education basic competence diagnosis. In December 2017, the 2018 Higher Education Basic Competency Diagnosis Promotion Plan was confirmed and put into practice.

According to the basic plans, Phase 1 diagnosis examined the basic elements that any college or university must be equipped with, such as educational environment, operation of classes and curricula, and student support and assistance. The phase 1 diagnosis was performed for 293 out of the 323 colleges and universities that were targeted for diagnosis, and 64% of the target institutions were designated as being subject to autonomous reform. Phase 2 diagnosis targeted 86 colleges and universities, examining their sustainability as higher education institutions based on their curricula, contribution to the community, transparency in administration, etc. Phases 1 and 2 were followed by combining the diagnostic results with the implementation of anti-corruption measures. As a result, schools subject to competency strengthening and schools subject to limited stipends(Categories I and II) were defined, respectively, and selections were made accordingly.

Efforts to ensure the maximum autonomy of schools

Unlike the previous higher education structural reform evaluation that categorized colleges and universities into groups A, B, C, D+, D, and E, the new system has designated 64%(120 four-year colleges and universities, and 87 two-year community colleges) of the target schools as schools subject to autonomous reform. For these schools, the government plans to offer general financial support(Higher education innovation Support Program Category I) for three years starting in 2019 without advising them to reduce the number of their students. Furthermore, some of the schools subject to competency strengthening will also be provided with general stipends(Higher education innovation Support Program Category II) so that they are given a second chance for growth. In particular, the general financial support or stipends(higher education innovation support programs) combine various special-purpose projects. As such, program applicants or recipients are selected through diagnosis, thereby reducing the burden of evaluation borne by the schools. The programs ensure the maximum autonomy of colleges and universities by allowing them to execute program budgets according to mid- to long-term development plans established by the institutions themselves.

Direction in Support and Promotion of Higher Education Pursuant to the 2018 Diagnosis



Strengthening the public nature and duty of higher education institutions

When the schools subject to autonomous reform were selected, consideration was given to achieving a balance between the five districts so that a framework is provided for adequately sized, high-quality schools based in the non-metropolitan regions to ensure their stable development and growth. Additionally, school-specific anti-corruption measures have been incorporated into the 2018 Higher Education Basic

Competency Diagnosis Promotion Plan. The aim is to help increase accountability and transparency in institution administration practices, prevent corruption and deviations among private institutions, and protect students from harm.

Downsizing policy – a joint government-market balancing act

The consensus on previous higher education structural reform evaluation is that massive government intervention in the downsizing policy ended up hurting the autonomy of schools and failed to incorporate the preferences of students. Considering these opinions, the 2018 Higher Education Basic Competency Diagnosis Promotion Plan intends to advise only a segment of the institutions(schools subject

to competency strengthening and schools subject to limited stipends) to downsize based on the results of diagnosis. The intention is to minimize the government's preemptive intervention, to let the schools decide on downsizing autonomously according to changing landscapes, etc., and to even allow the students to have a choice in downsizing.

Promoting industry-friendly curriculum for schools in non-metropolitan regions

With the increasingly widening gap between the metropolitan Seoul area and non-metropolitan regions, a gap in the education and research environments of regional colleges and universities is growing as well. To overcome this and to accomplish balanced development in the country's higher education, the government strives to help regional schools be more self-sufficient by distinguishing themselves with unique qualities, that is, reforming departments to be in line with region-specific industries. Moreover, the Administration is keen on strengthening the competitiveness of regional schools and promoting them as regional growth hubs(such as with employment quotas for graduates from regional schools).

Also, opportunities for regionally based talents to enter regional colleges and universities and receive higher education are being expanded through a special regional talent recruitment program that picks applicants separately from non-metropolitan regions. With this program, outstanding talents based in non-metropolitan regions can enter a university in the region and commit themselves to study.

Moreover, the authorities are supporting regional talents to obtain the competencies that are required in the field. To that end, local industry-specific university training courses are operated, involving the expansion of departments/programs that are in agreement or interoperated with the promise of employment by companies(departments with employment contract conditions, custom-tailored curricula under employment contracts, etc.), and increased opportunities for field practice.

Also, the government is increasing the employment of regional talents as civil servants and in public entities, and expanding opportunities for recruiting local human resources, helping them to land high-quality jobs by increasing their employment opportunities.

With these endeavors, the Administration's strategy is to help consolidate a positive cycle in which regional talents enter schools in their community, receive high-quality, practical education, land a high-quality job, and settle in their community. In this way, the regional schools and talents are expected to play a pivotal role in accomplishing regional development.

2

Strengthening scientific/ research competencies

In accordance with Article 2 of the Sciences Promotion Act, the term "sciences" refers to any and all areas and processes of a discipline that seeks scientific theories and methodologies to produce and develop knowledge and publish and convey the knowledge so produced and developed.
In consideration of the intention behind the Sciences Promotion Act, the Ministry of Education(MOE) has provided and implemented the Comprehensive Plans for Scientific Research Support Program, aiming to create a research ecosystem that is custom-tailored to specific phases in the life cycle and to allow the social sharing and dispersion of research outcomes. The plans cover all areas of the sciences including humanities and social sciences, Korean studies, natural sciences, and engineering. Stipends are provided separately for individual, collective, and joint research projects.

Establishing a research support system customized for users

The creation of a user-customized research supporting system is underway with a focus on building a research environment that is custom-tailored to the needs of researchers, and on expanding stipends in response to increasing social demand. In particular, the system emphasizes "staying on the course" initiatives where young researchers are able to continue their work without interruption by offering them more opportunities for research and granting them a long-term research period(a maximum of 10 years).

Specifically, stipends for young and highly motivated researchers in the humanities and social sciences are increased by extending their qualification from the previous maximum of 5-10 years from the point of obtaining a doctoral degree to 10 years. As for basic("grassroots") individual research in the natural sciences and engineering, the previous umbrella term of 3 years(KRW 50 million a year) has been increased since 2016 to ensure more stable longer-term support. Now, the stipends are granted for a maximum of 10 years, and the funds are subject to the researchers' choice, ranging from KRW 10 million to 50 million a year. In particular, the "staying on the course" initiatives that fund research projects up to 9-10 years are expected to provide researchers with a more stable long-term research environment that will in turn foster their full-fledged dedication to research.

Research in the humanities is also expanded to reflect increasing social demand. The Administration plans to expand strategic research projects to strengthen research efforts for solving domestic and international social problems. Moreover, when selecting and supporting research projects in the humanities, priority will be given to arts and sports research institutes and those affiliated with regionally based colleges/universities so that a balanced research framework can be created that is specific to disciplines as well as to regions.

Stipend Amounts by Discipline

(Unit : KRW 100 million)

Year	Humanities and social sciences	Natural sciences and engineering	Korean studies	Infrastructure creation	SUM
2016(A)	2,326(37.6%)	3,414(55.3%)	262(4.2%)	181(2.9%)	6,183
2017(B)	2,378(35.7%)	3,864(57.9%)	238(3.6%)	190(2.8%)	6,670
Balance(B-A)	49(2.1%)	450(11.6%)	△24(△10.1%)	9(4.7%)	484(7.3%)

BK21 Plus to increase education/research competencies

Brain Korea 21(BK21) Plus is a project that provides research scholarships for graduate school students, labor costs for young researchers, etc. by putting together a project team(or project units) consisting of departments at the graduate level. The aim is to ensure that next-generation researchers can focus on study and research so that the country's future competitiveness can be increased.

About 18,000 people, including 15,000 master's- and doctorate-level researchers in science and technology and 3,000 researchers in the humanities and social sciences benefit from annual stipends through BK21 Plus(as of 2017). For the past 14 years(starting in 1999), a total of KRW 3.14 trillion has been spent for the implementation of Phases 1 and 2 of the project. The seven-year(2013-19) Phase 3 of the project is currently being implemented. The outcomes of the BK21 Plus initiatives include a rapid increase in the number of SCI-published research papers, the settlement of a system that fosters research-oriented graduate schools, and the creation of a culture for stricter research ethics. Korea's higher education institutions are being upgraded into globally competitive, research-oriented schools.

BK21 Plus Project(Sept. 2013- Aug. 2020, for 7 yrs.)

Category	Program for nurturing future-oriented creative talents	Program for promoting global talents	Program for training talents with specialized skills
Talent promotion direction	• Cultivating next-generation researchers in all disciplines(science and technology, humanities and social sciences, convergence, etc.)	• Nurturing next-generation researchers in science and technology-based convergence fields	• Training high-quality field-oriented specialists in fields that require specific sets of skills *Design, cultural contents, tourism, health care, information security, etc.
Support details	• Research scholarships for graduate students(by category, at least 40-60%) - KRW 600,000/month for master's students; min. KRW 1 million/month for doctoral students • Labor costs for young researchers: min. KRW 2.5 million for post-doctorate researchers, etc. • Expenses for globalization: Stipends for graduate student participation in international conferences and related expenditures • The BK21 Plus project team(project units) operating expenses(within 10%), etc.		
Characteristics	• Continuing with Phase 2 of the BK21 project	• Continuing with the initiatives for creating globally competitive research-oriented colleges/universities(WCU)	• Provided anew in the Plus phase of the project
Support scale	• 468 project units(team) • About 13,000 graduate students	• 21 project units • About 400 graduate students	• 53 project units(team) • About 600 graduate students

Bolstering support for the study of traditional culture

Support is also strengthened for globalizing Korean studies, creating databases(DB) for classical Korean literature, and bolstering support for the usability of the established DBs. The seed-level international colleges/universities that offer Korean studies programs(in Bulgaria and Kazakhstan) are supported to grow into core-level institutions. Also, the promotion of Korean studies is strengthened by targeting regions such as Central and South America and the Middle East, which are rarely exposed to Korean studies. Diversification of the recipient regions is in progress as well.

