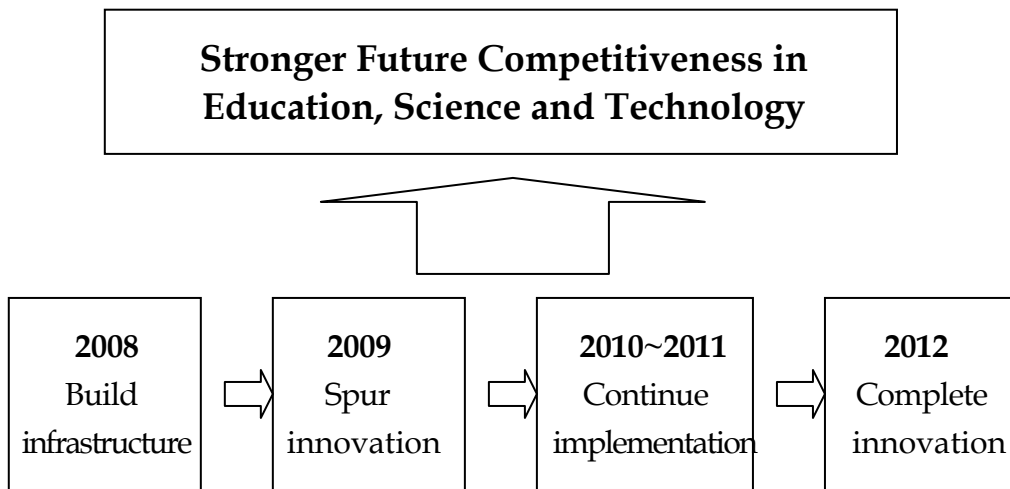


Major Policies and Plans for 2009

December 27, 2008

Ministry of Education, Science and Technology

I. Vision



12 Core Policy Tasks

Secure Reliability in Public Education	Enhance Education and Research Capacity	Strengthen S&T Competitiveness
Raise the competitive edge of public education	Foster university competitiveness	Develop key green growth technologies
Curb private education expenditure	Promote university autonomy/accountability	Support creative basic/fundamental research
Expand educational welfare support	Raise the research capacity of universities & research institutes	Foster big sciences through selection and concentration
Upgrade the quality of educational contents	Create synergy effects in education and S&T	Develop an international science business belt

II. Policy Tasks in Support of Economic Revitalization

1. Educational aid for the new poverty class and low-income households

Starting 2009, the Ministry of Education, Science and Technology will introduce a comprehensive education fee support system that enables the integrated provision of tuition, meal fees, after-school program tickets and communication expenses for students from low-income households. Previously, financial aid had been given separately in these four areas. A new one-stop service system will be developed to help students receive all four financial aids in just one application. In total, the ministry has allocated a budget of 841.7 billion Korean won for 2009 to assist the education of students from the new poverty class and low-income brackets.

In consideration that current economic conditions may lead to a rapid growth of students in need of educational fee support, the ministry also plans to develop a system that enables the quick allocation of special subsidies in the form of local education finance.

Alongside, subsidies for higher education students have been set at 845.6 billion won for 2009, up 377.7 billion compared to the budget of 2008. The subsidy consists of scholarship grants for 52,000 basic livelihood support recipients, work-study scholarships for 36,000 students, and low-interest loans for 350,000 students.

2. 50,000 new jobs at schools and the research field

In a bid to help higher education graduates find employment and provide new labor opportunities for the country's youth, the ministry intends to create 50,000 new job places at schools and the research field in 2009.

This will include 34,500 new jobs in the education service sector(educational administration internships, assistant teachers at day-long childcare centers, English instructors, after-school instructors, etc.), 8,300 jobs as a part of the "Green School" project(school facility constructors, sanitation workers, etc.), and 7,600 jobs in the higher education and research field(research interns, young researchers at universities and research institutes, interns at industrial firms, etc.)

