The KERIS

2006 Annual Report

KERIS KOREA EDUCATION & RESEARCH INFORMATION SERVICE

KERIS, a global partner
in education innovation

Contents

KERIS dreams of a world where education is available anywhere and at anytime through the use of ICT in education. Based on the belief that your success leads to our success, we are determined to help you reach your goals.

World Best e-Learning Partner, KERIS

| Major Tasks |

Supporting the formulation of policies on education informatization through the research on education and research informatization
Suggesting a future education model through future education research

Contributing to global e-learning community through e-learning globalization projects
Fostering the education informatization industry by promoting e-learning in Korea and abroad

Improving school education using ICT
Enhancing public education through the operation of EDUNET
Reducing private tutoring expenses through the operation of Cyber Home Learning System
Improving administrative efficiency by utilizing the NEIS system
Realizing customer-oriented school administration through online educational administration
Facilitating the use of school libraries through Digital Library Support System

Supporting researchers by securing and providing research information
Supporting higher education informatization through research on higher education and continuing education

"

Beyond receiving national and
worldwide recognition as a leader in educational
informatization, our goal is to provide
the best educational services to our customers.

"

The year 2006 marked the 10th anniversary of EDUNET, a comprehensive education information service for teachers and students. Since its inception in 1999, KERIS has strived to provide its customers with quality education information anywhere and at anytime.

In 2006, we maintained our efforts in providing customers with the educational service to satisfy their needs. We provided various customer-oriented information services in educational administration through the NEIS, and actively introduced student-oriented customized services to Cyber Home Learning and EDUNET. These efforts were greatly appreciated by teachers, students, parents, researchers and policymakers.

In addition, KERIS contributed to enhancing Korea's status as a global e-learning partner through active academic exchanges and sharing of Korea's e-learning experiences with both developed and developing countries. In particular, KERIS obtained an ISO certification for its international e-learning consulting service and information infrastructure management system, thus establishing itself as an organization with a quality management system of international standard.

Thanks to such efforts, KERIS received the 1st UNESCO-King Hamad Bin Isa Al-Khalifa Prize for the Use of Information and Communication Technologies in Education. This Prize is a proof of worldwide recognition of KERIS' achievements.

Our commitment to educational innovation continues in the year 2007, and we will strive to satisfy the needs of our customers, including teachers, students, parents, and education officials.

As a global partner in educational innovation, KERIS will make all efforts to further enhance Korea's status in the global arena. Most importantly, KERIS' priority will always be its customers.

Thank you.

February 2007
President Dae-Joon Hwang

Major Achievements and Events

| January |
Delegation from the Mongolian Ministry of Education, Culture and Science Visits KERIS

- Introduction to Korea e-learning status and discussions on future cooperation
- In addition to the Mongolian delegation, a total of 455 delegates from 41 countries visited KERIS in 2006 to receive training and to enhance mutual cooperation.
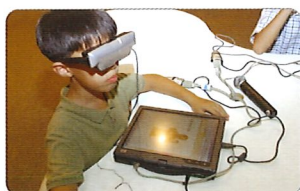
| February |
Presentations of Research Outcomes on Future Education Innovation

- Suggested a blueprint and educational innovation model for future education
- Two presentations held in February and December 2006 with 500 participants

| March |
Launch of the Home-Edu Service, a NEIS Service for the Public

- Issuance of education-related certificates through the Internet
- Substantially reduced time and cost of issuing certificates

| April |
9th e-Learning Expo (Edu Expo 2006)

- Promotion of successful cases of e-learning and of the e-Learning industry in Korea
- Held in five cities, drawing a total of 88,648 participants
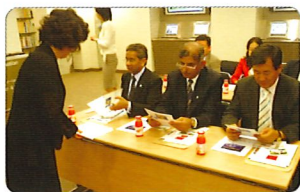
| May |
The Executive Committee of the e-Learning Global Cooperation Center

- Support for developing countries and promotion of international exchanges
- Committee headed by the Vice Minister of the Ministry of Education and Human Resources Development (MOE&HRD), and members composed of 28 heads of relevant e-learning organizations

| June |
2006 e-Campus Conference

- Provided opportunities to discuss university informatization and share information through symposiums and exhibitions
- Attended by 650 participants from 180 colleges and other relevant organizations

| **July** | **2006 e-Learning Policy Forum**

- Support of government policymaking through various discussions on e-learning issues
- A total of 11 forums held, including the u-Learning Forum

| **August** | **'Korea e-Learning (KOⓔL)' Designated as National Innovation Brand**

- The e-learning innovation brand symbolizing the new driving force of education
- Designed to facilitate the implementation of e-learning globalization policy

|**September**| **2006 International e-Learning Expo**

- Sharing of e-learning information through international exhibition and seminar
- Three-day expo drawing the participation of 18 organizations from 9 countries, as well as 80 Korean companies (a total of 17,127 participants)

| **October** | **ISO/IEC 20000 Certification for System Support Infrastructure Management of EDUNET and RISS**

- KERIS' major IT service management system wins international standard
- Recognized as a leader in the public sector information system management

| **November** | **2nd Franco-Korean Joint Seminar on ICT in Education**

- Sharing of experiences and discussion on future cooperation
- Participated by around 100 experts from the government, academia, international organizations

| **December** | **KERIS Announced as the Winner of the 1st UNESCO-King Hamad Bin Isa Al-Khalifa Prize for the Use of ICT in Education**

- International recognition of Korea's achievements in the use of ICT in education

Customer Satisfaction

| Objective |

To enhance customer satisfaction by readily providing information requested

| Activities |

∷ Survey on Customers' Needs

- Identifying customers' needs through various channels
  - ※ Operation of on-line customer service and consulting centers for its services including EDUNET, RISS, NEIS, etc.
- Development and application of a process to handle customers needs and suggestions
- Opinion collection through the advisory boards on customers, policies and quality assessment

∷ Delivery of Value for Customers

- Expanding customized service
  - ※ Revision of EDUNET to expand personalized customer service
- Information meetings for customers
  - Lectures on effective study methods for students
  - Presentations for invites international guests on education informatization
  - Consultation meetings for industry leaders, etc.

∷ Encouraging Customer Participation

- Providing opportunities for customers to participate in EDUNET
  - Operation of communities (1,107 communities)
  - Providing on-line community rooms (397 rooms)
  - Knowledge exchange (294,929 cases), data exchange (3,571 cases), etc.
- Developing customer participation services
  - Teacher support team : planning and promotion, research, consulting, etc.
  - Edurian : EDUNET monitoring by students and parents

∷ Expansion of Quality Management System to Increase Customer Satisfaction

- Application of the 'Six-Sigma' to improve service
  - Project to enhance EDUNET service for teachers
  - Reducing customer waiting time by improving management of RISS customer satisfaction center
- Acquisition of international certificate on quality management process
  - ISO/IEC 20000 certification for system support infrastructure management of EDUNET and RISS
  - ISO 9001 certification for international e-learning consulting service

:: Customer Satisfaction Survey Results for Major Services

Service	2004	2005	2006
EDUNET(score)	70.6	75.0	76.1
RISS (score)	72.0	75.6	75.9
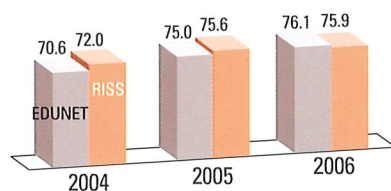
※ Survey results on satisfaction of governmental affiliates (Conducted by the Ministry of Planning and Budget)

:: Current Use of Major Services

Classification		2005	2006	Year on year increase
EDUNET	Teachers' EDUNET utilization rate	70.2%	73.6%	▲ 4.8%
	Students' performance improvement rate after using EDUNET	26.2%	36.4%	▲ 39.0%
	Time spent by teachers in collecting teaching materials and information - Before EDUNET use : 90.9 minutes, - After EDUNET use : 61.4 minutes (decrease by 32.5%)			
RISS	Number of those using RISS more than once a week	44.9%	73.0%	▲ 62.6%
	Satisfaction rate on information	70.3 (score)	70.3 (score)	▲ 2.6%
	Time spent on collecting research information - Before using RISS : 91.6 days - After using RISS : 53.8 days (decrease by 41.3%)			

