

2006

# Adapting Education to the Information Age

Ministry of Education & Human Resources Development  
Korea Education & Research Information Service

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## OVERVIEW

## 1. Analysis of Adapting ICT in Education

The Korea Education & Research Information Service conducted a time series analysis of accumulated data on adapting ICT in education, in order to investigate the present status of adapting ICT in education

in schools and identify important lessons for future policy development. The number and type of schools surveyed for this time series analysis is summarized in Table 1.

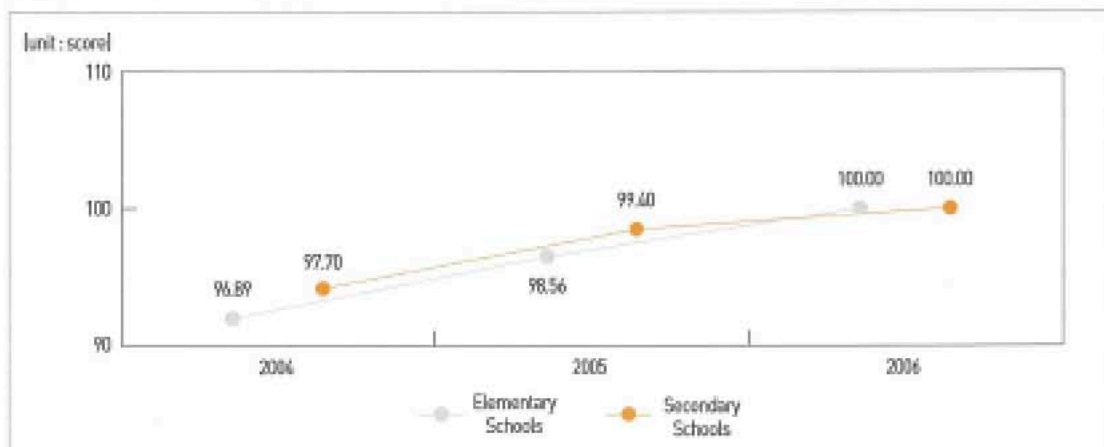
(Table 1) Number and Types of Schools Surveyed, 2004~2006

Description	2004	2005*	2006
Total	2,670	2,401	9,614
Elementary Schools	1,550	1,405	5,344
Secondary Schools**	1,120	996	4,270

\* For 2005, schools located in Gyeongangnam-do were not included.

\*\* Vocational schools and special-purpose schools were not included in the survey of high schools. In addition, data before 2005 does not allow for differentiation of middle and high schools. So, for the purposes of this analysis, middle and high schools were categorized as secondary schools.

(Figure 1) Composite Adapting ICT in Education Index, 2004~2006



aimed at encouraging individuals to continuously develop the knowledge, skills, and capabilities required by the present day labor market and global society in a timely manner.

#### 4. Education welfare and information culture

##### A. Education Welfare

Due to the widening economic gap, the probability of breaking through to a higher social class through