3. Employment assistance for university students and graduates

The ministry has disclosed a plan to assist the employment preparation of students enrolled in or on temporary leave from university, as well as graduates. To this purpose, up to 15 percent(60 billion won) of the ministry's budget for the "University Competitiveness Enhancement Project" will be set aside for the provision of employment assistance programs.

For graduates who have not been able to find suitable job opportunities, the ministry will encourage lifelong education centers at junior colleges and universities to offer specialized career development programs. In 2009, ten higher education institutions will be provided with 820 million won to foster

themselves into base centers of lifelong and vocational education. The number of such specialized institutions will grow to 15 by 2010.

In addition, recognizing the importance of nurturing human resources of global competence, the ministry will dispatch 1,200 higher education students to attend overseas training programs in 2009. In particular, the proportion of students attending programs in new growth-generating fields, such as green growth technologies, will grow to 40 percent by 2012.

4. Early budget execution as a means of aiding economic revitalization

Considering the need to help reinvigorate the country's economic sector, the ministry has decided to execute over 60 percent(28.5 trillion won) of its total budget within the first half of 2009. This translates into 65 percent of the national education budget and 63 percent of local education budgets.

In particular, by June, the ministry will spend 75 percent of its budget allocated for the facility refurbishment of 48 national schools.

At regions, 40 school constructions based on the BTL(build-transfer-lease) method will be provided with direct budget investment during the period, so that no cases of construction delay may occur due to budget shortage later on. The ministry will also take an early start in its 'school facility complex project,' to build in a complexity of community-usable facilities such as gymnasiums, swimming pools, libraries and parking lots in four selected local schools.

5. Restructuring the education and S&T sector

In line with the government's initiative to bring enhanced effectiveness into organizational administration across all sectors of society, the ministry has set goals to restructure various education and S&T bodies and streamline their operation.

At the school level, 106 small-sized primary and secondary schools with a student population of 60 or less will be consolidated with others.

In reflection of the decrease of the student-aged population, Metropolitan City/Provincial Offices of Education will see an overall 5 percent cut of their staff quota. An additional 5 percent staff reduction will be induced by giving incentives to offices that voluntarily downsize their staff composition.

The ministry also plans to induce the voluntary liquidation of faltering private universities, for which it will review the possibility of allowing universities to revert remaining assets after closing down the school.

In addition, government-subsidized research institutes will be urged to strengthen their accountability through clear goal settings and accurate evaluation procedures.

III. Major Policies for Education, Science and Technology

1. Better reliability in public education

(1) Stronger competitiveness in public education

In an on-going effort to diversify school choices, the ministry will increase its designation of boarding high schools to 142, with selections expanded to private high schools and urban-rural complex cities. The goal is to designate and support 150 such schools by 2010. The number of autonomous private high schools, which are granted extensive autonomy in curricular and financial operation, will grow to 30 by the end of the year, to reach 100 by 2011. A selection of 20 excellent vocational high schools will be nurtured into “Meister” vocational high schools in 2009, as a model of advanced professional education that enables students to pursue employment and further studies at the same time. By 2011, 50 Meister vocational high schools are planned to be in operation nationwide.

Major steps are being taken to improve the vocational education system at high schools, so that youths equipped with good vocational capacity and skills may successfully grow into key industrial human resources, without having to additionally attend university education. The ministry will thus ensure diverse career tracks for vocational high school graduates, either in the form of employment or junior college advancement. Graduates will also be able to delay their military service obligation for up to four years upon employment after graduation, and may pursue junior college degrees during military service

through the 'e-military university' system. In addition, general high school graduates who seek employment upon graduation will be provided with fee support to attend technical private tutoring institutions. A budget of 3.1 billion won has been set aside for the purpose in 2009.