Management Innovation

| Objective |

To create customer-oriented outcomes by internalizing and systematizing management innovation such as business process innovation, change management, and quality management

| Activities |

:: Stabilization of Change-friendly Organizational Culture for Innovation

- Designation and operation of innovation managers (total seven managers), and conducting of a focus group interview
- Shift from quantity-based work to quality-based work
- Shift to customized innovation management through development of a KERIS innovation analysis model
  ※ Development and analysis of innovation index in each division (16 indices in four areas)

:: Enhancing Staff Capacity-building and Learning Culture to Promote Creative Thinking and Capability to Practice Innovation

- Development of the HRM system by developing a KERIS core competence model
- Enhancing staff capacity for innovation through continuing education
  ※ No. of learning organizations in 2006 : 45
- Establishment of idea management system by promoting a voluntary learning culture
- Promoting knowledge management thru knowledge creation and sharing

:: Creation of Productive Outcomes as an Education and Research Informatization Organization and Innovation Leader

- KERIS ranked 1st among organizations affiliated with the MOE&HRD according to the evaluation on the management innovation activities of government affiliates. (4th stage)
- Development and promotion of KO@L, an innovation brand created by KERIS to lead the global e-learning community

:: Strategic Alignment of the Organization's Vision-Objective-Strategy-Instrument to Accomplish Vision

- Establishment of the 2006 KERIS Innovation Master Plan to satisfy customers and create value

	Before 2006	2006
Change in innovation direction	Systemization and internalization of innovation	• Sustainable ethical management • Management to disseminate and share achievements
Change in innovation target	Innovation of internal system and staff members	• Sharing of innovative practices with other organizations
Change in innovation subject	Led by bodies in charge of innovation	• Innovation activities centered on divisions • Led by innovative leading groups

<Directions for Management Innovation>

Ethical Management

| Objective |

To systemize and promote ethical management to establish the organization as a Korea's representative leader in ethical management

| Activities |

:: Implementation of Ethical Management Education and Action Program

※ Establishment of the Ethical Management and Customer Satisfaction Team (Sept. 2006)

- Ethical management education at monthly staff meetings (two meetings in 2006)
- Implementation of mandatory ethical management education and mentoring programs for new employees (two sessions in 2006)
- Contest of ethical management practices (Nov. 2006) : 16 submissions

:: Monitoring and Evaluation of Ethical Management

- Survey on ethical awareness of staff members and self evaluation on ethical management
- Development of KERIS Ethical Management Index, etc.

:: Encouraging Participation of Partner Organizations

- Encouraging partner organizations' participation in ethical management through CEO meetings
- Sharing and enhancing of ethical management awareness through the clean contract system

:: Social Contribution Activities

Classification		Frequency	Main Elements
Volunteer Activities	Support of hospitals for foreign workers	Once a month	Interpretation service, monthly donation, and participation in special events
	Support of underprivileged senior citizens living alone (by forming sisterhood relations with local communities)	Every Wednesday and Thursday	Delivering lunch to underprivileged senior citizens living alone
	Participation in the social safety net system	Once a month	Participation in the "Supporting one family per person" campaign, support of underprivileged citizens on major national holidays
	Support of flood victims	Non-regular basis	Visiting flood victims in Pyeongchang, Gangwon Province to support restoration activities and contribute relief goods to the victims
	Love ♥ Sharing Volunteer Club	Non-regular basis	Participation in the club's volunteer activities : visiting orphanages, retirement homes, and facilities for the disabled, etc.
Education Activities	Participation in after-school program	Twice a week	Support of the 'After-school Program' at Hyoje Elementary School
	Computer classes for the homeless	Twice a week	Working with Samsung SDS to hold computer classes and donate books for the homeless
Cultural Activities	Donation of children's books for the underprivileged	Once a month	Donation of books to Yeongdeungpo Social Welfare Center, opening a reading class for children

Research and Evaluation of Education Informatization Policies

2005 Presentation of directions for future education by creating a system to resolve pending issues
▶▶▶ **2006 Presentation of quality policy alternatives to pending issues in education informatization**

Objective

To support policy-making by implementing field-oriented basic research and policy assessment

Activities

- **Education informatization policy research**
- **Research on pending issues in education informatization**
- **Level measurement and policy assessment of education informatization**
- **Support of establishing national policies on education informatization such as "Measures to Enhance the Quality of e-Learning"**

Achievements

- **Suggestion of policy directions for education informatization through policy research**
  - Study on improving the school system for the ubiquitous era
  - Study on the role of education informatization to establish an edu-safety net

- **Improvement of policy research quality by systemizing the research project management process**
  - Establishment and enforcement of research project management guidelines (Apr. 2006), operation of six sigma innovation program, etc.

- **Publication of 'Issue Report' through research on pending issues in education informatization**
  - Concept and application of ICT literacy assessment
  - Understanding social capital and its educational implications

- **Strengthening the function of providing basic data for policy making by rating the national education informatization level**
  - Research conducted in early 2006 on the level of education informatization in primary and secondary education
  - Optimizing the index of lifelong education and special education informatization

- **Strengthening the assessment foundation for education informatization projects by supporting government-level assessment projects**
  - Assessment of education informatization projects (support of education informatization promotion plan and government performance assessment)
  - Survey on the use of EDUNET, RISS and educational content

The 2006 KERIS Symposium (Nov. 24) with the participation of 500 experts from home and abroad

KERIS Homepage : www.keris.or.kr

Policy research

Assessment research

Suggesting quality policy alternatives to pending issues in education informatization
- Drawing up a blueprint for education informatization projects
- Timely research for support of major government policies
- Increasing customer satisfaction thru research project process innovation

Research on pending issues

Support for policymaking

Education informatization policy research scheme

R&D on Future Education

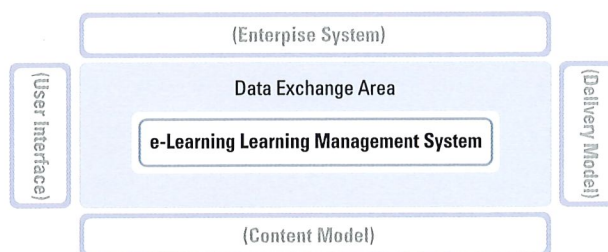▶▶▶ **2006 Development of prototype based on the next generation e-learning model**

Objective

To present a vision for future education by establishing future education blueprint, model and strategy

Activities

:: **R&D on new media**

:: **R&D on teaching and learning methods and learning environment**

:: **e-Learning based research**

:: **R&D on e-learning standardization**

:: **R&D on e-learning quality assurance**

Achievements

:: **Support for policy making on future education through R&D** (45 cases)
- Customer satisfaction rating on e-learning innovation research (score : 82.1)
  ※ Result of the satisfaction survey conducted on the relevant personnel from the government, education offices, private companies, and the academia

:: **Provision of ideas for education informatization policies**
- Research on e-learning service models by learner type (2 projects)
- Research on u-class model and prototype development (2 projects), etc.