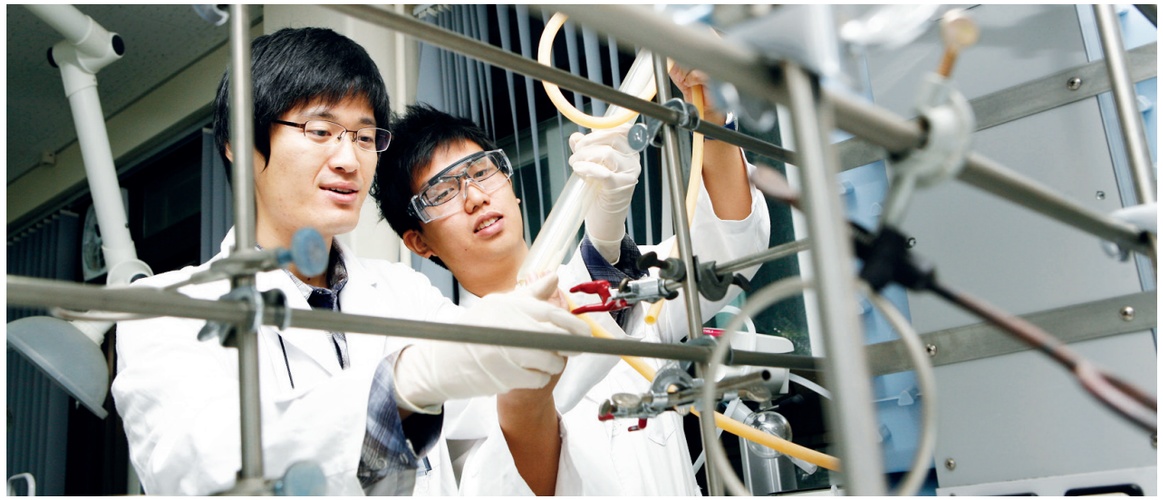
In addition, the government is supporting the collection, categorization, and analysis of classical Korean literature scattered all over Korea and elsewhere in the world, the creation of DBs of materials gathered for purposes of conservation and use, and the translation of selected classics and publishing the translations overseas. The Administration is also strengthening research on traditional Korean culture. For instance, a dictionary for the Annals of the Joseon Dynasty has been created(2007-17) to enable multidisciplinary applications and use of the information as a basic resource for creating cultural contents. The augmentation and compilation of the Encyclopedia of Korean Culture(2007-17) is yet another example of collecting and creating DBs for Korean culture.

Social dispersion of research outcomes

The government is supporting the publication of high-quality materials that will help the general public to experience the outcomes of research endeavors. Also, it is providing various academic events such as the World Humanities Forum and Korean-Chinese Humanities Forum to promote Korea's humanities to the world community and increase opportunities for improving the quality of Korean humanities.

The humanities cities program, an effort between universities and local governing bodies, is undergoing transformation into a brand(the "Humanities and Historic and Cultural Cities" program) that actively exploits local history, figures, and other regionally based humanities resources, as in the cases of European cultural cities. Moreover, a yearly program of humanities lectures given by renowned scholars and a humanities week program are being implemented. The aim of these is to let the humanities be enjoyed and shared by Korean citizens in their everyday lives.

Korea's academic research support has developed into a phase where the focus is on sharing and communication, having undergone the phases of intensive research support and popularization. In the future, efforts will continue to strengthen academic research support, such as grassroots basic research, to increase public interest in academic research, and to reinterpret quality research outcomes to make it easier for the general public to understand.



Creating infrastructure for academic research

The government also plans to make efforts for promoting domestic academic journals to the level of outstanding, globally competitive materials and for creating an academic research base by easing the financial burden borne by universities in purchasing international research publications. Furthermore, the scope of trainees for research ethics will be increased from the current pool of senior researchers to joint researchers. Also, the use of a research grant card will be required in all academic fields so that ethics in research can be strengthened as well.

3

Industry-academia collaboration policies and the strengthening of support for college/university students' employment and start-ups

There is an emerging need in Korea's education sector to strengthen competitiveness through cooperation and collaboration between companies, colleges/universities, and research institutes in preparation for the 4IR era. The Ministry of Education(MOE) accordingly aims at increasing the effectiveness of various collaboration support schemes and is leading the implementation of comprehensive industry-academia-research institute(hereinafter, "IAR") policies at relevant government agencies that are interdepartmental. For instance, framework planning is underway to create, operate, and establish a policy direction for a national industry-academia-research collaboration council(hereinafter, Collaboration Council"), an interdepartmental coordination body.

Foundation of national industry-academia-research collaboration council and establishment and implementation of basic plan for industrial education and industry-academia-research collaboration(2019-23)

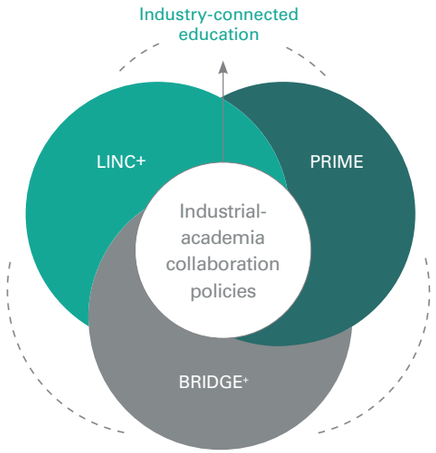
In October 2018, The MOE founded the national industry-academia-research collaboration council(hereinafter, "Collaboration Council") in the wake of the enforcement of the Industrial Education Enhancement and Industry-Academia-Research Cooperation Promotion Act and the amended Enforcement Decree of the same Act(in May 2018). The Collaboration Council engages eight ministries(ministers) under the leadership of the prime minister as well as experts in industry, academia,

the research community, and other relevant fields. Furthermore, the MOE has deliberated on and voted for an interdepartmental plan called the Basic Plan for Industrial Education and Industry-Academia-Research Collaboration(2019-23) (hereinafter, the "Basic Plan 2019-23").

In addition, the Ministry is actively striving to promote Leaders in Industry-University Cooperation(LINC+), a program geared toward the community, and BRIDGE+, an intracollegiate program that supports the commercialization of creative assets. These are part of the Ministry's initiatives for promoting industry-academia collaboration in colleges/universities, which include nurturing future talents and new technology development and transfer as the foundations of innovation and growth.

Leaders in Industry-University Cooperation(LINC+) aimed at social-customized academic cooperation

LINC+ implements various industry-academia collaborations that are in line with the conditions and characteristics of each school, such as the operation of an industry-academia collaborative curricula. LINC+ also develops and operates curricula that are customized to the collaborations underway in regional communities(the category of industry-academia collaboration advancement, 55 schools) and to the requirements of industry. In addition, LINC+ supports the interconnectivity between curriculum



development and operation and actual employment(the category of intensive customizing to community, 15 schools). The 10 schools selected for the category of industry-academia collaboration advancement are currently operated as the 4IR innovation leading colleges/universities that cultivate talents with a problem-solving mindset in preparation for the 4IR era. This goal is being realized by improving the curriculum and education methodologies and environments in the specialized fields of new industries at each relevant school.

Additionally, the scope of industry-academia collaboration has recently been expanded to include the humanities, social sciences, culture, arts, etc. Aggressive support is also being extended to the joint solution of current issues within communities with the use of industry-academia collaboration.

BRIDGE+, intracollegiate support to commercialize creative assets

BRIDGE+, an intracollegiate scheme to commercialize creative assets, supports schools' commercialization of technologies, patents, ideas, etc. owned by the schools and the transfer of the foregoing to industries(18 schools) so that the exploitation of research outcomes with potential can be expedited. More recently, BRIDGE+ supports technology packaging, which aims at intercollegiate convergence and re-creation of multidisciplinary or multifaceted technologies, and aggressively supports the incorporation of user perspectives such as those of companies so that the chances of success in technology commercialization can be increased.

College entrance means employment – promotion of social demand-driven departments

A program called "social demand-driven departments" is being greatly expanded for the purpose of recruiting and nurturing talents who meet the demands of companies, starting from the time of college entrance. In this program, students are guaranteed employment upon being admitted to a college/university.

In addition, contract-to-hire departments and customized curricula, two programs that are implemented autonomously by higher education institutions and companies in various forms, have been overhauled to suit the needs of industries. The overhaul

signifies the active introduction of a curriculum that allows the joint participation of schools and industries, starting from student recruitment and continuing through the processes of curriculum implementation, class material development, and classroom teaching. The end product is employment by a company.

An example of contract-to-hire departments is the department of semiconductor systems engineering at Sungkyunkwan University College of Information and Communication Engineering. This department guarantees a job at Samsung Electronics Co., Ltd. As such, the program operation entails students receiving field training at the company and the company's expert research staffs participating in core courses at the university.