In a bid to upgrade the teaching profession, more opportunities will be given to recruit professionals and Doctoral degree holders who possess expertise in various fields as school teachers. The competition-based open principal recruitment system, currently in operation at specialized schools, vocational schools and arts schools, will be expanded to general primary and secondary schools nationwide. A new principal training system will be introduced alongside, enabling general teachers to get appointed as principals without going through promotion procedures. With the legislation of the new comprehensive teacher evaluation scheme, schools are also expected to help make informed promotion decisions and provide customized training for individual teachers.

In addition, the ministry will see to it that a sufficient variety of adequate data categories are developed for the "School Information Disclosure System," which mandates all primary and secondary schools to disclose administrative and academic information including the number of students and teachers, cases of school violence, meal service and facilities, financial status and after-school programs. Disclosed data will be brought together into a comprehensive analytical report, to be used when evaluating local education offices and formulating education policies.

(2) Countermeasures for private education expenditure

The ministry recognizes that after-school programs serve as one of the most effective means of reducing private education demands. As such, steps are being taken to set up after-school support centers at regions, which will be responsible for expanding students' after-school learning opportunities, developing contents, providing consulting services and recruiting excellent instructors. For after-school programs that show good performance such as high student satisfaction levels and effective teacher placement, the ministry will also offer additional financial support and incentives.

Special government subsidy will be provided to schools and regions that have a large number of students who demonstrate low academic performance. In particular, the ministry intends to expand the "daylong student care classroom" system, which provides primary students with the three integrated functions of regular curricular instruction, after-school programs and parental child care till late evening hours.

Efforts will continue to resolve inordinate demands for English education, starting with the development of a national English proficiency test which will be used as material for employment, study abroad, and possibly college admission. The new Internet-based test will have reading, listening, speaking and writing sections, and will rate the level of test attendees from grade 1 to grade 3. Tests for each grade will be administered separately, with a unique set of items and tasks tuned to assess corresponding ability levels. As for teacher development, in 2009, approximately 1,500 English teachers will be provided with choice-based intensive training programs tailored to their needs.

The ministry will also select and train 5,000 English speaking instructors so as to meet demands according to the increase of English instruction hours at primary schools as well as level-differentiated classes at secondary schools.

In a bid to bring more stability and transparency into the private tutoring market, the ministry has set up an online private tutoring fee report center on the websites of the ministry and the Korea Consumer Agency, as a channel for students and parents to search information on the fee rates of private tutoring institutes and make civil appeals. At local education offices, fee details will be published on internet sites and monitoring teams will be operated in large numbers, so that people may report to the authorities if the institutes collect more than they claim. All institutes will be required to disclose how much they charge for anything including regular lessons, supplementary lessons and study materials, and also issue cash or credit card receipts for anything they sell.

The state Education Broadcasting System will also see improvement, with the introduction of expert broadcast material writers and the recruitment of star instructors. By increasing the provision of IPTV at schools, the ministry also seeks to help students attend EBS programs at any time they wish.

(3) Educational welfare for all youths

At agricultural and fishing villages, the ministry will introduce a “yearlong student care at schools” system, so that students may be provided with study, culture and welfare services at school 365 days a year. The system will be initiated at 378 rural schools in 2009, covering support for approximately 15 percent of needy students.

For students from urban low-income households, the ministry will select and subsidize 100 priority regions that are in need of educational welfare support. This will help aid 538 schools with study, culture, counseling and welfare programs, up by 216 schools compared to 2008. For 50 schools where basic livelihood recipient students number 100 or more, or their proportion reaches more than 20 percent of the total student population, the ministry will also offer special financial aid for a five-year period.

Special attention will be given to assisting students from multi-cultural backgrounds and North Korean defector families, in formats such as providing programs for the acquisition of Korean language proficiency and basic academic ability. Parents of such households will be provided with Korean language and PC usage programs, and counseling and interpretation service, so that they may enhance self-capacity for their children's education. At teacher's colleges and schools, the curricula will also include more courses designed to raise awareness and understanding on multiculturalism. For children of North Korean defector families, the ministry will offer adaptation education and improve systems to accredit previous educational experiences. The ministry will also increase budgets so that more private education facilities may engage in providing these children with customized learning programs.

