

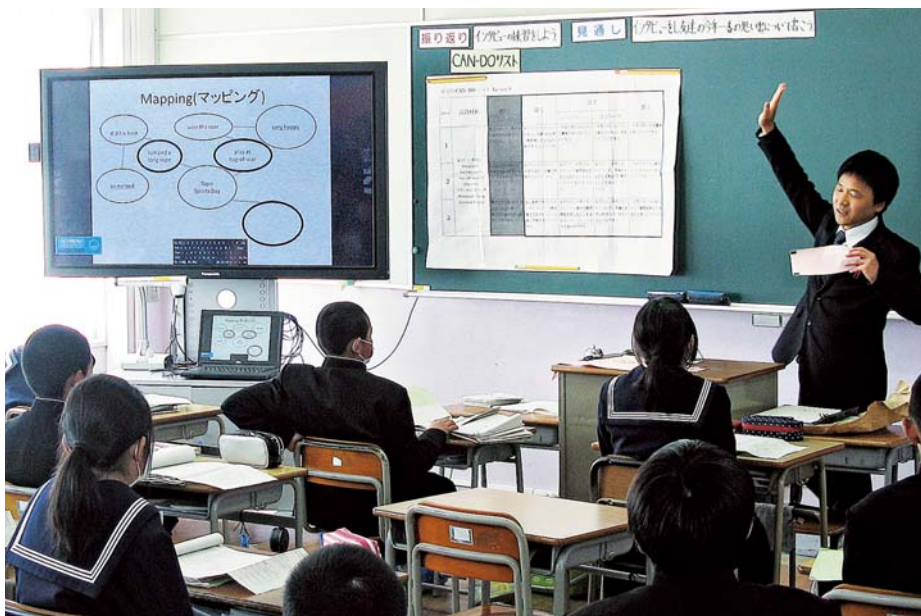
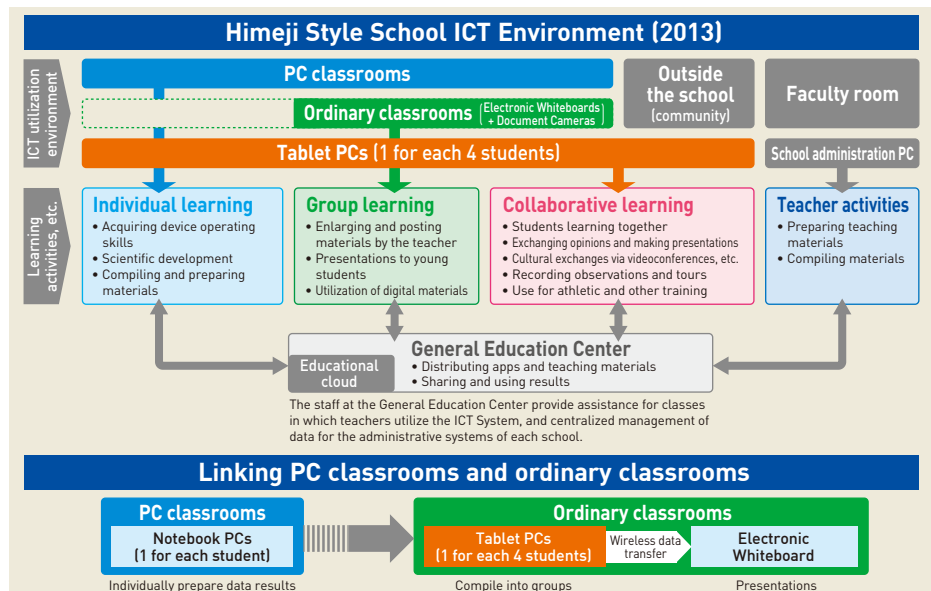
Electronic Whiteboards and Document Cameras are installed in all ordinary classrooms for elementary and junior high schools. Building the high-quality educational environment of Himeji City, utilizing the ICT System.

