Teacher Training System in Korea

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Contents

- Overview
- Teacher Training Systems
- National Teacher Training Information System
- Conclusion
Overview

- Teacher training programs designed for ICT literacy, ICT use, and ICT leadership
- Operation of teacher training institutes (175)
  - Government run TTIs (4), University attached TTIs (84), MPOE run TTIs (16), e-Teacher Training Institutes (71)
- Number of teacher trained in 2009: 226,313 teachers
  - e-Teacher training Institutes (37%), MPOE run TTIs (29%), Government run TTIs (27%), University affiliated TTIs (7%)
- Scope of teacher training: in-, and pre-service, capacity
- Types of teacher training
  - e-Learning: 55.1%,
  - Blended: 29.1%,
  - Offline: 14.6%
- Overall satisfaction on e-Teacher training is high: 82.61%
- Teaching community:
  - Operated by voluntary communities: Namosam (the web community for primary school teachers’)
  - Purposes: social networking, sharing and exchanging digital subject materials and experience in pedagogy and particular topics
Innovation in Teaching and Learning by Enhancing Teachers’ ICT Capabilities

Policies to enhance ICT use in education

ICT teacher-training

Support for self-directed effort to improve ICT abilities

National Teacher Training Information System, EDUNET-Teaching and Learning Center

Supportive environments

ICT Policies

Development programs
• MEST (Ministry of Education, Science and Technology): Establish master plans, Stable financing
• KERIS (Korea Education & Research Information Service)
  - Develops ICT teacher training programs and QA guidelines
  - Provide MPOEs with consultation on ICT teacher training
  - Monitor and analyze results of ICT teacher training
• MPOE (Metropolitan & Provincial Offices of Education)
  - Secure ICT teacher training budget
  - Conduct ICT teacher training
# Evolution of ICT Teacher Training

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<tbody>
<tr>
<td>Goal</td>
<td>Establish ICT infrastructure</td>
<td>Promotion of use of ICT in education</td>
<td>Advances in Education and Research Information service</td>
<td>Create digital ecosystem for learning and research</td>
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<tr>
<td>ICT Development</td>
<td>1996-2000</td>
<td>2001-2005</td>
<td>2006-2010</td>
<td>2011-</td>
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<tr>
<td>• Infrastructure building</td>
<td>• Development and distribution of content</td>
<td>• Customized learning</td>
<td>• Intensify ICT use</td>
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<tr>
<td>• ICT literacy education</td>
<td>• National system for sharing educational contents</td>
<td>• Develop digital textbooks</td>
<td>• Focused on side effects of ICT</td>
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<td>• Internet portal service</td>
<td>• Digital Library System</td>
<td>• U-Learning pilot projects</td>
<td>• Data and evidence based on policy making</td>
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<tr>
<td>• Opening of EDUNET</td>
<td>• Improving teaching methods</td>
<td>• National Teacher Training Information Service</td>
<td>• Encourage stake holder's participation and communication</td>
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<td></td>
<td>• EDUNET Teaching/Learning center</td>
<td>• Restructuring EDUNET based on Web 2.0</td>
<td>• Promote internal ICT use in education</td>
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<td>• Cyber Home Learning System</td>
<td>• Develop Edu-fine</td>
<td></td>
<td>• Penetrate into foreign Knowledge business market</td>
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<td></td>
<td>• EBS lectures for college academic ability test</td>
<td>• Establish KOCE</td>
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<tr>
<td>ICT training Policies</td>
<td>ICT training for over 25% of all teachers annually</td>
<td>ICT training for over 33% of all teachers annually</td>
<td>Teacher training for use of ICT in education: 30 hrs (15 hrs, optional) for every 3 years</td>
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<td>Training Direction</td>
<td>Focus on ICT literacy</td>
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</table>

Creative HRD using ICT

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# Teacher Training Programs based on Career Stage

## Training Level

<table>
<thead>
<tr>
<th>ICT Literacy Course</th>
<th>Basic ICT Use Course</th>
<th>Advanced ICT Use Course</th>
<th>ICT Leadership Course</th>
</tr>
</thead>
</table>
| • Basic ICT Skills (eg) Information search, use of ICT tools, etc. | • ICT-based, problem-based education | • Creative lesson planning  
• Developing thinking skills  
• Teacher Training for 21st Century Learners | • Building 21st century schools  
• Lead Innovation |

## Target Groups

- School Teachers
- School CEOs

## Teachers’ Career Stages
(from induction to retirement)
• Program name: Teacher Training for the 21st Century Learners
• Target: Primary and secondary school teachers
  (http://www.21c-teacher.net)
• Developed in 2008
• Training hours: 30 hours (15 hours, optional)
• Types of training: Offline (face-to-face) and Online including e-training
• Roles for teacher training
  - MEST: Establish master plans and financing
  - KERIS: Develop training courses and quality assurance guidelines, and support teacher training
  - MPOEs: Implement teacher training in each region.
• Goals: Encourage teachers to improve their ability to develop and apply new teaching/learning models and methods that are appropriate for the changing educational environment.