At the pre-school level, approximately 140,000 underprivileged pre-primary students will be subsidized with daylong program fees in 2009. Daylong operation will be expanded to 95 percent of all pre-schools in 2009, and 100 percent by 2010.

(4) Qualitative improvement of educational contents

In 2009, the ministry will introduce a curricular innovation scheme in the name of the “Core Schools” project, which aims at granting secondary schools enlarged autonomy in curricular formulation and operation. The project will be tested at 120 schools as a start, to be expanded to 500 schools by 2012.

Under the project, school principals at Core Schools will be allowed to freely decide their schools’ subject matters and subject instruction hours. The schools will also be provided with government subsidy to set up separate classrooms for special instructional needs, and secure personnel and material infrastructure for curricular innovation.

As for textbooks, the ministry will improve the way government-authorized school textbooks are priced and earnings are divided, so as to induce sound competition among publishers. Rigorous review procedures will be imposed when revising history textbooks, with the introduction of stricter standards for textbook writing and approval.

In addition, the ministry will develop and test digitized textbooks at selected pilot schools for primary 3rd to 6th graders in English classes. Mathematics, science and English courses will be taught using digital textbooks for freshmen at selected middle schools, while high school freshmen will use the new method for two subjects - mathematics and English. The ministry’s goal is to have digital textbooks adopted in 100 primary, middle and high schools nationwide by 2011.

2. Capacity-building in education and research

(1) Competition and competitiveness in higher education

The “Formula Grant Project for Enhanced Higher Education Capacity” project, first introduced in 2008, will operate on a budget of 495.9 billion won in 2009, up substantially compared to the previous year’s budget of 100 billion. Based on a non-competitive evaluation formula, the ministry will use pre-determined quantitative indices to assess the best performing higher education institutions. For selected institutions, the ministry will provide block grants to the presidents of universities/junior colleges, which will ensure that they invest diversely and creatively in upgrading their quality of education.

At regions, the ministry will select and subsidize nurture 20 local universities by economic blocs so that they may take up a leading role in developing top quality human resources in future growth-oriented industries. Examples are biomedicine and new IT at the Chungcheong Province, transportation facilities and fusion material/parts at southeastern regions, green energy and fusion IT at the Gyungang Province, and fusion medical and medical tourism at the Gangwon Province. Efforts to foster industry-academia collaboration will continue at the same time, with support for 25 local universities to lead the development of industrially customized programs and 70 universities to set up on-campus companies.

An important scheme aimed at inducing competition and quality improvement at the higher education level is the “Professional Graduate School” system.

Professional graduate schools are currently operated in the fields of law, business administration and medicine/dentistry, with 25 new graduate law schools scheduled to open in March 2009 with an admission quota of 2,000. In October 2009, the ministry intends to establish additional professional graduate schools in three growth-generating fields - green growth industry, new fusion technology and high value-added service industry.

In an attempt to broaden Korea's international educational reach, the ministry is also taking steps to expand the Korean Government Scholarship program into a comprehensive "MEST(Ministry of Education, Science & Technology) Scholarship" scheme, which will provide financial support for foreign students studying in Korea, students/faculty/experts on exchange, Korean students studying in foreign countries, and ethnic Koreans residing overseas. A foreign student network will be developed alongside so as to provide pre-arrival education, aid their studies in Korea and keep contact with the students after they return home.

In addition, the ministry intends to induce the investment of outside resources in improving the educational environment of universities. This will be done by allowing private investors to establish sports centers, office rooms, catering facilities, etc. on campus, and get paid back their investment expenditure. Private companies will be allowed as well to take residential occupation on campus within 10 percent of the total school land area. The ministry also intends to secure increased public finance for the higher education sector, which currently ceases at 0.6 percent as of GDP.