(Table 2) Roles of and Responsibilities in Adapting ICT in Education

Items	Ministry of Education & Human Resources Development (MOE)	Korea Education & Research Information Service (KERIS)	Metropolitan/Provincial Offices of Education
Informationization Plan	Developing a master plan at the national level	Helping the MOE and metropolitan/provincial offices of education to develop plans, research of action plans	Developing detailed action plans for Adapting of ICT in Education according to guidelines from the MOE
Legal systems	Developing or improving legal systems and providing guidelines to educational offices and schools	Research of policies on development or improvement of legal systems	Developing and operating systems at metropolitan/provincial level, providing detailed guidelines to schools
Infrastructure	Investigating infrastructure needs providing budgetary support, providing guidelines on maintenance or operation	Forecasting infrastructure needs, analyzing technological trends, investigating model cases, researching measures for cost reduction and advancement	Investigating the need for infrastructure at metropolitan/provincial level, providing budgetary support, operating the maintenance team
Content development & operation	Establishing the content development plan, providing budgetary support, providing guidelines on development, managing operational programs	Responsible for content development at the national level, management of content quality, developing a system for sharing of content owned by offices of education or other related organizations, other research activities	Developing their own content under the MOE's plan, operating in connection with the system for sharing of content
Training of teachers	Developing a plan for teacher training, providing budgetary support, providing guidelines on training, managing operational programs	Helping development of training plans, developing training materials, operating training programs, other research activities	Developing their own training plans under the MOE's plan, operating training programs
NEIS development & operation	Developing policies, operational management, security audit, evaluation	Planning for operation of central management center, operating central management center's system and communication networks, S/W analysis, design, additional development, and maintenance	Planning for operation of regional centers, operating regional centers' systems and communication networks, S/W management and supports
Evaluation	Planning the evaluation of adaption ICT performances at metropolitan/provincial offices of education and schools and conducting evaluation	Developing methods for evaluation of metropolitan/provincial offices of education and schools, providing support for evaluation, reflecting evaluation results in development of policies	Providing materials requested by the MOE for the purpose of evaluation, developing and executing self-evaluation
Bridging the digital divide	Developing measures to bridge the digital divide of regions, schools, and parents, providing budgetary support	Researching measures to bridge the digital divide, investigating model cases, providing support for action programs	Developing their own plans and executing them in connection with the MOE's plans

## I. Adapting ICT in Elementary and Secondary Education

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### 1. 'e-Teaching & Learning Support System' for Elementary & Secondary Education

#### A. Development and Operation of EDUNET, a Central Teaching and Learning Center

EDUNET connects education policies with schools and is an important axis for adapting ICT in national education. The teaching and learning center allows easy

and fast access to the information users want. This system includes a central teaching and learning center and metropolitan and provincial centers.

As of August 2006, the number of EDUNET

(Table 4) History of EDUNET

Dates	Description
1996. 4. 4	Adapting ICT in education working subcommittee - decided to temporarily establish the "national multimedia education support center" at the Korea Educational Development Institute - developed the plan on establishment and operation of EDUNET
1996. 9. 11	EDUNET opened
1998. 8. 10	500,000 members
1999. 10. 1	Began to provide educational information portal service, opened "01444" network for EDUNET
2000. 6. 14	2,000,000 members
2001. 5. 1	Differentiated, reinforced services (for teachers, preschoolers/parents, elementary/secondary schools, communities)
2001. 12. 1	Expanded the special education services
2002. 4. 30	5,000,000 members
2002. 5. 22	Began to provide national educational information sharing service (integrated search service covering EDUNET and 14 metropolitan & provincial offices of education)
2002. 9. 1	EDUNET integrated search, differential channel services for teachers, students, and education communities
2003. 6. 1	Revised the integrated search service
2004. 9. 15	Central teaching & learning center-EDUNET reorganized
2005. 10. 1	Began to provide targeted, differentiated services, reinforced the member management functions
2006. 9. 20	Reorganized with a focus on user-oriented services (differentiated services and functions by teachers and students)

## II. Adapting ICT in Higher Education

# II. Adapting ICT in Higher Education

## 1. Tertiary Adapting ICT in Education

### A. Adapting ICT in University Education

In implementing adapting ICT in education in Korean universities, the central government has taken a leading responsibility for projects that individual universities find difficult to promote, in order to improve their competitiveness and encourage universities to voluntarily promote adapting ICT in education efforts.

Most Korean universities established computer centers to develop the ICT infrastructure in the 1980s,

which was the start of university ICT adaption. As ICT adaption spread into many social areas in 1990s, universities developed campus networks for computerization of school affairs with many successful outcomes.