:: **Presentation of a vision for future education to enhance the efficiency of education informatization policy**
- Research on the development of a personal portable learning device based on ubiquitous technology
- Research on the augmented reality-based learning model

:: **Enhancing service quality through R&D on e-learning quality assurance**
- Development of assessment criteria and tool for e-learning quality assurance in primary, secondary and higher education (two types)
- Development of training materials on primary and secondary e-learning quality assurance (three types)

:: **Presentations and forums for sharing a vision for future education**
- Presentations on education innovation research (two times, 500participants)
- e-Learning and u-learning forums (11 sessions)

u-Class Model
(installed at the KERIS building)

2nd Presentation on 2006 KERIS Research Outcomes on Future Education Innovation (Dec. 14)

(Enterpise System)

(User Interface)

Data Exchange Area

e-Learning Learning Management System

(Delivery Model)

(Content Model)

e-Learning Standardization Area Map

e-Learning Globalization and Support of e-Learning Industry Promotion

2005 Increase of e-learning international cooperation programs and establishment of public-private partnership

▶▶▶ **2006 Expansion of e-learning globalization based on the public-private partnership**

Education OInformatization Training for Teachers from Erbil, Iraq

KERIS English Website: english.keris.or.kr

Objective

To enhance Korea's international status as a global e-learning partner by promoting international exchanges and Korea's e-learning industry

Activities

Support of education informatization in developing countries
- PC support and e-learning training programs
- PC donation campaign

Organization of international seminars and e-learning expo

Development of e-learning international consulting process and acquisition of the ISO 9001 certification

Implementation of quality assurance project on educational content

Achievements

Enhancing the national status by supporting education informatization in developing countries
- Training program for 455 people from 17 countries (30% increase year-on-year)
- Donation of 4,227 PCs (13% increase year-on-year)

Expanding international exchanges through joint seminars
- Joint seminars with Israel, Mongolia, and France
  ※ Around 1,200 participants from 15 countries

Training on education informatization provided to 20 teachers from Iraq
- 10-day intensive training program

Promotion of e-learning industry through e-learning expos
- 2006 International e-Learning Expo
  - 17,127 participants (international participants: 336), 1,597 business consultations
  - e-Learning International Seminar (650 participants from 13 countries)
- 9th e-Learning Expo
  - Participation by 235 companies with 1,694 products
  - Drew 88,648 people from five cities (4% increase year-on-year)

e-Learning presentation for international visitors to KERIS (468 people from 42 countries)

Certification of 163 types of quality educational information developed by private companies (143% increase year-on-year)

KERIS wins 1st UNESCO-King Hamad Bin Isa Al-Khalifa Prize for the Use of Information and Communication Technologies in Education
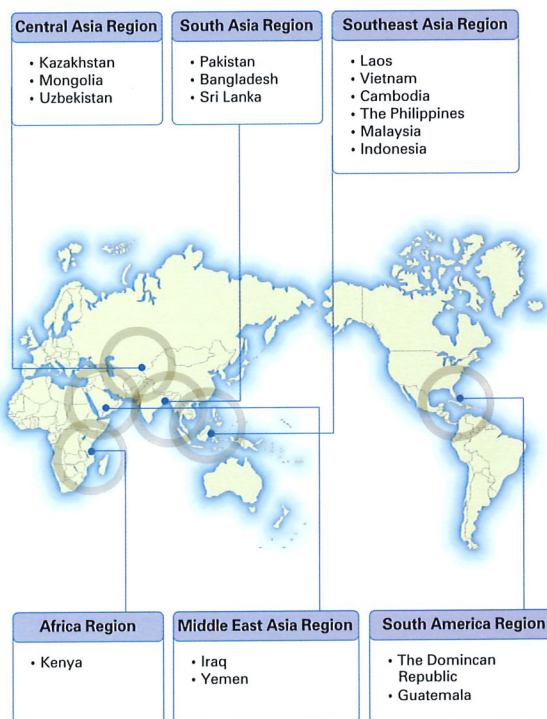
Created in 2005 by UNESCO and funded by the Kingdom of Bahrain, this Prize is to reward projects and best practices using information and communication technologies (ICTs) to enhance learning, teaching and overall educational performance.

In December 2006, KERIS and Korea's Ministry of Education and Human Resources Development were announced co-winners of the 1st UNESCO-King Hamad Bin Isa Al-Khalifa Prize for the Use of Information and Communication Technologies in Education (award ceremony held at UNESCO headquarters in Paris, January 2007). By awarding this Prize, UNESCO officially recognized that Korea's e-learning model can be applied around the world.

Support of Education Informatization in Developing Countries

Metropolitan and Provincial Offices of Education	Participating Countries	PC (units)	Training (number of people)
Seoul	Uzbekistan	300	20
Busan	Cambodia	150	21
Daegu	Bangladesh	-	24
Incehon	Pakistan	150	30
Gwangju	Sri Lanka	150	20
Daejeon	Mongolia	1,000	21
Ulsan	Yemen	150	20
Gyeonggi	Kazakhstan	170	18
Gangwon	Kenya	300	40
North Chungcheong Province	Indonesia	300	80
South Chungcheong Province	Laos	220	30
North Jeolla Province	Philippines	150	22
South Jeolla Province	Malaysia	157	20
North Gyeongsang Province	Myanmar /Guatemala	100/170	19
South Gyeongsang Province	Vietnam	150	29
Jeju Island	Dominica	350	20
KERIS	Iraq	260	21
Total	18 countries	4,227	455

Central Asia Region
- Kazakhstan
- Mongolia
- Uzbekistan

South Asia Region
- Pakistan
- Bangladesh
- Sri Lanka

Southeast Asia Region
- Laos
- Vietnam
- Cambodia
- The Philippines
- Malaysia
- Indonesia

Africa Region
- Kenya

Middle East Asia Region
- Iraq
- Yemen

South America Region
- The Domincan Republic
- Guatemala

Operation of EDUNET

▶▶▶ 2006 Establishment of a customer-oriented interface and an information provision system by learners' individual level

Appointment Ceremony of EDUNET
Monitors (Edurian) (June 9)

EDUNET Homepage : www.edunet.net

Objective

To provide a one-stop education information service to elementary and middle school customers (teachers, students, parents, etc.) in collaboration with the MOE&HRD, Metropolitan & Provincial Offices of Education (MPOEs) and other relevant educational institutions

Activities

- User-friendly education information portal service
- Establishment of a foundation for linking the services provided by the MOE&HRD and MPOEs
- Provision of class lesson support materials using ICT
- Establishment of a system for sharing evaluation questions developed by the MPOEs
- Securing quality content in collaboration with the relevant governmental and private organizations
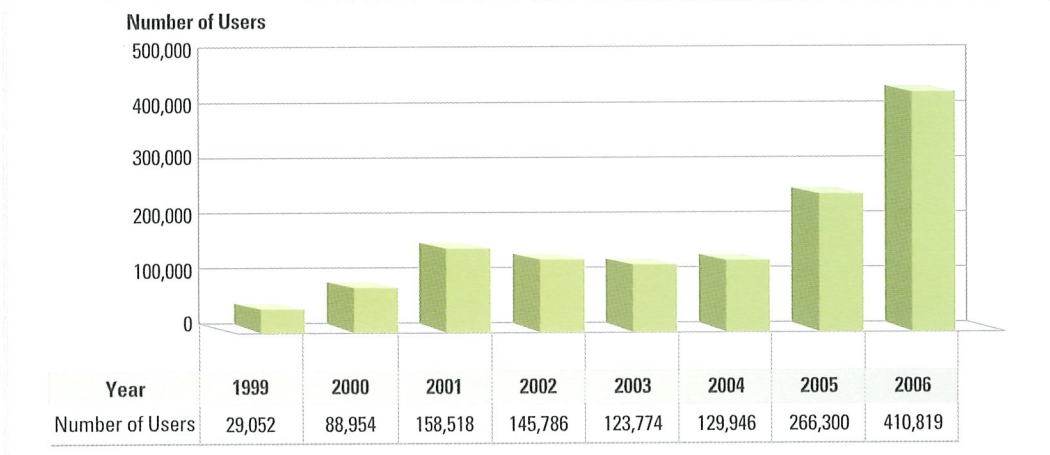
Achievements

- Overall increase in usage rate
  - Students' usage rate : 41.9% (3.5% increase year-on-year)
  - Teachers' usage rate : 73.6% (3.4% increase year-on-year)