How to make education/learning creative

Twitter
Blog
OER
Social Network software
Facebook
WIKI
Cloud computing
Digital textbook
Innovation of Classroom for the 21\textsuperscript{st} Century

Creative Education/Learning

Participatory Learning

Discovery based Learning

Learning Aided by Education Robot

Motivation, Immersion

Highly interactive contents, Dynamic interaction
Composed of six modules (units)
- Lessons to acquire the ability to develop teaching/learning strategies that reflect the characteristics of Learning 2.0
- Activity on the use of Web 2.0 in Classrooms
<table>
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<tr>
<th>KEY concept</th>
<th>Teacher training for 21st century learners “Teaching-Learning Capability”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective</td>
<td>Development of Teaching/Learning Capability Based on the Principles of Learning 2.0</td>
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</tbody>
</table>
| Modules (30 hrs)| M1: Understanding the changes in education paradigm and learning 2.0 (4)  
M2: Strategy for introducing learning 2.0 in the classroom (3)  
M3: Developing the ability to use Information in a self-directed manner (6)  
M4: Learning 2.0, Characterized by Openness and Sharing (6)  
M5: Learning 2.0 for Collaborative Problem-Solving (7)  
M6: Practice and Reflection (4) |
Teacher Training for the 21st Century Learners: Changes in training

Teacher training in the past

Application in class lessons

Improved Teacher training

Expert Analyses
National Teacher Training Information Service (NTTIS)

- Training Institutes run by MPOE, and MEST
  - Information on training courses
  - Information on training courses, training results
- National Teacher Training Information Service
  - Comprehensive Teacher Training Information System
    - KEM (Metadata), SCORM
    - Data gathering and analyzing tools
  - Information on training courses
  - Information on training courses, training results
- Training institutes run by privates and universities
  - Information on training courses
  - Information on training courses, training results

All schools and teachers
Training Information
- Training offered by:
  - MPOEs
  - Private companies
  - Universities

Self-diagnosis and Prescriptions
- By position and rank
  - Professional competence
  - Common competence

Comprehensive Training Information System
- Training Application
  - Linked analysis of training info & diagnosis results
- Taking Training Courses
  - Attendance
  - Distance
- Training Path & Quality Assurance
  - Individual training path
  - Quality assurance
  - Training course
  - Training institutes
- National Training Statistics Management

Training Outcome Analysis
- Field Test
- Outcome Evaluation
- Course Feedback

Expert Consulting
- Consulting on:
  - Professional competence
  - Common competence
  - Class lessons
  - Student guidance

National Education Information System (NEIS)
• Total number of teacher training institutes: 175 in 2010
• Category of operations
  • Government run TTIs(4)
    • MEST institutes: government education official training
    • Korea National University of Education: Capacity training for teachers and CEO
    • College of Education of Seoul National University: Certificate training for teachers and CEO
    • Korea National Open University: In-service teacher training for primary and secondary schools
  • University affiliated TTIs(84):
    • In-service teacher training for kindergarten, primary and secondary schools
    • (eg) College of Education of Gangwon National University
  • MPOE run TTIs(16)
    • In-service and capacity teacher training for kindergarten, primary and secondary schools, and special education schools
    • (eg) Seoul Metropolitan City
  • e-Teacher training Institutes(71) run by private, and universities
    • In-service teacher training for kindergarten, primary and secondary schools, and special education schools
    • (eg) Chunnam National University
### Statistics of Teachers Training by Institutes

<table>
<thead>
<tr>
<th>Category</th>
<th>No. of Teachers trained</th>
<th>TTIs operated by MPOEs</th>
<th>TTIs attached to Universities</th>
<th>e-Teacher Training Institutes</th>
<th>TTIs for Special Education</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of Teachers</td>
<td>Ratio(%)</td>
<td>No. of Teachers</td>
<td>Ratio(%)</td>
<td>No. of Teachers</td>
</tr>
<tr>
<td>Kindergarten 2008.3</td>
<td>18,069</td>
<td>6,169</td>
<td>34</td>
<td>1,348</td>
<td>7</td>
</tr>
<tr>
<td>Primary school 2009.2</td>
<td>279,613</td>
<td>85,336</td>
<td>31</td>
<td>18,648</td>
<td>7</td>
</tr>
<tr>
<td>Secondary school</td>
<td>226,313</td>
<td>58,744</td>
<td>26</td>
<td>19,381</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>226,313</td>
<td>150,249</td>
<td>29</td>
<td>39,377</td>
<td>7</td>
</tr>
</tbody>
</table>