The Ministry of Education & Human Resources Development has operated the "Education Network" from 1992, which is the largest non-profit network in Korea. This provides a high-quality Internet network at a reasonable cost in order to ensure the university ICT

(Table 22) e-Learning Support Centers

No.	District	Coverage	Year/University
1	Seoul	Seoul	2007 (scheduled)
2	Incheon - Gyeonggi	Incheon, Gyeonggi-do	2007 (scheduled)
3	Gangwon	Gangwon-do	2005 (Gangwon National University)
4	Chungbuk	Chungcheongbuk-do	2006 (Cheongju University)
5	Daejeon - Chungnam	Daejeon, Chungcheongnam-do	2007 (scheduled)
6	Daegu - Gyeongbuk	Daegu, Gyeongsangbuk-do	2005 (Yeungnam University)
7	Busan - Ulsan - Gyeongnam	Busan, Ulsan, Gyeongsangnam-do	2004 (Gyeongsang National University)
8	Jeonbuk	Jeollabuk-do	2006 (Chonbuk National University)
9	Gwangju - Jeonnam	Gwangju, Jeollanam-do	2005 (Chonnam National University)
10	Jeju	Jeju-do	2003 (Cheju National University)



## III. Adapting ICT in Lifelong Education

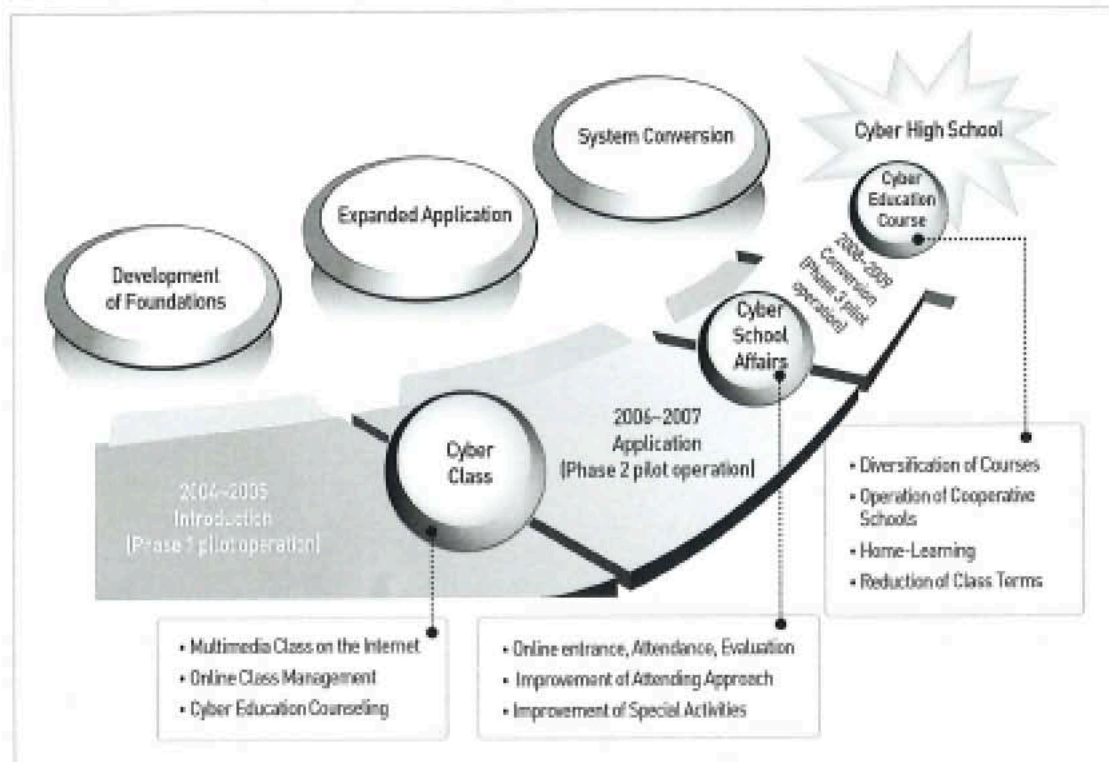
### 1. Distance Education

#### A. Operation of Broadcast & Correspondence High School

The Broadcast and Correspondence High School (BCHS) established "the five-year plan for cyber high schools" to overcome the limitations of the existing

unilateral radio teaching and activate the bilateral Internet-based learning with a focus on moving pictures without limitations of space and time. Accordingly, the "project for development of the BCHS cyber education system" is being promoted from 2004 to 2008 with the