- More efficient information acquisition (in proportion to time spent) by teachers than other education sites
  - EDUNET : 116.7% (other sites: 97.7%)

- Decrease of time spent on information collection after EDUNET use (90.9 minutes -> 61.4 minutes, reduction by 32.5%)

- Encouraging user participation to enhance customer-oriented service
  - "Q&Asession on the copyright of education materials" for protection of intellectual property (410 inquiries)
  - Operation of field support team composed of 172 school teachers
  - Operation of 'Edurian Club' ,composed of 46 students and 54 parents

- 43.5% of teachers replied that students can enhance academic performance by using EDUNET

- Establishment of integrated meta DB for the National Education Resource Sharing System
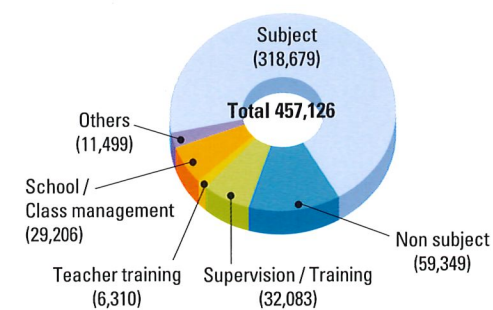 (210,000 items in 2006, cumulative total: 530,000 items)

:: Number of Daily EDUNET Users

Number of Users

Year	1999	2000	2001	2002	2003	2004	2005	2006
Number of Users	29,052	88,954	158,518	145,786	123,774	129,946	266,300	410,819

• Usage of Major Services
(unit : item / monthly average for Oct.- Dec. 2006)

Classification	Service	Monthly usage rate (number of hits)
Teachers	Multimedia content	341,899
	Evaluation questions	3,038
	Teaching-learning modules	2,652,236
	Knowledge exchange	15,006
Students	Online textbooks for primary and secondary education levels	362,824
	Quiz	103,230
	Learning material archive	43,927
	Theme learning	12,462
Community	Total number of communities	5,041
	Number of community members	239,046

• Status of Integrated Meta DB for National Education Resource Sharing System (Unit: item)

Subject (318,679)

Total 457,126

Others (11,499)

School / Class management (29,206)

Teacher training (6,310)

Supervision / Training (32,083)

Non subject (59,349)

:: Status of Educational Content (unit : types)

Classification	2005	2006	Increase / Decrease	
Multimedia Educational Materials	18	4	▼	14
Special Education Content	2	0	▼	2
Educational S/W Contest	296	288	▼	8
Content Developed by Public/Private Sectors	249	293	▲	44
Quality Assured Educational Content	67	163	▲	96
Total	632	748	▲	116

Cyber Home Learning System

2005 Reduced private tutoring expenses by expanding service nationwide

▶▶▶ **2006 Narrowing down of education gap by expanding service to high schools**

Objective

To reduce private tutoring expenses and narrow down the education gap by establishing and operating the nationwide Cyber Home Learning System (CHLS)

Activities

- **Expansion of the target groups, subjects and educational opportunities of cyber home learning service**
- **Conducted basic research on ways to develop cyber home learning**
- **Establishment of an archive system for the sharing of cyber home learning content**
- **Monitoring of cyber home learning**
- **Designated as 'National e-Learning Quality Assurance Center' and conducted content quality certification**
- **Implementation of the project to enhance cyber teachers' capabilities**
- **Organization and operation of the field support team to systemize the work of cyber teachers**

Achievements

- **Service expanded to senior high school students** (only provided up to middle school students till 2005)
- **Daily visitors to the CHLS site: 107,787 per day** (99% increase year-on-year)
- **Survey results of students' satisfaction on cyber home learning : 65.98 points** (8.88% increase year-on-year)
- **An estimated amount of 750 billion won (US$ 789 million) saved on private tutoring expense in 2006** (87% increase year-on-year)
- **Securing of cyber home learning content**
  - Joint content development by the central organization and the MPOEs (75 items)
  - Secured content through cooperation with relevant organizations (69 items)
- **Learning consultations by cyber teachers of MPOEs (760,000 cases)**(Monthly average 63,333 cases)
- **Increase in the number of cyber teachers** (6,147 teachers, 94.9% increase year-on-year)
- **Cyber home learning parent tutor system** (2,692 parents participated in 2006)
  - Management of attendance and progress
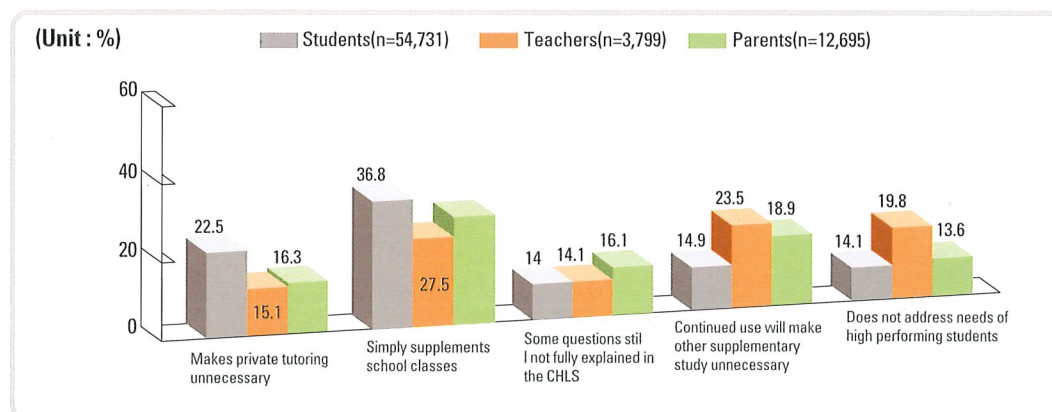 - Encouragement of learning, cyber teacher support, etc.

Award Ceremony for the Best CHLS Classes (Feb. 13)

National CHLS Center : cyber.edunet.net

:: Status of CHLS Members (Unit : number of ubscribers)

Classification	Total No. of Student Members	Students in Designated Class Type		Students in Self-Study Type	Daily Average Users
		No. of Classes	No. of Students		
2004	769,840	1,978	42,100	727,740	54,142
2005	1,608,997	3,999	178,705	1,430,292	107,787

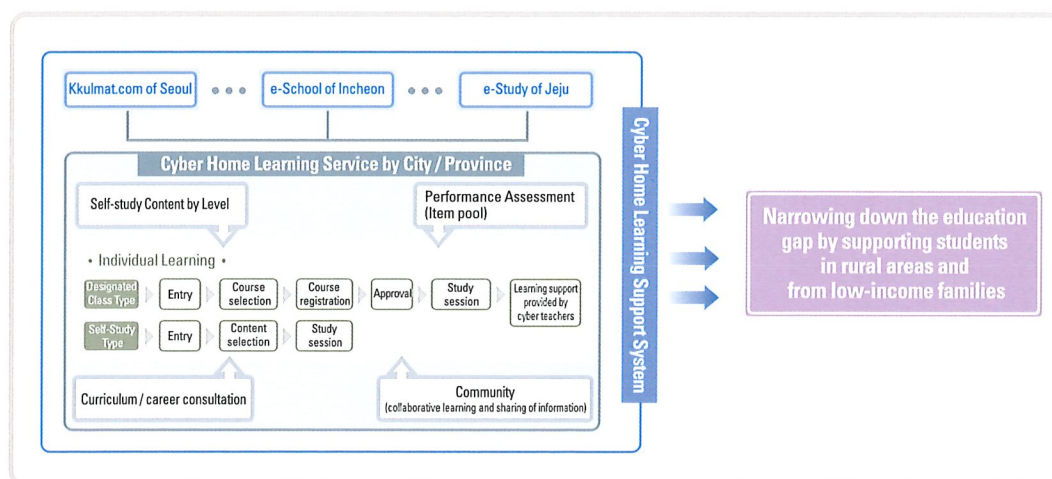## :: Reduction of Private Tutoring Expenses through CHLS