As for customized curricula, the department of automobile engineering(with an emphasis on imported automobile repair) at Doowon Technical University has developed a customized curriculum aligned with the National Competency Standards(NCS) based contract-to-hire scheme, with local companies specializing in imported automobile repair. The department is accordingly training and producing expert technicians. As of 2015, 1,813 students in 73 departments at 34 colleges/universities are taking contract-to-hire courses, while 5,608 students in 173 departments at 64 schools are participating in the customized curriculum programs.

Meanwhile, regional colleges/universities have formed partnerships with regionally based small and medium-sized companies and middle-standing enterprises that are chronically understaffed. The partnerships have led to the operation of social demand-driven departments. Local governing bodies recruit regional enterprises that are willing to participate in the social demand-driven department scheme and support the matches between such enterprises and regional schools based on manpower demand projections. Participating companies enjoy tax relief along with increased returns on the training expenses of the employment insurance fund.

Program for Industrial needs-Matched Education(PRIME) to promote industry-connected education

The government supports higher education institutions to be able to implement autonomous reforms, which include the restructuring of curriculum and degree programs and the adjustment of the number of students according to the community's demand for manpower. An example of the foregoing is the Program for Industrial needs-Matched Education(PRIME), a scheme that fine-tunes higher education to industry needs.

So far, the mismatch between the talents produced by colleges and the workforce society demands has made it difficult for college graduates to land jobs that are relevant to their majors. As a matter of fact, the majority of young job seekers have ended up getting a job with companies that are not up to their expectations. There has been great concern about the emergence of youth unemployment as a social issue, and demands that the government and higher education institutions resolve the mismatch between labor supply and demand together.

Colleges and universities that participate in PRIME must provide a reasonable structural reform and a capacity adjustment plan that is in keeping with the demands of their community and relevant industries. Talented young students must aggressively be recruited into fields where social demand is strong. Additionally, vocational and career-related education and training in higher education institutions must be strengthened to ensure the social advancement of their students, with a support system in place to accompany the initiatives.

Promoting college-initiated start-ups

To promote colleges and universities as the epicenter of innovation and job creation, curricula and academic programs oriented toward start-ups are established, and funds are provided for start-ups by universities/university students.

The paradigm of higher education institutions is shifting to a focus on start-up initiatives by offering intensive support for universities' start-up program operations and academic program reforms. In addition, the government and schools have jointly put together a college start-up fund(KRW 18.85 billion as of 2017; a minimum of KRW 23 billion as of 2018) so that new start-ups can enter into the stabilization phase.

In particular, the government plans to convert the current start-up education/training that focuses on theory into field practice-oriented start-up programs in the next five years, with the establishment of the second five-year plan for university start-up education. Increased technology start-ups and the promotion of start-ups by college/university faculties are also on the implementation agenda.

The government also plans to implement a start-up education/training program that is fine-tuned to fields by using online start-up platforms, college enterprises, etc. Joint cultivation and advancement into the global market is also envisioned based on exchanges with local and international authorities such as the Innovation Center and overseas colleges/universities.

Higher education institution-led technology innovation start-ups are an alternative to help overcome the country's high youth unemployment and the particularly dire employment situation faced by college graduates by creating more jobs. Concretely, the scheme aims at nurturing talents and developing and commercializing new technologies in preparation for the 4IR era with college-level start-ups. Accordingly, the MOE launched a program for promoting universities to lead lab start-ups(from 2018 and beyond) jointly with the Ministry of Science and ICT(MSIT) and the Ministry of SMEs and Startups(MSS). This program supports start-ups that are based on new technologies retained by colleges/universities in the form of academic papers, and in particular, patents, according to the roles* assigned to each government division.

*The MOE supports the creation of infrastructure including the establishment of start-up friendly academic programs, the operation of such curricula, and the payment of labor expenses for faculties and students.

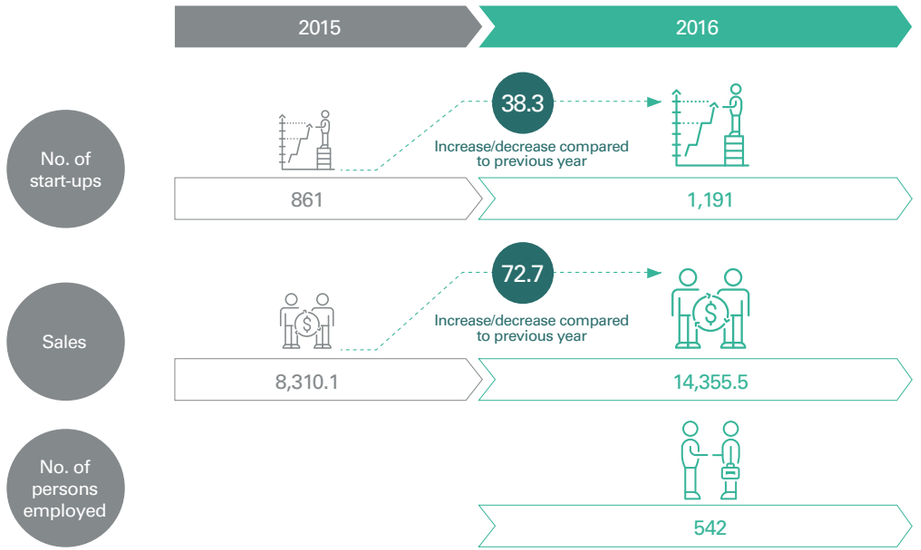
As a result, the number of college-level start-up clubs is on the rise due to the increased interest in start-ups among college students. In fact, the sheer number of start-ups by university students per se is increasing considerably.

College enterprises are a program that is put to use in field practice and training by students and faculties alike, where technologies developed in schools are commercialized, and at the same time, production and sales(revenue creation) are provided. The enterprises offer first-hand corporate management experience including idea creation, prototyping, marketing and sales.

Status of start-ups by college students

As of 2016, there are 1,191 start-ups launched by college students. The total amount of sales is KRW 14,355.5 million. The figures represent a 38.3% and 72.7% increase, respectively, compared to the same period in the previous year.

(Unit : no. of start-ups; KRW 1 million; no. of persons; %)



* Time series analysis is not possible due to a lack of quantitative data on the total no. of employees at college student start-ups, as compiled by industry-academia collaboration activity surveys with existing colleges/universities (MOE).

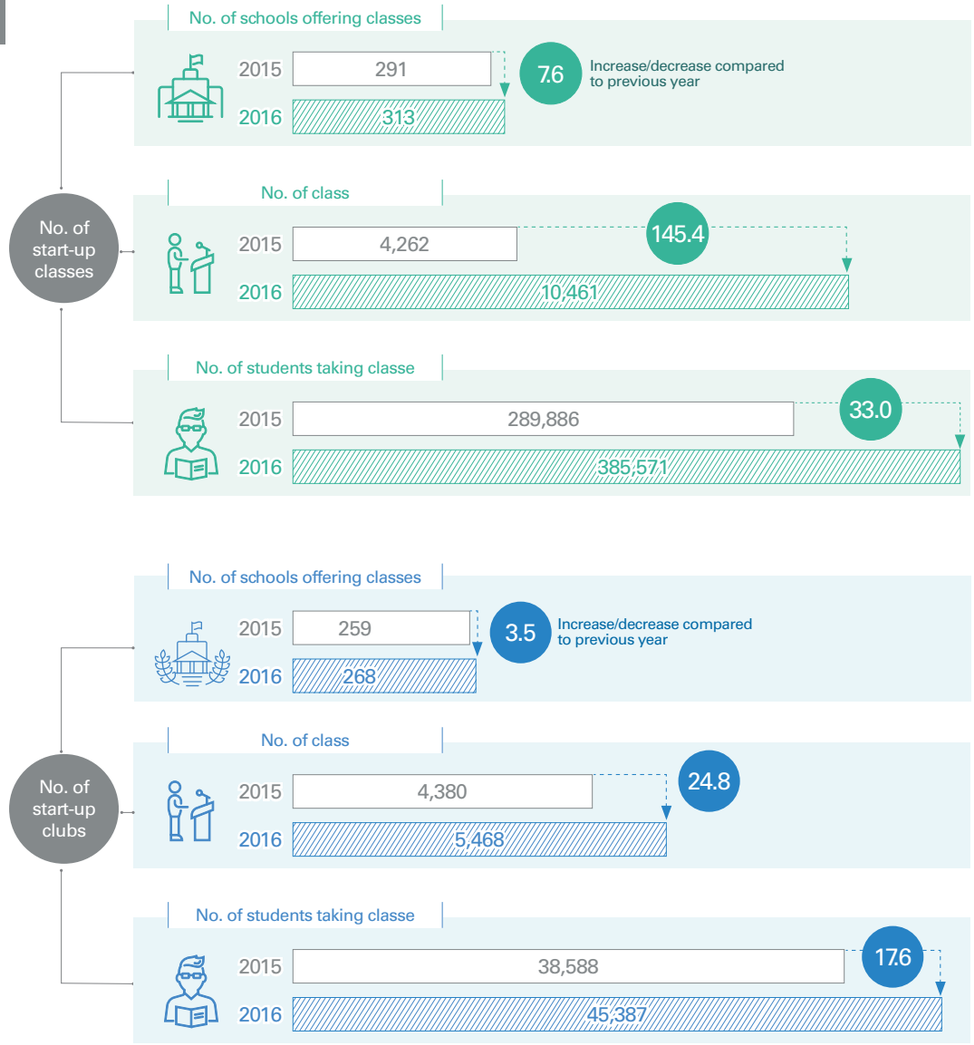
※ Sales : The amount of sales generated between 1 Jan. and 31 Dec. 2016.

