Direction of Teacher Policy on ICT in Education

JAPAN

October 22 (Tue.) 2013
Necessity to promote utilization of ICT in schools which are main places of learning with a view to enhancing education to bring up students with excellent ability to live in the 21st Century.

To enhance the ability to utilize information

Promotion of ICT utilization in school management

To enhance the skill for ICT literacy

Assistive ICT for Special needs school

Teacher professional development on ICT in Education
ICT in Educational Policy

The Second Basic Plan for the Promotion of Education
Cabinet decision on June 2013

【 Basic Strategy 】
Using ICT to create an education for the 21st Century

- Teaching classroom to the Collaborative working and Interactive learning
- Development of digital textbooks and contents for teaching
- Standardization of digital contents
- Improvements to the environment for ICT
- Improving the abilities of teachers to teach
## Basic Status of ICT in Education

### (main focus on infrastructure improvements)

<table>
<thead>
<tr>
<th>Metric</th>
<th>March. 2007</th>
<th>March. 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate of high-speed Internet connection (more than 30Mbps)</td>
<td>35.0%</td>
<td>71.3%</td>
</tr>
<tr>
<td>Rate of in-school LAN service</td>
<td>56.2%</td>
<td>83.6%</td>
</tr>
<tr>
<td>Number of student per computer</td>
<td>7.3 / Computer</td>
<td>6.6 / Computer</td>
</tr>
<tr>
<td>% of teachers who can give ICT instruction</td>
<td>52.6%</td>
<td>65.1%</td>
</tr>
</tbody>
</table>

### TARGET

**Completion of Second Plan for Promotion of Education**

- **2013 - 2017**
  - Generally 100%
  - 3.6 / Computer
  - Generally 100%
Aims of ICT in School Education

1) To nurture the ability to utilize information
   Promote information education for nurturing the ability to utilize information that could respond proactively to information society.

2) To cultivate academic abilities
   Cultivating academic abilities, including the ability to think and express well, as basic foundations by utilizing ICT in each subject.

Implementation of the current educational guidelines
(Primary 2011, Lower secondary 2012, Upper secondary 2013)

- Improvement of learning activities to utilize information and ICT in each subject.

- Compulsory Technology & Home Economics Courses “Technology of information processing” for lower secondary schools, and “Information” for upper secondary schools.
### Aims of ICT in the Course of Study -Educational Guidelines-

<table>
<thead>
<tr>
<th><strong>Elementary School</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Become familiarized with computers and use them appropriately, and information ethics in the period of integrated study and in each subject.</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th><strong>Lower Secondary School</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Make it possible to develop information ethics and actively use ICT in the period of integrated study and in each subject.</td>
</tr>
<tr>
<td>• Make “Technology of Information processing ” a compulsory course for Technology &amp; Home Economics in the Technology section</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Upper Secondary School</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Make it possible to develop information ethics and actively use ICT in the period of integrated study and in each subject.</td>
</tr>
<tr>
<td>• Choose one compulsory subject from general subjects: “Information Study for Participating Community” or “Information Study by Scientific”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Special needs schools (for the blind, deaf and otherwise disabled)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• According to the guidelines for elementary, secondary and high schools.</td>
</tr>
<tr>
<td>• Utilize ICT equipment such as computers according to the circumstances of the disability (Assistive Technology)</td>
</tr>
</tbody>
</table>
Promotion of ICT in Education

ICT in Education

Information Education

Effective use of ICT in classroom studies

Nurturing the ability to utilize information

Informatization of school affairs

Practical capability to utilize information

Scientific understanding of information

Attitude of willing toward participation in the information society

For achieving goals in various subjects

Reduction of teachers’ administrative burdens
Securing time to face children

Strategy 1
“Investigation of the ability to utilize information”
(October 2013 – January 2014)
The Situation of Investigation

H24年度予備調査において撮影
Strategy 1. Investigation of the ability to utilize information

● **AIM**

Measure to ability of practical capability to utilize information,

1. how to access, collect, select, process, organize, analyze, represent, decide, express and create required information by working toward solving problem and inquiry activities

2. understanding of attributes of the means of acquiring information, scientific perspective and concept related to information

3. understanding the roles, impact on social life, necessity information ethics and responsibility

4. through appropriately use ICT tools

● **Participant**

- **students**: elementary years 5 and lower secondary years 2 (years 8) computer based testing

- **teachers**: a teacher who is teaching their classroom survey teacher abilities to use ICT in classes effectively and to help student to use ICT efficiently (survey on paper by questionnaire)

- **principals**: environment for ICT, leadership etc..
Development of teaching methods using ICT, development of digital textbooks and verification of the effectiveness of education with ICT under the school environment where one student is provided with one computer and digital blackboard and wireless LAN is fully prepared.