Classification	2005	2006
Amount of Reduced Private Tutoring Expenses	400 billion won (US$ 421 million)	750 billion won (US$ 789 million)

:: Survey Results on the CHLS Effectiveness

(Unit : %) Students(n=54,731) Teachers(n=3,799) Parents(n=12,695)

- Makes private tutoring unnecessary: 22.5, 15.1, 16.3
- Simply supplements school classes: 36.8, 27.5, (green)
- Some questions stil l not fully explained in the CHLS: 14, 14.1, 16.1
- Continued use will make other supplementary study unnecessary: 14.9, 23.5, 18.9
- Does not address needs of high performing students: 14.1, 19.8, 13.6

:: CHLS Conceptual Diagram

National Education Information System (NEIS)

2006 Expanded service to more schools and a wider population

Launch fo the New
NEIS School Affairs System(Mar.14)

National Education Information System
(NEIS) (www.neis.go.kr)

Objective

To enhance convenience for the public and reduce teachers' administrative work load

Activities

- **Establishment and operation of new NEIS school affairs system and stabilized application to schools**
- **Expanded Home-Edu civil service and launch of the service for parents**
- **Improvement of NEIS S/W quality**
- **Development and operation of on-line service for university zadmission documents**
- **Establishment and operation of integrated digital education finance management system**
- **Quality and Security Management of the NEIS center**

Achievements

- **Expanded implementation and stabilization of new school affairs system**
  - Reduced 165 types of hand-written documents (used by 11,039 schools)
- **Enhanced convenience for the public by providing on-line certification service and sharing of administrative information**
  - 70% increase in no. of certificates issued on-line, 80 billion won (US$ 84 million) saved annually in certificate issuance
- **Cost and time saved through on-line provision of university admission documents**
  - Simplification of process (4 stages -> 2 stages), cost saved (113.5 billion won, US$ 119 million), time saved (17 days)
- **Smooth implementation of digital education finance management system, as part of the national financial innovation plan**
  - BPR/ISP (2005) -> Program development (2006) -> Pilot service (2007)
- **Expansion of on-line certificate issuance and sharing of administrative information**
  - Selected as the best innovation practice by the MOE&HRD and KERIS

2005	2006

• Civil certificates viewed on and printed from PCs (5 types)
  - Total no.of certificates issued : 469,893
• Seven types of administrative information shared by three ministries
  - Total no.of certificates issued : 469,893
	• Launched and expanded service (5 types ->10 types)
	  - No. of certificates issued: 790,415 cases (70% increase year-on-year)
	• Increase in sharing of administrative information: 7 types -> 13 types (five ministries)
	  - Expanded service areas (four areas including civil and general service)

Reduction in Workload and Time by Improving Major Work Processes

| Category	Main Innovation Elements and Outcomes
On-line Recruitment	Off-line application in person -> Automated on-line application
Issuance of Teachers Certificates	Simplified issuance procedure (4 steps -> 3 steps) and reduced issuance time by 37%
Information Sharing between Audit and Inspection Bodies	Manual processing -> Integrated NEIS on-line processing: time saved by 50%
Year-end Adjustment	Automated income tax deduction, time saving of more than 40%

Online Provision of University Admission Documents by All Participating Schools

Classification	No. of Schools	No. of Graduates	No. of Enrolled Students	Total No. of Students
Regular Application	2,069	498,627	574,229	1,072,856
1st Early Application	2,132	574,161	576,897	1,151,058
2nd Early Application	2,135	574,990	579,892	1,154,882

- Cost-saving effect by students, parents, and universities

Students and parents		Universities		Expense saved
105.8billion won (US$ 111 million)	+	7.7billion won (US$ 8 million)	=	113.5billion won (US$ 119 million)

Home-Edu Civil Service System
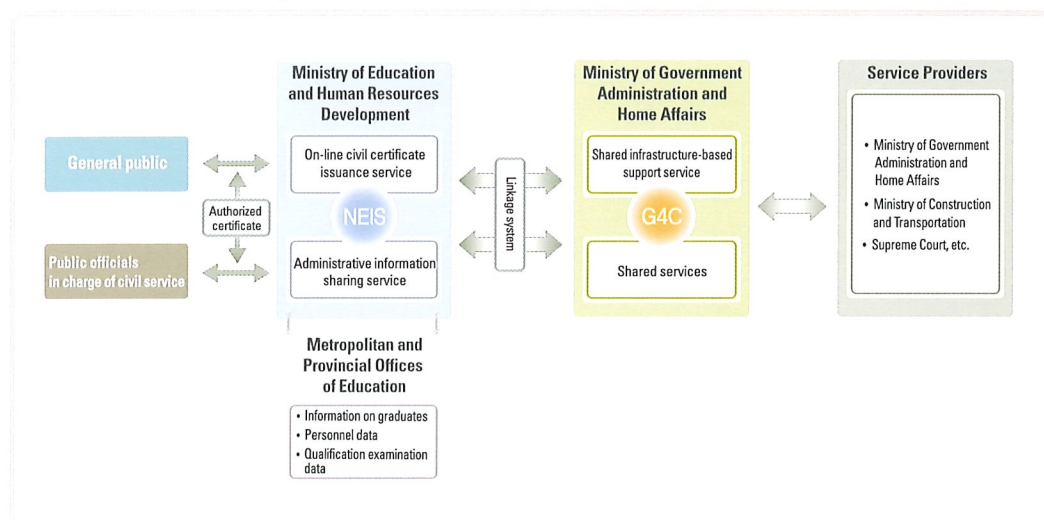
Digital Library System (DLS)

2005 Increase of user satisfaction through stabilization of central DLS

▶▶▶ **2006 Improved service stability by establishing the DLS v2.0 at MPOEs**

2006 School Library Conference (June 2-3)

KERIS DLS(lib.keris.or.kr)

Objective

To encourage the utilization of school libraries by supporting the operation of a comprehensive digital library covering books, non-book materials, and on-line information

Activities

Stable operation and management of metropolitan and provincial DLS systems
- Continued maintenance and functional improvement of DLS Softwares
- Establishment of the DLS Version 2.0 at the MPOEs

Established central DLS catalogue and provided teaching and learning information linkage service

Research on the ways to promote the use of school libraries

Achievements

Acquisition of GS certification by the Telecommunications Technology Association on the DLS v2.0

Increase of customer satisfaction through the management support of the DLS operated by the MPOEs
- Phone consultations through the call center (11,700 cases), customer satisfaction score reached 4.4 points (250 customers, full score: 5 points)
- Maintenance of DLS Software (158 cases)
- Contest on best DLS application cases (54 best practices secured)
- Visiting service to schools (62 schools)
- Education for DLS users (2,289 users)

Central bibliography catalogue (15,000 inventories in 2006) and information on subject-related books (2,000 items in 2006)

Basic research for promoting the use of school libraries (8projects)

- Status of Registered DLS Schools
(Unit: schools / cumulative total)

Year	No. of Schools
2001	30
2002	266
2003	3,201
2004	5,505
2005	7,111
2006	8,764

※ 83% of all schools registered

- Status of Registered DLS Users
(Unit: person / cumulative total)

Classification	No. of Students	Percentage
Elementary School Students	4,353,783	52.1
Middle School Students	2,246,639	26.9
High School Students	1,736,173	20.7
Other Institutions	25,409	0.3
Total	**8,362,004**	**100.0**

Research Information Service System (RISS)

2005 Established as the hub of academic research in Korea

▶▶▶ **2006 Knowledge globalization by enhancing the sharing of information at home and abroad**
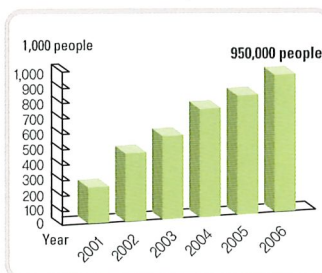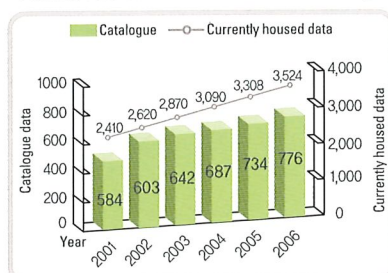
Objective