No. of employees : The number as of 31 Dec. 2016, excluding single- and co-CEO. This number is limited to the workforce enrolled in the four mandatory insurance programs.

Status of start-up classes and clubs

As of 2016, there are 10,461 start-up classes offered by colleges and universities, a 145.4% increase compared to the previous year. The number of start-up clubs organized by college students is 5,468, a 24.8% increase from the previous year.

(Unit: no. of start-ups; no. of persons; %)



Strengthening career development and job competency with systematic vocational education

A strategy for the promotion of career development education is provided to help students seek career path education and prepare for future employment, starting in the first or second year of college. The goal is to help strengthen the career development competency of college students so they can successfully advance into the job market.

Customized career development and employment support services are offered to university students starting fom the junior year of college that aim at the early establishment of a career path based on various vocational explorations and that are based on each student's stage of career path development and job competencies. Since job experience obtained while still in school helps reduce the mismatch between companies and young job seekers and shorten the period of job hunting, the government is expanding hands-on and practice-oriented programs(practicums, etc.).

Career development education/training and employment support information are being customized to the needs of college students with the interconnection between WorkNet, CareerNet, and other comprehensive on-campus job experience management systems.

Globalization of Korean Education

EDUCATION IN KOREA

PART 3

Lifelong Learning and Vocational Education

An era marked by extended longevity and repeated career path renewal has arrived. Accordingly, the Korean government provides lifelong education with an online learning system that empowers citizens to receive education anytime and anywhere. A lifelong education support network is being expanded to ensure that education is available anytime, even for the educationally vulnerable segments of the population who missed the opportunity to learn when they were school-age children.

Furthermore, it is projected that the ideal future talents required by industrial development will be those with both general skills and expertise, that is, convergent thinking talents. The government accordingly offers support so that people can select the type of work they are most interested in and adept at, equip themselves with the relevant basic job skills, and grow into professionals with creativity and problem-solving skills who are capable of collecting, processing, creating, and using knowledge and information.

1

Promoting lifelong learning for adults

Lifelong education in Korea is divided into six categories, academic skill strengthening education, adult literacy education, vocational competence improvement education, humanities and liberal arts education, arts and culture education, and citizen participation education, and is defined as all forms of organized educational activities that include the foregoing. Starting with the introduction of a bachelor's degree examination for a self-education program in 1990, an academic credit bank system and credit accumulation and transfer scheme were introduced in the wake of education reform on May 31, 1995.

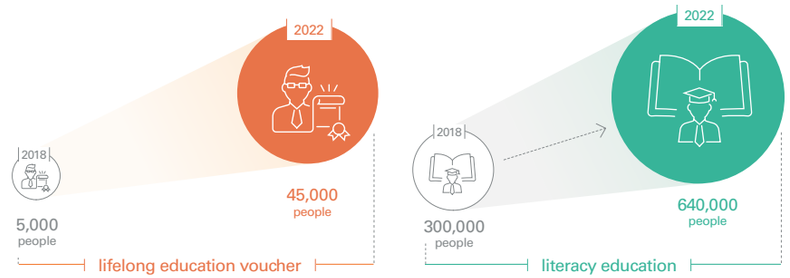
In 2006, a lifelong learning accounts system was put in place as a pilot program. It was not until 2008 that more continual, varied, and flexible systems were introduced, including a lifelong learning-oriented colleges and universities scheme, thereby putting efforts in the promotion of lifelong learning and education. Temporal and spatial accessibility to lifelong education has been increased in favor of citizens with a variety of semi-formal lifelong education entities offered, such as accredited lifelong education institutes, middle and high school communication courses, the Korea National Open University, cyber colleges/universities, in-house colleges(companies), etc.

Announcement of the fourth Basic Plan for Lifelong Education Promotion

Recently, greater emphasis is being placed on continued or lifelong learning to ensure adjustment to the rapidly changing life environment and better quality of life for all people, as Korean society weathers dramatic social changes such as the introduction of a 52-hour work week, technological innovations spearheaded by the 4IR, and an increasing aging population. Naturally, Korean society is seeing the ever-growing importance of lifelong education that demands citizens develop their job competency throughout their lives. Therefore, the government announced the fourth Basic Plan for Lifelong Education Promotion in February 2018 in accordance with the relevant law, proposing the direction in which lifelong education in Korea is to be promoted for the next five years. The government's blueprint aims at increasing the accessibility of lifelong education for all people. To increase lifelong education opportunities for the educationally vulnerable segments of the population, the government plans to provide about 5,000 people with a lifelong education voucher(up to KRW 350,000 per person per year) starting in 2018 and to increase the number of recipients to 45,000 by 2022. In addition, since 2006, the Administration has supported 300,000 people with literacy education to increase the basic reading skills necessary for adults' social life. The goal is to increase the accumulated number of recipients to 640,000 by 2022, thus providing opportunities for all citizens with literacy issues. On May 28, 2018, the national center for lifelong education promotion for individuals with disabilities was inaugurated, increasing and promoting accessibility to lifelong education for the disabled.

Introducing an industry-customized short-term job competency certification program

Another urgent, important issue is the promotion of delayed schooling, which is in line with the advancement and innovations occurring across industries. To that end, an unprecedented pilot program called Match the Demand(an industry-customized short-term job competency certification scheme) was introduced in 2018. In this scheme, a company determines the kinds of core work they need and conveys their needs to education institutions(colleges, etc.) for curriculum development and operation, and the results of program implementation are sent to the company for evaluation and certification. In this way, the learners(employees, etc.) can get practical help with their job skill improvement, employment, etc. Meanwhile, the academic credit bank system, which awarded 674,880 learners bachelor's degrees and associate degrees from 1999 to February 2018, is also positioning itself with the changing landscape in the technology sector and plans to develop and operate a standardized curriculum that reflects the demands of new industries such as artificial intelligence(AI), virtual reality(VR), and big data analysis. In addition, Korea Massive Open Online Courses(K-MOOC) plans to increase the number of classes it offers on various subjects such as the 4IR and vocational education/training to more than 500 and offer them in 2018.



Additionally, to increase the accessibility of college education, the government has made academic programs for adults more flexible. Specifically, work experience is recognized as credits, and the number of class days is shortened depending on the characteristics of the subject(class) so that the learner can attend classes during a concentrated period of time. Financial support programs are also continuously implemented so that universities can operate degree programs dedicated to adults, reflecting the characteristics of the schools concerned and the demands of society.

Expanding lifelong learning cities

Meanwhile, the government has designated 160 base self-governing organizations between 2001 and 2018 to support the lifelong learning city program to make places friendlier to lifelong learning. Support will be increased in the coming years based on the outcomes of the program, with an emphasis on both qualitative improvement and quantitative expansion of lifelong learning cities. Along with this, the government promotes spontaneous learning groups of local residents, helping them create a base upon which social values are created through activities such as talent donation, community volunteerism, and employment and start-ups related to the community.

2

Providing high-quality, field-oriented vocational education

Vocational education in Korea begins in earnest in senior high school and is carried out in vocational high schools. All school-age children in Korea complete the same curriculum(the National Curriculum) up to the junior high school level. At the senior high school level, schools are divided into general high schools(learning a general curriculum) and vocational high schools(learning vocation-related subjects) for students to choose from. The latter schools are in turn divided into three types, the most prevalent of which is the specialized vocational high school. The other two are Meister high schools, which accommodate industry needs, and the vocational courses offered in general high schools. As of April 2018, approximately 24.8% of all senior high schools in Korea, or 586 schools, are vocational high schools and 18.5% of all senior high school students are receiving vocational education.

Curriculum customized to industry needs

Vocational education in 17 subject(class) clusters including business administration and finances, culinary art, mechanics, and farming/forestry/marine business are offered in vocational senior high schools. The education is focused on practice and field experience so that students can be fully professionally competent in their chosen field of expertise upon graduation. In particular, the existing curriculum is to be fully reformed starting in 2018 and will be implemented based on the National Competency Standards, which addresses the knowledge, skills, attitude, and other factors that are required in the field. The goal is to minimize mismatches between the field(industry/company) and the classroom. The NCS-based curriculum aims to provide education that enables “doing,” not just “knowing.” Accordingly, students

learn the necessary knowledge, skills, attitudes, etc. on the basis of processes that are implemented in actual, real-world industry fields.

Practicum – a highly relevant, safe program

Vocational high schools operate a practicum system geared towards helping students develop practical job skills. Basically, a round of practicum lasts about one to three months. If a practicum site is a company with a safe and learning-friendly environment, such company is designated as leading practicum company. Long-term practicums and early employment are allowed at such companies.

Companies and the leading enterprises that participate in the high schools' practicum system work with the schools in planning practicums, and the on-site teachers of the companies use the plans as the basis for offering field-related education/training to students. The MOE, the Ministry of Employment and Labor(MOEL), and the Office of Education inspect these companies to ensure that students receive field training in a safe environment. Labor affairs experts such as certified public labor attorneys also participate in the inspections.