[Figure 19] Plan on Development of Cyber Education System for BCHS



# IV. Education Welfare & Information Culture

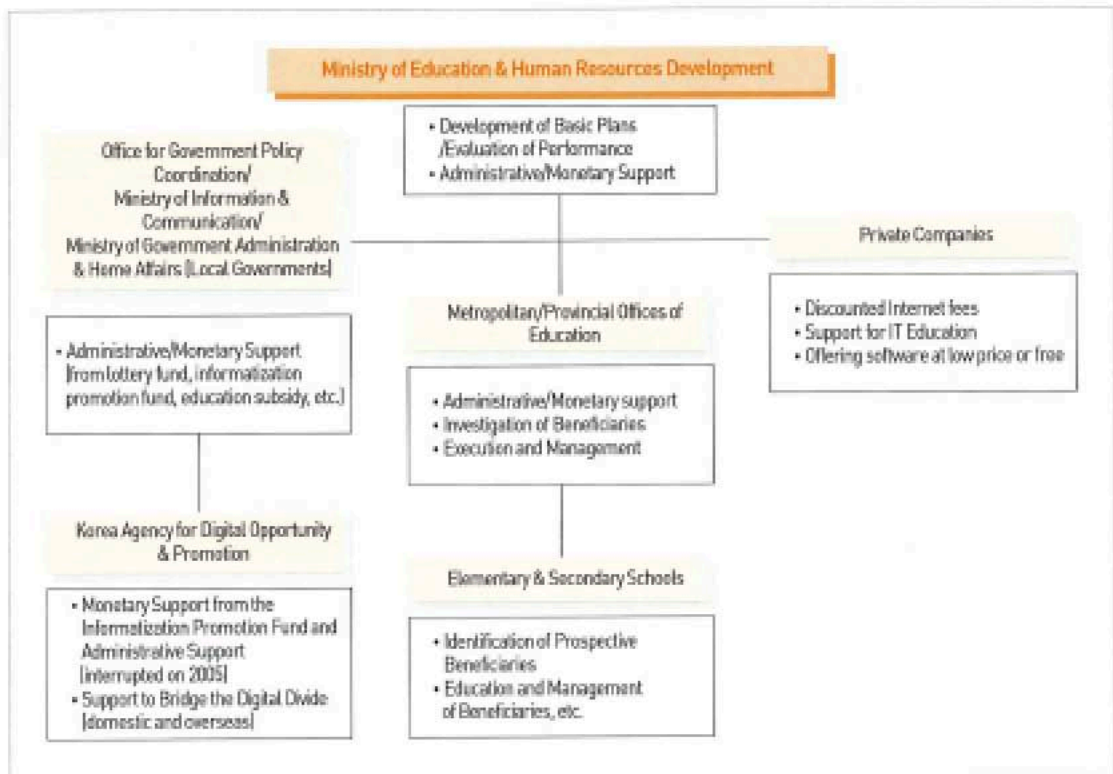
## 1. Education Welfare

### A. Support for Children from Less-Privileged Families

In order to resolve the digital divide problem, the Korean government enacted the "Act for Bridging the Digital Divide" (Act No. 6356) on January 2001.

In addition, the Ministry of Education & Human Resources Development developed the plan on distribution of computers and offering of ICT training programs to children from lower-income families on April 2000. This project is to select 500,000 less-

[Figure 24] Adapting ICT in Education to Children from Less-Privileged Families



# V. Future Education & e-Learning

## 1. Management of e-Learning Quality

### A. Quality Assurance of e-Learning

As e-Learning becomes a new educational paradigm in the knowledge-based society, most countries are actively adopting e-Learning programs.

In addition, with the rapid spread of e-Learning, the demand for quality management of e-Learning is also increasing. For e-Learning in the public education

[Figure 25] e-Learning Quality Management System (proposed)