To establish RISS as the central international research information distribution system by promoting the international information sharing network
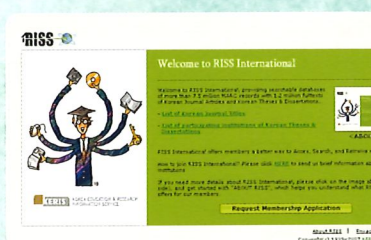
Activities

- Established system for sharing research information at home and abroad
- Operated and expanded system for sharing information in universities and libraries
- Established system for acquiring full texts of overseas research information unavailable in Korea
- Supported researchers in purchasing dissertations from overseas

Achievements

- Operation of RISS International to provide global research information
  - Seven countries (U.S., Germany, France, etc.) to participate in RISS International pilot service
  - A fee-based service to be provided from July 2007

- Sharing of research information among relevant domestic organizations, specialized and special libraries
  - Sharing of the National Library of Korea's catalogue data
  - Expanded specialized libraries covered by the RISS service (147 libraries/ cumulative total)

- Support in purchasing overseas academic papers unavailable in Korea
  - Support provided to around 6,200 Korean university professors and students, ten times in 2006, 50% of the total expense covered

- Metadata standardization and consistency assurance of research information resources
  - Provision of catalogue service, development and distribution of bibliography data, input guidelines, and catalogue management system

Research Information Service System (RISS) (www.riss4u.net)

RISS International (intl.riss4u.net)

- Annual data collected for the union catalogue

Catalogue — Currently housed data

Year	2001	2002	2003	2004	2005	2006
Currently housed data	2,410	2,620	2,870	3,090	3,308	3,524
Catalogue	584	603	642	687	734	776

- RISS Subscribers by Year

1,000 people

950,000 people

| Year | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |

Support for Sharing of Domestic Research Information

2005 Expansion of the distribution network for domestic research information through digitalization

2006 Establishment of a digital distribution system to reduce time and cost for obtaining research information

2006 University Library Personnel Seminar (Nov. 22)

dCollection(www.dcollection.net)

Objective

To save time and cost for acquiring quality research information by promoting the digitalization of domestic research information and operating the digital distribution system

Activities

- Promotion of the sharing of domestic research information through digital system operation
- Distribution and promotion of the digital knowledge distribution system dCollection
- Identifying the ways to increase the research data registration rate thru six sigma application
- Expansion of the Union Catalogue to improve efficiency and reduce operation costs
- Operation of the Inter-Library Loan (ILL) service to expand the sharing of research information

Achievements

- 37.3 percent increase year-on-year in the use of full-text service for dissertations and journal articles
- Cost-saving effect for university libraries and service users through the full-text service
  - University libraries in digitalizing and distributing research information: 1.9 billion won (US$ 2 million)
  - Service users in research information collection: 30.6 billion won (US$ 3.2 million)
- Time saved in research information distribution through the six sigma introduction
  - Service time at universities: 18 days (8 days reduced from 26 in 2005, excluding the days needed to provide RISS service)
- Improvement in work efficiency through joint utilization of research information
  - 18 percent improved year-on-year
- Improved saving effect in cost and human power for university libraries through the ILL system
  - Saving effect: 2.6 billion won(US$ 2.7 million) in budget and 65 people in workforce (110 million won (US$ 116,000) 3 persons saved year-on-year)

Monthly Average Use of Dissertations/Journal Articles (Unit : cases)

Classification	2003	2004	2005	2006
Dissertations	90.820	183.037	311.035	440.038
Journal Articles	89.971	165.004	224.636	295.277
Total	180.791	348.041	535.671	735.375

Time and Cost Saving Effect for Users in Obtaining Research Information

Classification	2003	2004	2005	2006
Time Saving Effect	10.85 million days	20.88 million days	25.71 million days	35.30 million days
Cost Saving Effect	7.6 billion won (US$ 8 million)	14.4 billion won (US$15 million)	22.3 billion won (US$23.5 million)	30.6 billion won (US$ 32 million)

Improvement in Work Efficiency and Cost-saving Effect through Union Catalogue Service

Classification	2005	2006	Increase Rate
Time Saving Rate on Work Process	31.7%	40.2%	▲ 27%
Cost Saving Rate on Data Management	22.7%	29.9%	▲ 31%
Work Efficiency Improvement Rate	33.3%	39.2%	▲ 18%

Increase in Domestic Institutional Members for ILL Service: 652 libraries (5% increase year-on-year)
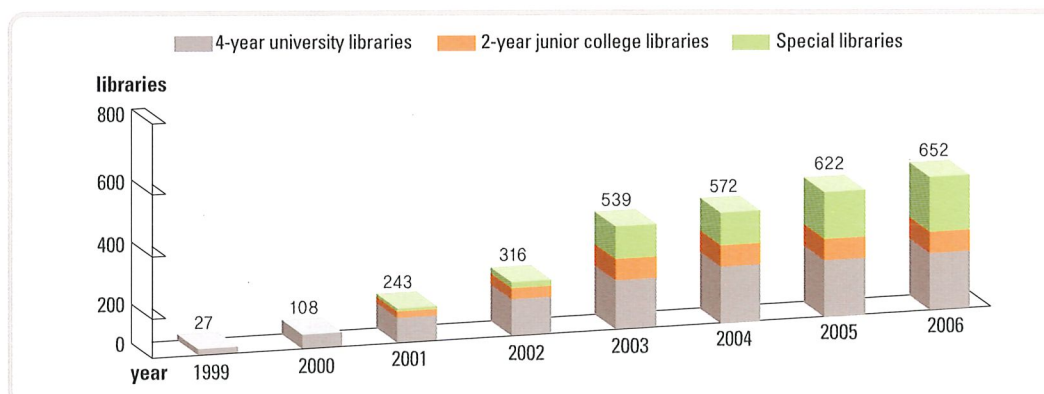
※ Expanded opportunities for special libraries participating in the ILL system (Increase by 10% year-on-year)

Support for Sharing of Overseas Research Information

>>> 2006 Enhanced efficiency in information use through acquisition of research information and diversification of distribution channels

Digital Dissertations on Demand Service (ddod.riss4u.net)

KERIS Academic Library Consortium on Electronic Resources (ace.riss4u.net)

Objective

To systemize the supply of overseas research information and diversify distribution channels, maximizing convenience of usage

Activities

Securing and co-purchasing national license for overseas research information

Securing original contents of overseas research information for permanent possession

Securing contents for the overseas reference information service

Promotion of the utilization of overseas digital information service

Analysis of the effectiveness of national licensing for overseas research information

- Analysis of the budge and time saving effects at national, institutional and individual levels
- Analysis of the significance and value of the national licensing project for overseas research information

Achievements

Purchase of 14 kinds of DB thru national license for sharing overseas digital information

Direct access to overseas eBooks for RISS members and 102 organizations

Formation of 93 consortia, where 158 organizations participate in purchasing online overseas research information

Introduction of overseas doctoral dissertations: 81,301 papers (20 percent increase year-on-year)
- Time and cost saving effects in collecting overseas research information for the public
  - Cost saving effect : 44,118,490 won a year (US$ 46,440)
  - Time saving effect : 234,920 days a year

Provision of access channel and time saving effect in obtaining overseas research information through the ILL system
- Monthly average number of applications for overseas library loans: 557 (33% increase year-on-year)
- Time saved: 74,000 days a year (75% rise year-on-year)

Introduction of overseas e-books: 34,650 books in total (28% increase year-on-year)