Apprenticeship, a combined work-study program

Korea operates a combined industry-academia program, or apprenticeship school, which is a special type of practicums. In this program, schools and companies collaborate to design a two-year curriculum track, and training/education is provided by both the schools and companies to create a work-study program. Any student participating in the dual apprenticeship travels between the field and classroom starting from the second year in senior high school. The participating students receive education that is highly oriented to field dynamics, thereby acquiring the necessary field capabilities. As of 2017, 50.7% of all students attending specialized vocational high schools landed a job, among which more than 70% are students who are trained at apprenticeship schools.

Fostering basic job skills required in the field in addition to knowledge and techniques

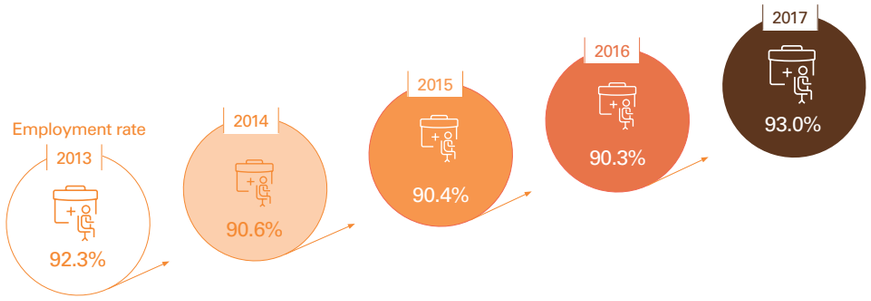
In order for students to continuously deliver outcomes in the labor market following graduation and to continue fostering their professional competency, the cultivation of basic job skills is extremely important. Hence, vocational high schools in Korea offer a diagnostics and assessment tool for basic job skills at the national level. Rather than just a test in the form of knowledge measurement, basic competency in speaking, listening, and troubleshooting are evaluated through a variety of questions with listening, writing, and speaking to assess the students' basic job skills. The basic job skill assessment, therefore, is based on ICTs and is performed during the first and second vocational high school years. Based on the results, students can identify their strengths and weaknesses.

Operating industry-customized high schools to promote outstanding technical workers

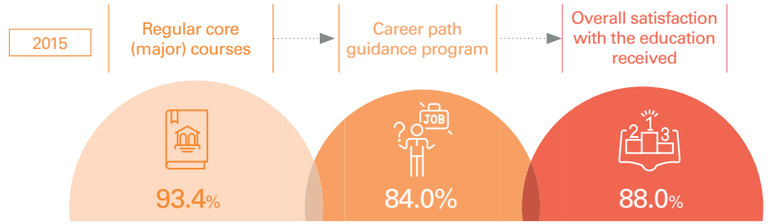
The government operates 47 Meister high schools since 2008 to nurture outstanding, skilled technical workers. Unlike the specialized vocational high schools, Meister high schools are given considerably greater autonomy in operating curricula and school affairs. They offer education and training fine-tuned to the

demands of industries, with a particular emphasis on project-based classes, which are normalized among these schools so that students can be supported in increasing their troubleshooting abilities and self-assertion skills. As relatively higher-performing students enter Meister schools, vocational programs reflecting the quality of the students are offered, with a scholarship and dormitory expenses provided for all students. As of 2017, approx. 93% of all Meister high school students succeeded in landing a job.

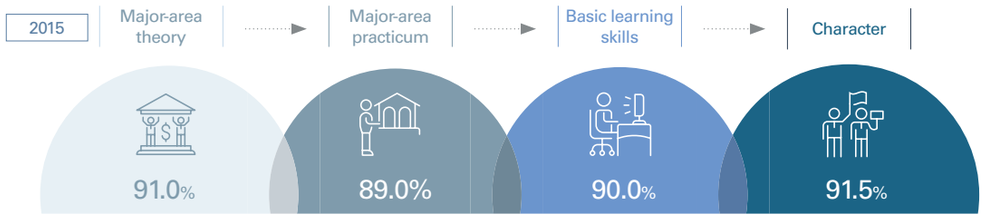
Employment rate(5-year average) at Meister high schools



Graduates' satisfaction with the curriculum of Meister high schools



Companies' satisfaction with the curriculum of Meister high schools



Providing vocational education opportunities for all students

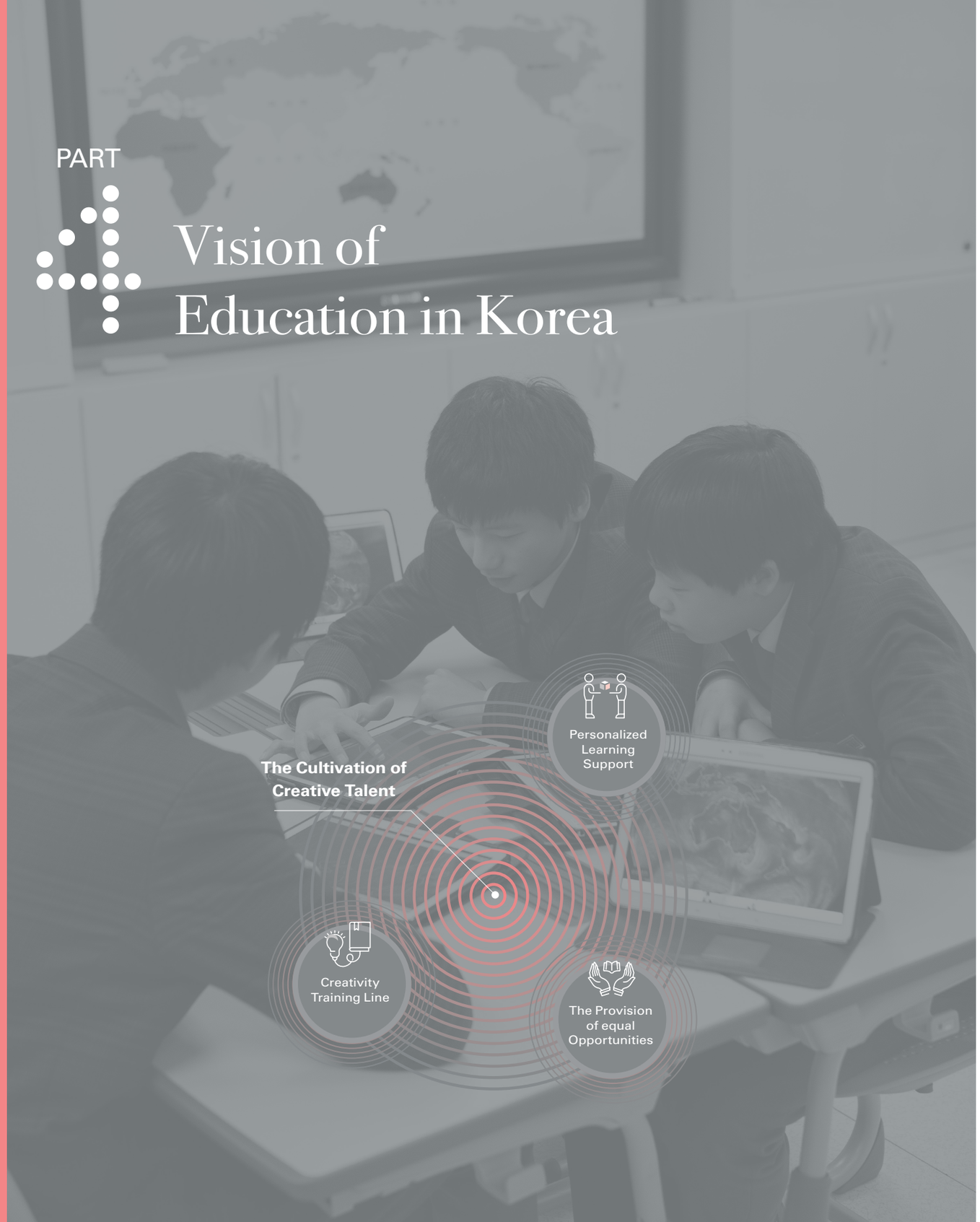
Vocational high schools have a relatively higher percentage of students who come from a poor financial background. Accordingly, a full scholarship is provided to all students receiving vocational education at the schools. Accessibility to vocational education, therefore, is being increased for any willing student regardless of his/her socioeconomic circumstances.

Aggressive employment-connectivity system and support for continuous competency development

The majority of the students attending vocational high schools are seeking employment. To support their aspirations, the schools, education offices, and the MOE together operate various programs and support initiatives to connect students with jobs. Teachers and employment support staffs are exploring and offering jobs to students, and the education offices operate employment support centers to assist students with their search for jobs by cooperating with companies, local governing bodies, public entities, etc. The MOE founded a new stipend program in 2018 that connects high school students with jobs if they wish to seek employment with a small- or medium-sized enterprise. In addition, the MOE offers vocational high school graduates with more than three years of work experience an opportunity to be admitted to a college/university outside entrance quota, so that they will continue to develop their competency while working. Furthermore, the government is supporting students with a program dedicated to job-first, study-later cases so that the individuals can keep both working and studying. In particular, a new scholarship program was established in 2018 to provide the individuals with full coverage of their tuition so they can continue to develop their job proficiency without financial difficulties.

PART

Vision of Education in Korea



When discussing the remarkable economic development that Korea, once a war-torn country, has accomplished, the role of education as one of Korea's growth engines cannot be denied. In fact, Korea's experience in nurturing the talents required in each phase of its industrial development and implementing its educational policies in tandem with the phases has remained an object of envy in the global community. Based on this accomplishment, education in Korea now prepares to take the next step.