(2) University autonomy and accountability

An increased budget of 23.6 billion won will be invested in the “Admission Officer” system so that universities may consider diverse criteria other than test scores when selecting students, such as special abilities, aptitudes and creativity levels.

The ministry’s plan in to grant universities full autonomy in student admission by 2012, for which it will strengthen the responsibility and accountability of the Korean Council for University Education. An Educational Collaboration Committee will also be set up to discuss the direction of university admission policies among Superintendents, university presidents, ministry officials and educational experts.

In return for expanded autonomy, universities will be required to fully meet requirements to disclose school information and analytical data. In order to facilitate the application of outside assessment and accreditation, the ministry will require universities to conduct self-evaluation and publicize results. It will also operate a government authorization procedure for private evaluation/accreditation institutions.

(3) Capacity building at universities & research institutes

In the first operational year of the World Class University(WCU) project, first initiated in 2008, 35 research teams at Korean universities will establish new academic departments or specialized majors in future growth-generating fields.

Another 36 universities have employed foreign scholars at existing academic programs, and 76 universities have invited distinguished world-class scholars to teach and research in Korea.

The WCU budget for 2009 has been set at 160 billion won, which will benefit a total of 284 top-notch international academics including two Nobel laureates, who are expected to function as a “change agent” to innovate the education and research atmosphere of Korea’s higher education sector.

In order to gain full effects from the project and develop a global academic network of academics, the ministry plans to set up a university consultation body to support foreign scholars and organize a WCU-Nobel Forum on a regular basis.

Schemes to nurture Master’s and Doctoral level professionals will continue with the Brain Korea 21 project, which has allocated 265.9 billion won for 2009 to subsidize 20,000 graduate researchers at 565 teams. Under a new program, 700 Post-docs who have graduated five years or less ago will be given opportunities to attend training programs at domestic/foreign universities or research institutes.

In a major move to bring managerial effectiveness into government-subsidized research institutes, the ministry will allow the recruitment of renowned foreign scholars as institute heads. The new system will be first tried out in 2009 at the Korea Institute of Science and Technology(KIST), where the recruited foreign head will pre-present management goals for KIST, and have his/her performance against those goals evaluated afterwards.

(4) Synergy effects in education and S&T

The Consultation Committee for Education, Science and Technology will strengthen its function of coordinating and formulating pan-governmental policies, including detailed action plans for the "S&T 577 Initiative" which aims at raising government expenditure on R&D to 5 percent of GDP, develop R&D in 7 key technology fields, and advance 7 national S&T systems.

As affiliated organizations, the Korea Science & Engineering Foundation, Korea Research Foundation and Korea Foundation for International Cooperation of S&T will be consolidated into two bodies, the 'Korea Research Foundation' and the 'Korea Scholarship Foundation.' The Korea Research Foundation will support all fields of academic study and S&T R&D, as well as international research cooperation. The Korea Scholarship Foundation will be responsible for providing one-stop service of national scholarships and loan programs.

At the high school level, the ministry will expand the number of gifted education schools in science from one to four by 2011. The Korea Science Academy, the country's only high school for the gifted in science at present, will re-open doors in March 2009 as an affiliated body to the Korea Advanced Institute of Science and Technology(KAIST). The plan comes as an effort to give the Academy a leading role in nurturing Korea's educational environment for scientifically gifted students. Once affiliated, the Academy will operate its curricula in linkage with KAIST, and draw from the Institute's manpower and facility resources.

3. Global power in science and technology

(1) Technological advancement of green growth

Within the first half of 2009, the ministry will announce a pan-governmental “comprehensive plan for R&D development in green growth technologies,” under which it will launch steps to advance development and international cooperation in key fusion technology areas including IT, BT and NT. In particular, the ministry will invest 43 billion won during the year to develop green growth in 11 core fields including solar cell materials technology and eco clean technology. Governmental spending on green technology R&D is expected to more than double between 2009 and 2012.