Increase in the use of overseas research information by academics and reduction in budgetary constraints
- 730 applications for the service in 2006
- Cost saving effect: 6.2 million won (US$ 6,500)

Provision of webzines by research area
- Webzines sent to personnel of 400 university libraries and 350,000 RISS members

Status of Content Building for Overseas Research Information (Unit : cases)

Classification	2001	2002	2003	2004	2005	2005
Overseas Dissertations	17,000	35,700	46,700	57,054	67,779	81,301
Overseas e-books	2,800	9,200	16,100	26,100	30,100	34,650
Overseas References	-	6,400	10,000	17,006	24,219	31,450

Cost Saved in Obtaining Overseas Research Information through National licensing (Unit : US$)

Classification	Total	DDOD	OCLC FS	netLibrary	Others
Cost Saving Effect	104,888,321	44,118,490	28,668,775	17,752,500	14,348,556

※ DDOD (Digital Dissertations on Demand): provision of information on overseas dissertations ;OCLD FS (OCLC First Search) : provision of information in humanities and social sciences ; net Library : full-text service for overseas e-books

Status of Utilization of Overseas Research Information Service (Unit : cases)

Classification	2001	2002	2003	2004	2005	2006
Search service	627,791	1,027,822	2,219,516	2,597,051	3,672,471	5,269,263
Full-text service	13,074	74,551	258,509	392,620	755,767	734,466

Status of Co-purchasing of Overseas Research Information by Year

Classification	2001	2002	2003	2004	2005	2006
Number of consortiums	54	36	68	76	81	93
Number of organizations	114	132	142	147	143	158

Research Achievements of KERIS

|Policy Research|

Title A Study on Roadmap of u-Learning in Korea

Research Team Sung-Ho Kwon, Beom-Seog Ko, Jong-Won Seo, June Lee, Kyung-Hee Kang

Main Contents
- Research on the ways to link ubiquitous computing technology to education in preparation for a ubiquitous society
- Presentation of a proposed vision for u-learning Korea, mid- to long-term development plan, and specific projects
- Forecast of socio-cultural changes according to the development of ubiquitous computing technology and proposition of future educational innovation and policy directions based on the fundamentals of education

For inquiries Jong-Won Seo (822) 2118-1460, jseo@keris.or.kr

Title The Effect of Information and Communication Technology (ICT) in Korean Education on the Transformation of Teaching and Learning Culture

Research Team Hyeon-Jin Kim, Jin-Ho Lim

Main Contents
- Development of conceptual framework for teaching and learning culture related to ICT in education, focusing on the changes in the lifestyles and values of teachers and students
- Identification of the characteristics of the transformation of teaching and learning culture in elementary schools related to ICT in education through focus group interviews and surveys with teachers and students
- Policy proposals to promote desirable changes in teaching and learning culture through education informatization

For inquiries Hyeon-Jin Kim (822) 2118-1265, jinnie@keris.or.kr

|Future Education Research & Development|

Title A Study on Development of Ubiquitous Learning Devices

Research Team Young-Jun Lee, Heon-Chang Yu, Bo-Kyung Kye, Jae-Hyeok Choi

Main Contents
- Development of next-generation personal portable learning devices that overcome the shortcoming of existing devices and are specialized for educational purpose with improved learning effectiveness, portability and economical efficiency
- Definition of essential functions and specifications for ubiquitous learning devices through analyses of the use of learning devices at home and abroad, of users' (students, teachers and parents) demands, and development of teaching & learning scenarios
- Presentation of the prospect of ubiquitous learning devices according to the development of stages of u-learning technology

For inquiries Bo-Kyung Kye (822) 2118-1352, kye@keris.or.kr

|e-Learning Standardization|

Title Research on Enhancing the Education Resource management with Ontology

Research Team Jae-Hyuk Cha, Yong-Sang Cho, Hyun-Jong Choe, Yong-Seok Choi, Nam-Mee Moon

Main Contents
- Analysis of the development tendency and main issues related to semantic web based on ontology technology
- Development of the methodologies to build a KEM ontology model for semantic web-based search and educational information service and a curriculum-based, sample domain ontology model for linking with the metadata-based ontology
- Development of the search system prototype using the KEM ontology and domain ontology, and analysis of the effectiveness of ontology-based search service

For inquiries Yong-Sang Cho (822) 2118-1447, zzosang@keris.or.kr

|Educational Administration Informatization|

Title   Study on System Enhancement and Educational Utilization Plan for NEIS(National Education Information System)

Research Team Jang-Ik Lee, Myung-Ho Shin, Min-Soo Kim

Main Contents • Analysis of the current status of NEIS, including analyses of best practices and school affairs service in order to examine educational activities at schools

• Development of Educational Utilization Model for NEIS enhancement and the model validity test through survey with teachers

• Presentation of mid- and long-term NEIS enhancement plan including personalized learner support service, student / parent counseling and guidance system, and integrated school administrative system

For inquiries Myung-Ho Shin (822) 2118-1287, skyshin@keris.or.kr

| Field & Project Support Research |

Title   A Study on Linking Model of Cyber Home Learning with After-school Program

Research Team June Lee, Jeong-Im Choi, Jae-Shin Song, Jong-Un Park

Main Contents • Identifying the areas of support for after-school programs through the Cyber Home Learning service

• Development of a model to link cyber home learning and after-school programs

• Proposals for legal and institutional improvement for linking the cyber home learning service and after-school programs

For inquiries Jong-Un Park (822) 2118-1344, jupark@keris.or.kr

| Research Information & Higher Education |

Title   Development of Evaluation Standards for Institutional Evaluation of Cyber University in Korea

Research Team Wha-Kuk Lee, Min-Won Seo, Sang-Ho Song, Seri Kim, Byeong-Jin Kim

Main Contents • Development of evaluation strategy and management model based on the analysis of the management status of the cyber universities in Korea

• Development of evaluation standards in 16 areas in 6 main categories through analysis of evaluation indicators of domestic and overseas general and cyber universities, development of draft evaluation standards and validation of the standards by experts

• Suggestion of possible future directions of evaluation system for cyber universities in Korea

For inquiries Byeong-Jin Kim (822) 2118-1388, kbjin@keris.or.kr

List of Other Major Research Reports

Policy Research
· Directions and Suggestions for Restructuring the Education System in Ubiquitous Era
· A Study on the Current Status of and Ways for Improvement of Financial Investment in Education Informatization
· A Study on the Formulation of the Role of Education Informatization to Build an Edu-safety Net
· A Study on the Ways to Promote e-Learning Globalization
· A Study on Formulating a Strategy to Build an e-Learning Cluster of Universities in the Asia-Pacific Region
· Development of Analysis Indicators of e-Learning Effectiveness to Enhance e-Learning
· A Study on the Development of Digital Literacy Indicators to Promote 21st-century Knowledge and Information Capacity
· A Study on Optimizing Informatization Indicators for Lifelong Education Institutions

Future Education Research & Development
· A Study on e-Learning Service Model by Learner Type in the e-Learning Environment
· A Study on the Development of an Augmented Reality-based Next-generation Learning Model
· A Study on the Development of a Next-generation Learning Model Based on Ubiquitous Technology
· A Study on the Ways to Build Future Classrooms for the Ubiquitous Environment
· A Study on the Establishment of RFDI and USN in Primary and Secondary Schools
· An Analysis of the Effectiveness of the Creative Thinker Program
· An Analysis of the Effectiveness of u-Learning

e-Learning Standardization
· A Study on the Effectiveness of Digital Textbooks
· A Study on the Standardization of the Interoperability of Evaluation Questions
· A Study on the Standardization of Collaborative Learning Management Linked with SCORM-based Content
· A Study on the Standardization of Capacity Information Support Linked with SCORM-based Content
· A Study on Major International e-Learning Standardization Trends and Standards
· A Study on the Development of e-Learning Content Standards in Higher Education