Education informatization, ICT familiarization education, and e-learning policy

The government aims at nurturing creative talents with the convergence of education and ICT. To that end, the Administration has established three goals: education to lead creative competency in learners to prepare for the future, support for learning that is customized to foster dreams and performance capabilities, and the provision of equal opportunities for education through mutual growth and cooperation. To help realize these goals, the government is implementing strategic tasks that will help create a learner-centered digital education ecosystem.

In 2018, digital textbooks started to be implemented for third and fourth graders in elementary schools and first-year junior high school students. According to the 2015 Revised National Curriculum, the textbooks will be continually spread on a yearly basis, allowing the parallel use of paper and digital textbooks. To that end, the MOE collaborates with accreditation entities, publishers, and textbook development organizations to develop textbooks that are concrete and reader-friendly, that are learner-oriented and enable level-specific learning, and that are vivid and interesting with the implementation of high-tech multimedia techniques.

At the elementary and junior high school levels, software education is to be increased within the regular curriculum track and the relevant curriculum elements are expanded. Also, outstanding case studies from research/pilot programs (schools) are recruited and disseminated. At the university level, software-oriented schools are expanded annually, with their curriculum reformed and turning basic SW education into mandatory courses for non-major students so that the focus in placed on promoting talents with specialized skill sets.

Promoting student exchange programs to draw outstanding foreign students

Countries around the world are now dedicated to attracting foreign students to their higher education programs in an attempt to expand their own college education service industry and recruit international talents to their workforce. The number of foreign students in Korea has been increasing since 2015. This quantitative growth duly demands qualitative management.

The government has been implementing policies that accredit local colleges/universities with outstanding competencies for recruiting and managing foreign students. Related efforts include infrastructure for international students in Korea and support for the development of Korean language proficiency by foreign learners. On the other hand, surveys on current recruitment practices are conducted for schools with inadequate outcomes, and depending on the results, certain disadvantage are imposed.

In addition, the Administration invites talented young minds from around the world, provides them with tuition and living expenses and encourages them to enroll in degree courses in local undergraduate or graduate programs. With these initiatives, the government implements state-funded scholarship programs for foreign students who will hopefully turn out to be Korea-friendly global talents.

Since 1967, Korea has given scholarships to more than 8,922 foreign students from a total of 156 countries. As of 2018, approximately 3,000 scholarship students (including 803 newcomers) are studying at 79 colleges/universities in Korea. About 5,000 alumni of this program are now working in various fields around the world, including politics, finance, and academia.

To help recruit students from a wide range of countries, the program Training of Outstanding Science and Engineering College Students from Asian Countries (starting in 2015 and still in operation) has been expanded to include applicants from Africa and Central and South America starting in 2017. Moreover, CAMPUS Asia (an undergraduate and graduate student exchange program), aimed at the promotion of talents that will lead the cooperation of the three countries of Korea, China, and Japan, is also underway.

Expanding ODA in the education sector

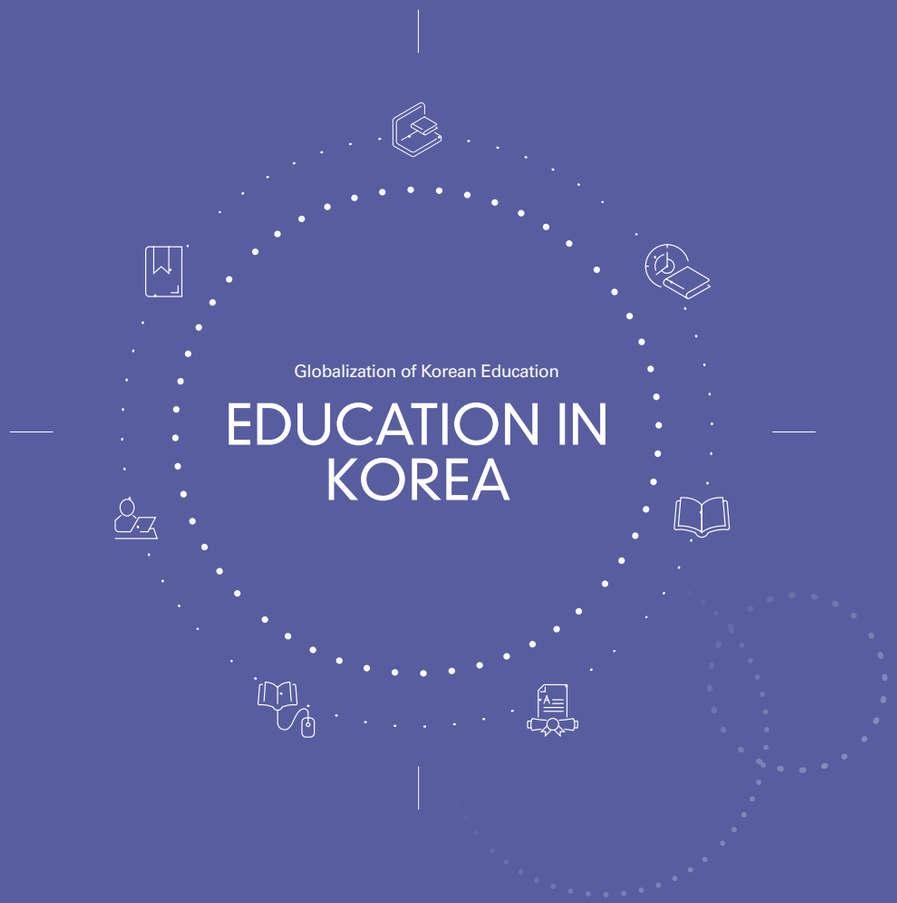
There are constant requests from developing countries around the world, such as those in Southeast Asia, Africa, and Latin America, for the sharing and transfer of Korea's educational development experience and know-how. In response, the government has shared this experience with the international community, and efforts for giving back to global society are coming to fruition.

The Administration is promoting and supporting colleges/universities that lead international cooperation and is helping them strengthen the capabilities of universities in developing countries by transferring the systems, resources, experience, etc. of the colleges/universities. In other words, the schools leading international cooperation initiatives are helping higher education institutions in developing countries to install and/or remodel departments in their schools so that they can increase their educational capabilities and contribute to the development of their communities. This program is becoming Korea's unique educational ODA model which fully exploits the resources of outstanding local colleges/universities.

Also, a project is in progress that sends high-performing faculty members to developing countries, as human resources are among the elements that constitute the core competitiveness of Korea's education. Korean teachers are dispatched to Africa and other regions to help support basic education in developing countries. The teachers conduct teaching and learning activities in local schools.

In addition to the foregoing, Korea is expanding education opportunities for African countries by using its ICT. The Better Education for Africa's Rise (BEAR) program is also firmly positioning itself as a way to help improve vocational education practices in Africa.

Education in Korea is now crossing the boundaries of its territory and taking bold steps toward the world at large.