Strategy 2. The Innovation in Learning (2011~2013)

Model Schools

- 10 Elementary Schools
- 8 Junior High Schools
- 2 Special Support Schools
## Contents development of the digital textbook

**Digital Textbook**

In addition to the contents of the paper textbook, digital textbook has scaling function of images, writing, marking function, video playback function, and other functions which are to contribute to better understanding of contents in the textbook.

## Preparation Schedule

<table>
<thead>
<tr>
<th>Year</th>
<th>Elementary School</th>
<th>Junior High School</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>Japanese • Mathematics (4th • 5th)</td>
<td>Japanese • Math (3rd • 6th)</td>
<td>Japanese • Math (3rd • 6th)</td>
</tr>
<tr>
<td></td>
<td>Foreign language (5th • 6th)</td>
<td>Society • Science (5th • 6th)</td>
<td>(4th • 5th)</td>
</tr>
<tr>
<td>2011</td>
<td>Society • Science (5th • 6th)</td>
<td>Japanese • Math (3rd • 6th)</td>
<td>(5th • 6th)</td>
</tr>
<tr>
<td></td>
<td>Japanese • Math • English (1st • 2nd)</td>
<td>Society (1st to 3rd)</td>
<td>(1st to 3rd)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Science (1st to 3rd)</td>
<td>(2nd • 6th)</td>
</tr>
<tr>
<td>2012</td>
<td>Society (1st to 3rd)</td>
<td>Japanese • Math (3rd • 6th)</td>
<td>(3rd • 4th)</td>
</tr>
<tr>
<td></td>
<td>Science (1st to 3rd)</td>
<td></td>
<td>(3rd • 4th)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Japanese • Math • English (3rd)</td>
<td>(3rd • 4th)</td>
</tr>
<tr>
<td>2013</td>
<td>Science • Society (3rd • 4th)</td>
<td></td>
<td>(3rd • 4th)</td>
</tr>
</tbody>
</table>
Strategy 3. Improving the Quality and Ability of teachers

Implementation of an information education leader's cultivation training
(Independent administrative agency “Teacher Training Center”)

● AIM
Carry out the training to train a person becoming a leader in each area to promote information education at school.

● Participant
- An inspector and the training person in charge in each Board of Education
- A principal, a vice-principal, and a teacher who is going to work as leaders such as a training lecturer in each area.

● Capacity  110 persons

Publication of the manual about ICT of the education

● AIM
Information education based on a new course of study should be carried out surely and smoothly, utilize ICT in the subject instruction and make a reference book for the teachers who commented on a concrete action about the computerization of school affairs.

● Publicity
Distribute a booklet to each Board of Education and school and publish it on the Web site.

Publication of the practice casebook

● AIM
Collect advanced practice examples about the education utilized ICT in each school and make a casebook.

● Publicity
Distribute a booklet to each Board of Education and publish it on the Web site.
Develops and provides digital materials which are useable by the class

**School Education Edition**
(Assumes that teachers use it by the class)

- Encompasses almost all of the units of High School, Junior High School and Elementary school.
- Processing is possible to a class freely (Right is treated)
- Such as of about 70,000 teachers nationwide to register
- Digital material of about 130 titles available free of charge (Approximately 50,000 of photographs and videos)

**General Release**
(Assume that a child uses it by home learning)

- Registration-free, Free of charge, Only for browsing
- The high recognition that is displayed the top in a word of "the science" by Google search
The essences for teachers of using ICT

- Active learning and Attention
- Basic and Barrier-free
- Collaboration and Case study
- Digital content and Date
- Efficiency and Experience