Source: Analysis report of Satisfaction on e-Teacher Training, KERIS, 2009
A Survey of customer satisfaction

- Period: Nov. 11th – Dec. 12th in 2009
- Method: Web survey
- Participants: Institutes(71), Teachers(1,648), Operators(30)

Analysis of the survey results

- Course taking: Foreign Languages(23.5%), Counseling(19.9%), IT(15.4%), Subject(11.4%)
- Objectives: Career development(51.3%), Increase expertise(39.1%)
- Considerations in course selection: Quality of content(44.2%), peer evaluation result(16.4%), Institute’s assessment on course and outcome(13.7%)
- Time of training: After office hours(46.4%), During office hours(28.8%), during vacation(15.9%)
- Satisfaction(82.61%): Service infrastructure(85.90%), Content(83.78%), Support service(82.41%), Curriculum operation(82.05%), Efficacy of utilization(81.92%)
## Development of ICT Indicators in Education

<table>
<thead>
<tr>
<th>Information structure</th>
<th>ICT Utilization Skills</th>
<th>Digital Index</th>
<th>Information Ethics and Protection</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Individuals</strong></td>
<td>ICT literacy assessment tools for students (KERIS)</td>
<td>Digital divide index (KADO)</td>
<td>Internet addiction Index (KADO)</td>
<td>Information culture index (KADO)</td>
</tr>
<tr>
<td></td>
<td>ICT Skill Standard for Teacher (ISST) (KERIS)</td>
<td></td>
<td>Information ethics index (Korea Internet safety commission)</td>
<td></td>
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<tr>
<td></td>
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<td></td>
<td>Game addiction index (Korea Game Industry Agency)</td>
<td></td>
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<tr>
<td><strong>Institutes</strong></td>
<td>Index for assessment of ICT level in K-12 schools (KERIS)</td>
<td>Index for digital divide in primary and secondary education (KERIS)</td>
<td>Information protection index (KADO)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>University informatization index (KERIS)</td>
<td>Digital opportunity index (KADO)</td>
<td>Cyber violence index (Korea Internet safety commission)</td>
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<td>Education for the handicapped index (KERIS)</td>
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<td>Life-long learning index (KERIS)</td>
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<td>National informatization index (KADO)</td>
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</tbody>
</table>
To assess the utilization of ICT in education

<table>
<thead>
<tr>
<th>Index</th>
<th>Main contents</th>
<th>Target</th>
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</table>
| ICT literacy assessment tools for students | Focus: Assessing the ability to resolve the given problematic situation effectively  
Utilization: Apply to the revision of the information education system  
Domain:  
- Content: Computers networks, expression and logic of information, algorism and modeling, information ethics  
- Ability: define, access, evaluate, create, manage, communicate | Primary school students (1-2, 3-4, 5-6 grade), Secondary school students (middle school and high school students) |
| ICT Skill Standard for Teacher (ISST)     | Focus: Assessment of ICT skill depend on role of teachers  
Utilization: Use in the teacher training courses  
Domain: Information gathering, processing, and exchange, Information ethics | Teachers, Executive teachers, CEOs                                                        |
### Evaluation Criteria of ICT in Education

**Input Domain**

1. Hours school CEO participates in ICT activities each year
2. Hours teachers participate in ICT training each year
3. Percentage of total school budget allocated to ICT
4. Number of PCs per student
5. Number of PCs per teacher
6. Total number of computers available
7. Internet speed
8. Expenditure per student for educational software purchasing

**Utilization Domain**

<Teacher>

9. Amount of teaching content posted on the school homepage by each teacher
10. Percentage of teachers exchanging information with parents on the school homepage
11. Percentage of teachers who participate in ICT-related associations

<Student>

12. Percentage of students accessing the school homepage each day
13. Amount of learning content downloaded from school homepage by each student
14. Time per student for use of computer lab each week based on the curriculum
15. Percentage of students engaged in ICT literacy education

**Output Domain**

<Teacher>

16. Percentage of ICT-certified teachers
17. Percentage of teachers who participate in ICT conventions at a national or local level
18. Percentage of teachers who participate in ICT experimental lessons

<Student>

19. Percentage of ICT-certified students
20. Percentage of students who participate in ICT conventions at a school level
Summary

✓ Enhancing teachers’ capabilities for ICT in education is based on national ICT policies

✓ e-Learning in teacher training became popular: 55.1% in 2009

✓ Development of training programs
  - According to teachers’ needs and career stages
  - Responding to the new education paradigm: web 2.0
  - Two separate tracks are developed for teachers and CEOs of primary and secondary schools

✓ Establish a comprehensive support system beyond support of individual national projects
  - National Teacher Training Information Service
  - Fostering supportive environment and self-directed efforts
감사합니다

Thank You