APPENDIX

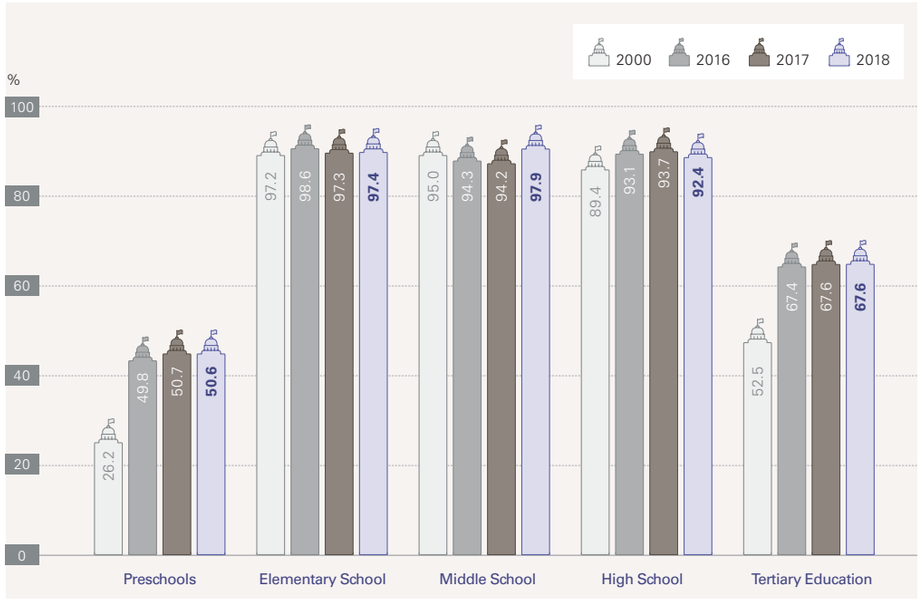
Educational Statistics

Number of Schools, Students, and Teachers 2018

Types of schools		No. of schools	No. of students	No. of teachers
Preschool, elementary, and junior and senior high schools total		20,967	6,309,723	496,263
Preschools		9,021	675,998	54,892
Elementary schools		6,064	2,711,385	186,684
Junior high schools	Subtotal	3,240	1,338,828	109,911
	Junior high schools	3,214	1,334,288	109,906
	High civil schools	3	64	5
	Air and correspondence middle schools	23	4,476	-
Senior high schools	Subtotal	2,407	1,549,109	134,312
	General high schools	1,556	1,096,331	90,855
	Special-purpose high schools	157	66,693	7,787
	Specialized high schools	490	252,260	25,619
	Autonomous high schools	155	123,292	9,966
	High technical schools	7	652	85
	Air and correspondence high schools	42	9,881	-
Special schools		175	25,860	9,250
Various kinds of schools		60	8,543	1,214
Special classes, etc. for working youth		[4]	[239]	[49]
Higher education institutions total		430	3,378,393	90,288
Universities and colleges	Subtotal	228	2,347,965	68,915
	Universities and colleges	191	2,030,033	66,863
	Teachers' colleges	10	15,788	835
	Industrial colleges	2	16,262	354
	Technical colleges	1	84	-
	Air and correspondence colleges	1	164,325	152
Universities and colleges	Various kinds of schools	2	3,470	147
	Distance colleges	1	950	8
	Cyber colleges	17	116,795	554
	In-house colleges	3	258	2
Junior colleges (Two-year programs)	Subtotal	157	708,196	13,798
	Junior colleges	137	659,232	12,584
	Technical colleges	-	10	-
	Various kinds of schools	-	-	-
	Distance colleges	1	1,822	14
	Cyber colleges	2	5,551	37
	In-house colleges	5	246	4
	Specialized colleges	3	13,310	262
	Polytechnic colleges	9	28,025	897
Graduate schools	Subtotal	45[1,153]	322,232	7,575
	Graduate school universities or colleges	45	10,361	1,341
	Graduate schools	[1,153]	311,871	6,234

Note 1) The figures in parentheses "[ ]" are not included in the aggregate total.
2) Only the total no. of teachers (both sexes combined) has been surveyed for "special classes, etc. for working youth."

Percentage of Enrollment by Year



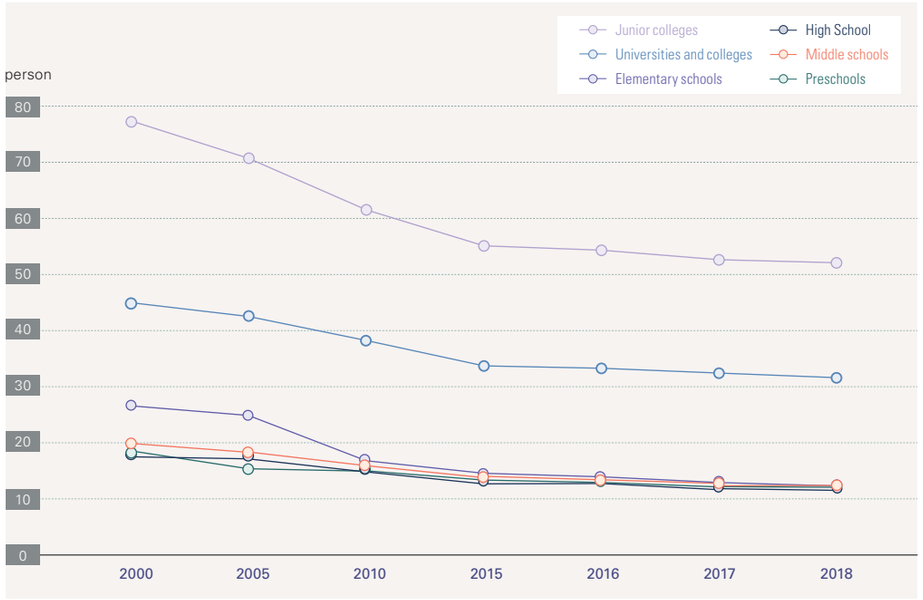
(Unit : %)

Classification	2000	2005	2010	2015	2016	2017	2018
Preschools	26.2	31.1	40.3	48.9	49.8	50.7	**50.6**
Elementary School	97.2	98.8	99.1	99.1	98.6	97.3	**97.4**
Middle School	95.0	94.3	96.5	95.3	94.3	94.2	**97.9**
High School	89.4	92.1	91.7	92.5	93.1	93.7	**92.4**
Tertiary Education	52.5	66.1	69.3	67.5	67.4	67.6	**67.6**

Note
1) Enrollment rate A9:H13A9:H13-age children enrolled in school/School age population) × 100
2) The school age population is based on KOSTAT's "Population Projections for Korea" (up to 2015: finalized figures; 2016 to date: projections).
3) School age refers to 3-5 years old for preschools, 6-11 yrs. old for elementary schools, 12-14 yrs. old for middle schools, 15-17 yrs. old for high schools, and 18-21 yrs. old for higher education institutions.
4) The figures regarding higher education institutions are based on the no. of students enrolled.

Source
Population projections database (http://kosis.kr), Statistics Korea (KOSTAT) (as of 1 Dec. 2015)

Number of Students per Teacher



(Unit : person)

Classification		2000	2005	2010	2015	2016	2017	2018
Preschools		19.5	17.5	14.8	13.4	13.3	12.9	**12.3**
Elementary schools		28.7	25.1	18.7	14.9	14.6	14.5	**14.5**
Middle schools		20.1	19.4	18.2	14.3	13.3	12.7	**12.1**
High School	All types	19.9	15.1	15.5	13.2	12.9	12.4	**11.5**
Higher education institutions	Universities and colleges	44.4	42.1	38.1	33.3	32.9	32.1	**31.9**
		(31.8)	(29.5)	(27.0)	(24.6)	(24.2)	(23.6)	**(23.6)**
	Junior colleges (2-year)	78.0	70.9	61.2	55.5	54.2	52.9	**52.4**
		(51.2)	(44.1)	(39.4)	(36.1)	(35.5)	(34.7)	**(35.0)**

Note
1) A1:I13 from preschool through high school include regular full-time faculty, short-term teaching staff, and teachers on leave. The figures exclude retired teachers and instructors/lecturers.
2) Regarding higher education institutions, the no. of students per teacher refers to the ratio of the no. of enrolled students (registered students) to the no. of full-time teaching staff.
3) The statistics for universities and colleges include the figures for students and teaching staffs at regular graduate schools.

High School and Higher Education Completion Rate by Year

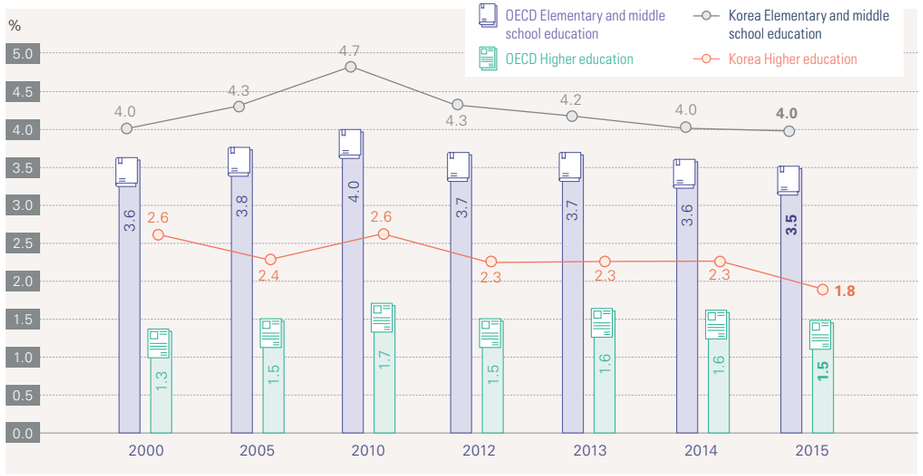
(Unit : %)

Year \ Country		High school completion rate					Tertiary Education Completion rate				
		25-64 yrs. old	25-34 yrs. old	35-44 yrs. old	45-54 yrs. old	55-64 yrs. old	25-64 yrs. old	25-34 yrs. old	35-44 yrs. old	45-54 yrs. old	55-64 yrs. old
2003	Korea	73	97	83	55	32	29	47	32	16	10
	OECD	66	75	70	62	51	24	29	26	22	17
2005	Korea	76	97	88	60	35	32	51	36	18	10
	OECD	68	77	71	64	54	26	32	27	24	19
2010	Korea	80	98	95	73	43	40	65	47	27	13
	OECD	74	82	78	72	62	31	38	33	28	23
2015	Korea	-	-	-	-	-	45	69	-	-	18
	OECD	-	-	-	-	-	35	42	-	-	26
2016	Korea	-	-	-	-	-	-	70	-	-	-
	OECD	-	-	-	-	-	-	43	-	-	-
2017	Korea	-	-	-	-	-	-	**70**	-	-	-
	OECD	-	-	-	-	-	-	**44**	-	-	-

Note
1)"Completion rate" refers to the percentage of individuals who complete their high school or tertiary education compared to the same-age population brackets.
2) "Year" refers to the school year.
3) Refer to the explanatory notes for school systems at each education level(high school and tertiary).
4) The asterisks refer to unannounced indicators. Age-specific high school completion rates and tertiary education completion rates for ages 35-44 and 45-54 have not been announced since 2016. Only the tertiary education completion rate for ages 25-34 has been announced for 2016 and 2017.
5) The combined tertiary education completion rate has been released since 2003.(No statistics are available for 2000.)

