ICT impact on Education
Effective ICT utilization on lessons

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Outline

- ICT utilization among teachers in Japan
- Effective measurements toward teacher training.
- Case study 1
  - Effective ICT utilization in Classes and fieldworks.
- Case study 2
  - International Collaborative Project
- Result and Exploration
Teachers Computer Competence

Data collected Annually in March

- Operation
- Instruction
Teachers’ ICT Utilization Standard (MOE standard 07.2.19)

1. Ability to utilize ICT for preparation, evaluation, etc.
2. Ability to utilize ICT during lessons
3. Ability to instruct students to use ICT for learning
4. Ability to nourish information morals
5. Ability to utilize ICT for school affairs
Teaching Abilities for ICT Utilization in Education

- Checklist for K-12 schools -

A1 : Plan how and when to use PC/Internet
A2 : Utilize Internet or CD-ROM to collect materials
A3 : word-processing or presentation software to produce documents
A4 : Collect and manage students’ contents, learning status, achievements, using PC or digital cameras
B1 : Present materials effectively to students using PC or presentation equipment to encourage students interests
B2 : to grasp questions clearly
B3 : to explain for their easy understanding or deepen their thought
B4 : to fix their knowledge in arranging learned things

C1 : Teach students collecting/selecting information using PC or Internet
C2 : to write, and to produce tables/graphs, using software
C3 : to make presentation or expression using PC or presentation software
C4 : to utilize learning software or Internet for repeated learning/practicing

D1 : Teach students to communicate, having responsibility for their information and activities and taking into account of counterparts
D2 : to collect or send information, keeping rules/manners in information society
D3 : to understand information accuracy/safety and to utilize ICT taking care of their health
D4 : to acquire basic knowledge of information security, such as importance of password, and their and others’ information

E1 : Collect information for school affairs and class management and produce documents and materials using software
E2 : Exchange and share necessary information, utilizing Internet or school LAN, for closer cooperation among teachers, parents, communities
ICT Utilization for Education among teachers

Percentages shown below are the number of teachers who can do or can do to some extent.
ICT Utilization for Teacher Training

Integrate IT into Your Class

MEXT (The Ministry of Education, Culture, Sports, Science and Technology) offers a variety of support services to all school teachers to help integrate information technology into their classes. This site provides video clips which show classes in progress, demonstrating the effectiveness of IT for each subject.

Video Clip Selection

Points of Interest
The use of video clips that allows the students to appreciate the speech and movement of Kyogen provides them with a first hand experience of old Japanese thereby enabling them to familiarize themselves with old words and phrases.

Points of Interest
To show live feed from around the world broadcast through cameras on the Internet so that students can recognize themselves as a global citizen.

Points of Interest
The use of computer presentation software and projectors to visually demonstrate concepts that are difficult to grasp just from printed materials and blackboard instructions.
Effective ICT utilization in Classes.

- Physical Education, Horse Jumping Elementary
Effective ICT Utilization in the Fieldwork.

- ZOO –School
- Combination between active knowledge and school knowledge
- Can you hear? This heart beat 1 beat 2
- Sounds help students find something new while watching a live animal.
While watching a live Anumal
Aquarium and School

A coverage activities scene. This student selected the theme of “Body and Features of Dolphins” and the coverage was done in front of the glass tank for dolphins.
Places and contents of learning

- **Enrichment**
  - Facing the real world with the help of digital movies or audio to deepen understanding.

- **Experiential learning and class activities**
  - After getting information, students make reports with professionals’ help via the internet at school.
International Collaborative Project
World Youth Meeting

- Started in 1999 in Nagoya, Japan.
- The steering committee is constituted of 20 universities, schools, and overseas universities, schools.
- Participating countries. (Up to 2007)
  - Korea, Taiwan, Cambodia, Papua New Guinea, Philippines, Australia, China, Finland, Germany
framework for WYM

- **Pre event**
  Exchange files according to the theme
  Design questionnaires, self-introduction via movie files.

- **Event**
  Face to Face Joint Presentation as a collaborative product
  - They have to overcome cultural conflicts.

- **After Event**
  CD titles are created and shared by English Classes in participating countries.
Collaborative Presentation
Cambodia - Japan

Garbage problem in Angkor Wat area
High Schools
Japan-Korea session

日韓 梨花女子大付属高校
日本福祉大学付属高校
Model of 10 Years of Experience

- Home pages
- Mailing List
- Real time communication

Real time communication

File Exchanges
- Designing Questionnaire

Face to Face
- Home stay Program
- Joint Presentation

File Exchanges
- CD title
- For Efficient English Material

E-Learning pre-event stage
- Event
- After Event
- E-Learning
Supportive E-learning

“Enjoy Speaking” is aimed at acquiring basic English to communicate with overseas students.
“It is necessary to treat the” study activity” as an urgent issue in a broader framework.”

( Kubota,2000)

Forms of learning should be well designed.
Places and contents of learning regarding an International Project

- e-Learning
- Basic conversation, edutainment
- Classroom
- Group work for making and performing presentation
- Experiential learning
- Collaborative presentation with overseas participants
Analysis of the participating 51 students comparison of the pre and post event

- Did you have more chances to use English?  
  \( (t(50)=3.824,p<.001) \)
- Would you like to try making an English Presentation?  
  \( (t(50)=2.718,p<.001) \)
- Do you want to give an English presentations?  
  \( (t(50)=2.349,p<.001) \)
- Do you feel more confident in speaking English and in managing a project?  
  \( (t(50)=2.945,p<.001) \).
- Future English study
  almost 100 % of them answered that they think it necessary to study English every day.
    - 81 % of them answered that e-Learning was useful and helpful.
Results and Exploration

- According to the ICT fundamental, ICT utilization was enhanced.
- Teacher training was improved year by year.
- ICT is improving quality of learning.
- English presentation and computer education can be related to each other. (MEXT2000)
- It is necessary to design situations of different aspects such as study in a classroom, E-learning and ICP.
- It is crucial to treat “study activity” as an urgent issue with in broader framework.
Results and Exploration

- To set up the learning environment across border as 2-3 week international curriculum focusing on communication.

- This environment naturally help students to acquire computer skills and global friendship. New technology and broadband surely help them.

- To become get to know communicative aspects of English via the internet.

- To tackle the global issues, such as