Special attention will be given to raising Korea’s technological power so as to tackle the global issue of climate change. Domestic and international R&D will be supported at a large scale in 36 related areas including fossil fuel alternatives and CO2 capture/disposal. The ministry seeks to increase the weight of research on climate change, from 16 percent as of all Korea’s basic fundamental research in 2008 to 30 percent by 2012.

(2) Creativity and excellence in basic research

Upon recognizing the importance of upgrading quality and creativity in basic sciences, the ministry will increase support for individual basic research from 364 billion won in 2008 to 500 billion won in 2009 and again to 1.5 trillion won by 2012. Financial aid for the individual basic research of S&E faculty

including new researchers will rise from 20.3 percent of all research fees in 2009 to 35 percent by 2012.

Under a new initiative, the ministry intends to select a small number of highly gifted students in their early 20s, to provide them with gifted education up to the stage of Doctoral degree acquisition through the guidance of Korea's top scholars and professionals in relevant fields. The goal is to nurture a key selection of scientists into potential Nobel candidates in the fields of physics, chemistry and physiology/biomedicine.

Another policy focus is to nurture growth-generating fundamental technologies. A "Global Frontier Project" is being designed for the purpose, which will foster the development of new drug candidates and green fundamental technologies. The ministry has also set aside 12 billion won for 2009 to nurture a high-risk, high-return 'pioneer research project' where minimum 50 percent of participants are new researchers, with aim to increase international patent acquisition in areas such as protein therapeutics and neural elements.

(3) 'Selection and concentration' to foster big sciences

The Korea Space Launch Vehicle(KSLV-1), the country's first space rocket, is scheduled for launch in the summer of 2009. Prior to launching, the ministry will conduct safety inspections once every month with the help of Russian partners and domestic experts. In the latter half of the year, the ministry will also initiate preparations to independently develop a larger and more advanced model of a 300-ton booster(KSLV-II) by 2017.

Special efforts will be taken to localize key space technologies by linking with areas that Korea is relatively strong in, such as IT and NT. In design are technologies for high-speed video material storage/transmission, satellite receiving/transmitting and solar sensors.

Drawing from its experience of constructing a High-flux Advanced Neutron Application Reactor(HANARO), the ministry seeks to export self-developed research reactors to foreign countries. As a part of the initiative, the ministry plans to participate in an international tender to design and construct a new research reactor(PALLAS) for the Dutch Nuclear Research & Consultancy Group. The ministry will also start the development of small-to-medium reactors for export purposes in hands with the private sector, with plans to complete processes by 2012.

In addition, steps will be launched to develop Generation IV reactors in a bid to improve proliferation resistance and economize spending. A budget of 30.7 billion won has been set aside for 2009 to start the development of a sodium-cooled fast reactor and pyro-processing technology, and another 14.7 billion to build a very-high temperature reactor.

The Korea Superconducting Tokamak Advanced Research(KSTAR) will study aspects of magnetic fusion energy which will be pertinent to the ITER fusion project as a part of the country's contribution to the ITER effort. Domestic companies will be encouraged to enlarge participation in ITER's international projects, such as the domestic procurement of superconducting magnets for which a budget of 78.5 billion won has been allocated for 2009.

The ministry is also in the process of building Korea's first research ice breaker "Araon," with delivery set for September 2009. The ice breaker will conduct research on marine resources in the Arctic and Antarctic seas, as well as on the usage of polar micro-organisms.

(4) Visions for an international science business belt

Within the year, the ministry will complete legislative and institutional preparations to establish an international science business belt in Korea. A comprehensive planning design is scheduled to be settled in early 2009, followed by the legislation of the Special Act on the International Science Business Belt within the first half of the year.

By June, the ministry also plans to draw up details for the establishment of an open network-type 'Asia Basic Science Institute' and large-scale high-tech research accelerators within the belt.