Source
"Education at a Glance: OECD Indicators" OECD

Percentage of Public Education Expenditure compared to GDP



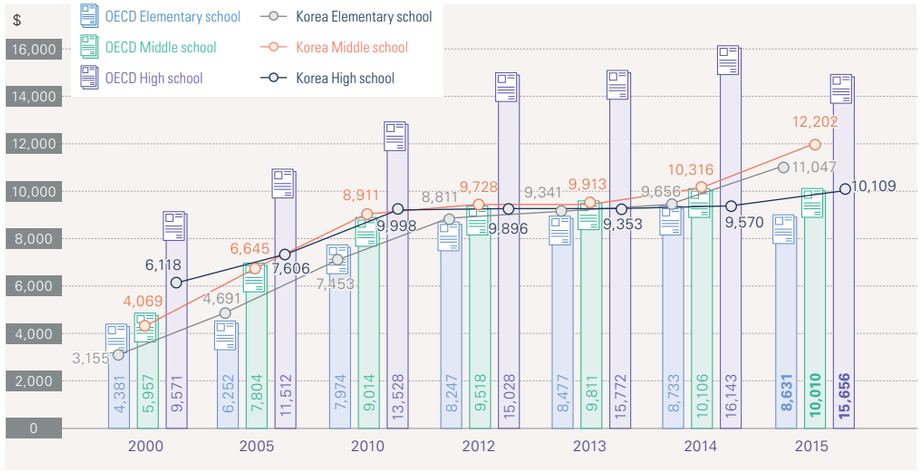
(Unit : %)

Year \ Country		Elementary and middle school education			Higher education		
		Total	Government funded	Privately funded	Total	Government funded	Privately funded
2000 (2003)	Korea	4.0	3.3	0.7	2.6	0.6	1.9
	OECD	3.6	3.4	0.3	1.3	1.0	0.3
2005 (2008)	Korea	4.3	3.4	0.9	2.4	0.6	1.8
	OECD	3.8	3.5	0.3	1.5	1.1	0.4
2010 (2013)	Korea	4.7	3.9	0.9	2.6	0.7	1.9
	OECD	4.0	3.7	0.3	1.7	1.1	0.5
2012 (2015)	Korea	4.3	3.8	0.5	2.3	0.8	1.5
	OECD	3.7	3.5	0.2	1.5	1.2	0.4
2013 (2016)	Korea	4.2	-	-	2.3	1.0	1.3
	OECD	3.7	-	-	1.6	1.1	0.5
2014 (2017)	Korea	4.0	3.5	0.5	2.3	1.0	1.2
	OECD	3.6	3.4	0.3	1.6	1.1	0.5
2015 (2018)	Korea	**4.0**	**3.5**	**0.5**	**1.8**	**0.9**	**0.9**
	OECD	**3.5**	**3.2**	**0.3**	**1.5**	**1.1**	**0.4**

Note
1) Total =(Government funded + privately funded + overseas public education expenditures)/GDP x 100. Due to decimal points and rounding, the aggregate sum might be different from the summation of the figures. The data preceding fiscal year 2015 include overseas expenditures in the government funded portion, whereas the data for 2015 and beyond segregate overseas expenditures from the government funded portion.(South Korea is "missing" overseas public education expenditures.)
2) "Year" represents fiscal years. The ones inside the parentheses refer to the years when EAG(Education at a Glance) reports were released.
3) The South Korean higher education data for fiscal year 2015 exclude carry-over and reserve fund from the previous year, while the preschool, elementary, and middle school education data include the previous year's carry-over and reserve fund amounting to KRW 4.7 trillion(or approx. 0.3% compared to the GDP).
4) The data for fiscal years 2010 and 2012 through 2015 were calculated by including expenditures that are not allocated by education level in each curriculum(preschool, elementary, and middle school). The data for fiscal year 2014 and beyond(excluding 2015) are the same as the EAG-listed indicators. The data preceding 2014 do not match the indicators since the data were submitted to the OECD after the issuance of EAG.
5) The asterisks refer to unannounced indicators.("Education at a Glance 2016: OECD Indicators" lists the elementary and middle school education data by dividing them into elementary, middle, and high school data.)
6) South Korea's GDP(based on fiscal years) for 2000 is KRW 522 trillion. The figures for 2005, 2010, 2013, 2014, and 2015 are KRW 811 trillion, KRW 1,173 trillion, KRW 1,429 trillion, KRW 1,486 trillion, and KRW 1,564 trillion, respectively.

Source
1) OECD(respective year), "Education at a Glance: OECD Indicators"(publication, web(HTML) tables, country notes)
2) Check the EAG web table and EAG country note on the OECD website for South Korea's government-funded amounts for fiscal year 2015.

Public Education Expenditure per Student



(Unit : $, %)

Year \ Country		Elementary school education		Middle school education		High school education	
		Public education expenditure per student	Percentage of annual public education expenditure per student compared to per capita GDP	Public education expenditure per student	Percentage of annual public education expenditure per student compared to per capita GDP	Public education expenditure per student	Percentage of annual public education expenditure per student compared to per capita GDP
2000 (2003)	Korea	3,155	21	4,069	27	6,118	40
	OECD	4,381	19	5,957	25	9,571	42
2005 (2008)	Korea	4,691	22	6,645	31	7,606	36
	OECD	6,252	21	7,804	26	11,512	40
2010 (2013)	Korea	7,453	26	8,911	31	9,998	35
	OECD	7,974	23	9,014	26	13,528	41
2012 (2015)	Korea	8,811	28	9,728	30	9,896	31
	OECD	8,247	22	9,518	25	15,028	40
2013 (2016)	Korea	9,341	29	9,913	30	9,353	29
	OECD	8,477	22	9,811	25	15,772	41
2014 (2017)	Korea	9,656	29	10,316	31	9,570	28
	OECD	8,733	22	10,106	25	16,143	40
2015 (2018)	Korea	**11,047**	**31**	**12,202**	**35**	**10,109**	**29**
	OECD	**8,631**	**22**	**10,010**	**25**	**15,656**	**38**

Note
1) The equation for calculating public education expenditure per student uses a changed basis for calculation, starting with "Education at a Glance 2018: OECD Indicators."
- Previous equation: {(Ordinary expenditure + Capital expenditure) / No. of students} / PPP - New equation: {(Direct expenditure by education entity) / No. of students} / PPP
2) The South Korean higher education data for fiscal year 2015 exclude carry-over and reserve funds from the previous year, while the preschool, elementary, and middle school education data include the previous year's carry-over and reserve fund amounting to KRW 4.7 trillion(or approx. 0.3% compared to the GDP).
3) The data for fiscal years 2010 and 2012 through 2015 were calculated by including expenditures that are not allocated by education level in each curriculum(preschool, elementary, and middle school). The data for fiscal year 2014 and beyond are the same as the EAG-listed indicators. The data preceding 2014 do not match the indicators since the data were submitted to the OECD after the issue of EAG.
4) South Korea's per capita GDP(based on fiscal years) for 2000, 2005, 2010, 2012, 2013, 2014, and 2015 is USD 15,186, USD 21,342, USD 28,829, USD 32,022, USD 32,664, USD 33,632, and USD 35,204, respectively.
5) South Korea's PPP conversion rate(based on fiscal years) for 2000, 2005, 2010, 2012, 2013, 2014, and 2015 is KRW 731.19, KRW 788.92, KRW 823.67, KRW 860,25, KRW 871.41, KRW 870.74, and KRW 870.93 to USD, respectively.

Source OECD(respective year), "Education at a Glance: OECD Indicators"

OECD PISA Rankings

(Three year cycle, Object : 15 years olds)

Classification		2000	2003	2006	2009	2012	2015
OECD Member Countries	Reading	6	2	1	1~2	1~2	**3~8**
	Mathematics	2	2	1~2	1~2	1	**1~4**
	Science	1	3	5~9	2~4	2~4	**5~8**
All Participating Countries	Reading	7	2	1	2~4	3~5	**4~9**
	Mathematics	3	3	1~4	3~6	3~5	**6~9**
	Science	1	4	7~13	4~7	5~8	**9~14**

Note
1) Note 1: PISA(Programme for International Student Assessment)
2) Starting with PISA 2006, the OECD offers information about the range of each country's rank at a 95% confidence level.
3) Rankings are renewed every 3 years, targeting students aged 15.(The most recent data are for 2015.)

Government Budgets vs. Ministry of Education(MOE) Budgets by Year

(Unit : Million won, %)

Year	Government budgets (A)	MOE budgets (B)	B vs. A (%)
2000	93,937,057	19,172,028	20.4
2005	134,370,378	27,982,002	20.8
2010	211,992,599	41,627,519	19.6
2014	309,692,464	50,835,377	16.4
2015	322,787,071	51,224,094	15.9
2016	329,909,201	54,065,928	16.4
2017	339,661,568	61,832,104	18.2
2018	**368,646,277**	**68,549,213**	**18.6**

Note
1) The government budgets for the year 2000 are an aggregate sum of general accounts, a special account for the management of fund transferred to local governments, and a special account for the management of fund transferred to local education agencies.
2) For the years 2010 through 2018, the government budgets are an aggregate sum of general accounts and special accounts.
3) The MOE budgets are an aggregate sum of general accounts and special accounts.
4) The MOE budgets for the year 2010 refer to the budgets of the now-obsolete Ministry of Education, Science and Technology(MEST).

Source MOE(budget officer); DBAS(Digital Budget and Accounting System)

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