Educational Administration Informatization
· A Study of the Mid to Long Term NEIS Development
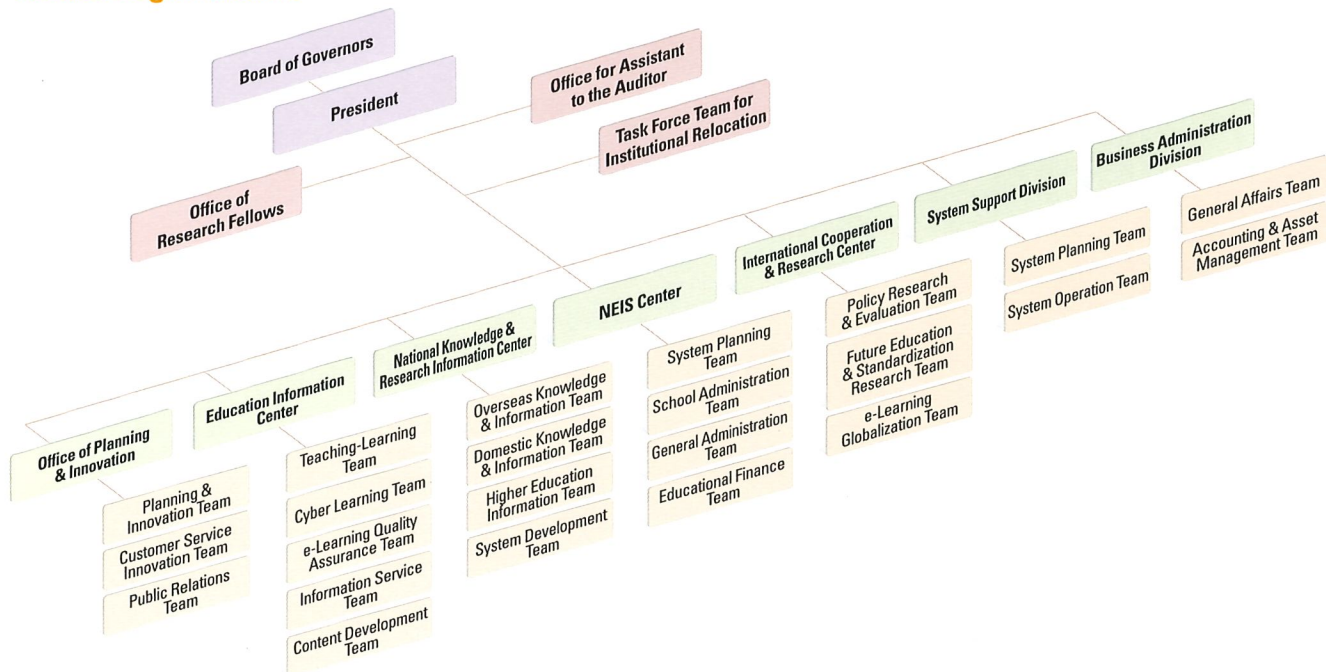
Field & Project Support Research
· An Evaluation of the Pilot Project on School Teaching-Learning Support Centers
· Development and Application of Performance Evaluation Model for National Teaching-Learning Center
· A Study on the Results of EDUNET Restructuring in 2006
· A Survey on the Current Utilization of Vocational Education Materials and Analysis of Its Effectiveness
· A Study on Integration and Linking Strategies for National and Metropolitan-Provincial Teaching-Learning Centers
· A Study on Improving the Usability of National Teaching-Learning Center·EDUNET Service for Teachers
· A Study on the Second-phase Development of Cyber Home Learning
· A Study on the Analysis Methodology of the Effectiveness of Cyber Home Learning
· Establishment of Informatization Strategy for Cyber Home Learning Diagnosis-prescription System
· A Qualitative Study on the Best Practices of Cyber Home Learning
· Research on Linked System for DLS Expansion
· A Study on the Effectiveness of Revitalization of School Libraries Based on Reading Ability
· A Study on Standard Model for School Libraries in Rural Villages
· An Exploratory Study on the Strategy for Enhancing School Library Services of the 2nd Phase
· An Analysis on the Status and Impact of School Libraries
· A Study to Develop School Library-assisted Teaching and Learning Materials
· Focusing on the Korean Language and Social Studies at Secondary Schools
· An Evaluation Study on the School Library Revitalization Project
· Research on the Status of the DLS Use and Users' Satisfaction Analysis
· A Study on the Ways of Joint Utilization of Internet Video Materials Developed by
  Metropolitan and Provincial Offices of Education

Research Information & Higher Education
· Leveraging Academic Department Classification to Enhance Subject-based Service
· A Survey on the Actual Utilization of dCollection System for Establishing National Knowledge and information
  Distribution System
· A Study on the Directions of University Administration Information Standardization
· A Study on the Achievements of Cyber Universities
· A Study on the Current Status of e-Learning in Higher Education
· A Study on Strengthening University e-Learning Support Center and Establishing Development Strategy

KERIS Organization

Board of Governors

President

Office for Assistant to the Auditor

Task Force Team for Institutional Relocation

Office of Research Fellows

Office of Planning & Innovation
- Planning & Innovation Team
- Customer Service Innovation Team
- Public Relations Team

Education Information Center
- Teaching-Learning Team
- Cyber Learning Team
- e-Learning Quality Assurance Team
- Information Service Team
- Content Development Team

National Knowledge & Research Information Center
- Overseas Knowledge & Information Team
- Domestic Knowledge & Information Team
- Higher Education Information Team
- System Development Team

NEIS Center
- System Planning Team
- School Administration Team
- General Administration Team
- Educational Finance Team

International Cooperation & Research Center
- Policy Research & Evaluation Team
- Future Education & Standardization Research Team
- e-Learning Globalization Team

System Support Division
- System Planning Team
- System Operation Team

Business Administration Division
- General Affairs Team
- Accounting & Asset Management Team

Brief History of KERIS

April 1999   KERIS was founded by consolidating KMEC and KRIC
  - ※ KMEC : Korea Multimedia Education Center founded on May 21, 1997
  - ※ KRIC : Korea Research Information Center founded on Dec. 26, 1996
  - ※ Korea's first web-based educational information service "EDUNET" was launched: Sep. 11, 1996
  - ※ The Research Information Service System (RISS) was launched to enhance the nation's research competitiveness: May 1, 1998

Mar. 2001   Designation as the National Education and Research Information Center by the Ministry of Information and Communication

Apr. 2002   Designation as the National Operation Center for the "National Education Information System (NEIS)"

May 2002   Launch of the "National Education Resource Sharing System"

Nov. 2002   Launch of the "National Digital Library Support System"

Dec. 2004   Acquisition of a Korean Standards certificate for primary and secondary educational metadata (KS X 7001)

July 2005   Acquisition of ISO 9001 certification for quality management system

Dec. 2005   Launch of Home-Edu, the online civil service for educational administration

Mar. 2006   Launch of the new NEIS School Affairs System

Dec. 2006   Acquisition of ISO 9001 certification for its e-learning international consulting service

KERIS announced as the winner of the first UNESCO-King Hamad Bin Isa Al-Khalifa Prize for the Use of Information and Communication Technologies in Education

Overseas Institutions that Have Signed MOUs with KERIS

· Sun Microsystems
· National Institute of Informatics (Japan)
· Microsoft
· National Centre for Distance Learning (France)
· Ministry of University, Research, and the Information Society
  of the Catalan Autonomous Government (Spain)
· National Institute of Multimedia Education (Japan)
· Srinakharinwirot University (Thailand)
· Asia-Pacific Centre of Education for International Understanding
· China Academic Library & Information System (China)
· education.au (Australia)
· Stanford Center for Innovations in Learning, Stanford University (United States)
· Academic Advanced Distributed Learning Co-Lab (United States)
· U.S. Satellite Laboratory (United States)
· University of Paris 10 (France)
· Moscow State University of Economics, Statistics and Informatics (Russia)
  ※ In chronological order of signing