In 2008, the Himeji City Educational Committee established the "Creative Educational Program for Attractive Himeji," promoting original and unique educational innovation as represented by its integrated elementary and junior high school curriculum. As part of the program, it was decided to equip the ordinary classrooms in all 35 junior high schools in the city with ICT Systems in 2013. Panasonic 65-inch multi-touch screen displays were selected for use as Electronic Whiteboards.

Installation Details

Educational Innovation Launched for "Attractive City Development"

In accordance with the merging of four surrounding towns with Himeji City in March 2006, a General Plan for new city development and proposals for fundamental educational innovation were launched. Integrated education at elementary and junior high schools according to this "Creative Educational Program" then began with model schools. The program was implemented at all of the elementary and junior high schools of the city in 2011.



A sample lesson using the ICT System, which combines an Electronic Whiteboard with a Document Camera and PC. The junior high school uses a 65-inch display as an extension of the blackboard.

ICT Utilization Environment Linking PC Rooms with Ordinary Classrooms

In 1991, the Himeji City Educational Committee proceeded to equip all of the city's elementary schools with PC rooms, and apply IT systems to school administration, following the provision of PC classrooms to all junior high schools. In 2011, ICT Systems consisting of Panasonic large-screen TVs, touch-screen systems, and Document Cameras were installed in the ordinary classrooms of all 69 junior high schools in the city. This formed the basis for the "Himeji Style School ICT Environment" for lessons that linked the PC classrooms with ordinary classrooms.

Professional Display System Report

Vol.30

Himeji City Educational Committee

Hyogo, Japan

Date delivered: April, 2013

Reasons for Deciding to Install These Displays

High evaluation for the ICT System in junior high schools

The system is a highly effective addition to school education for a variety of reasons, including the following.

1. By utilizing the features of conventional blackboards, which enable written information to remain on the board, and the ICT System, which allows you to jot down information into enlarged teaching materials, it becomes possible to give "more understandable lessons."
2. Because it is easy to enlarge and display materials such as textbooks, the time required to create teaching materials is reduced. In addition to lessening the burden on teachers, it makes it possible to spend more time interacting with the students.
3. Enabling students to experience presentations based on a large-screen display improves expressive abilities.



Using the Electronic Whiteboard separate from a blackboard allows both to be used in combination. For example, the teaching materials on the Electronic Whiteboard can be marked while terms can be explained by writing them on the blackboard.

Installing the system in junior high schools enabled an effective, integrated elementary and junior high school curriculum.

In order to provide a seamless start for the integrated elementary and junior high school curriculum that began in 2011, it was necessary for the members of the Educational Committee to develop a framework to share information among the schools, and to maintain uniformity in the overall educational environment. To achieve this, the planning of an information promotion system was placed on the agenda for 2013 development operations.

In addition to installing ICT Systems based on Electronic Whiteboards in all of the ordinary classrooms of all the junior high schools in the city, it was decided to provide all elementary and junior high schools with tablet PCs to enable small-group (4-person) collaborative learning.

This resulted in the following:

- A "PC classroom" to provide individual studying with one PC for each student.
- Tablet PCs for use in group collaborative studies, opinion exchanges, and presentations.
- Ordinary classrooms throughout the city's elementary and junior high schools for easy-to-understand group study based on large-screen Electronic Whiteboards and Document Cameras. These facilities were also linked to establish a "Himeji Style School ICT Environment" for lesson use.
- The use of multi-touch screen displays allows immediate use at any desired time.



In this presentation, English sentences are enlarged and displayed. Himeji City students experience this kind of presentation frequently from the age of elementary school students, so it increases their self-expression capabilities.

Key Points in Selecting Displays for the ICT System

■ Capable of use at any time

It's important that the display be capable of immediate use whenever a class requires it. Because of this, a minimal requirement is that the display be permanently installed and comfortably used even in brightly lit classroom. Also, positioning and other settings for touch panel systems can be inconvenient, so it is important to select equipment that can be used at any time.

■ Ability to use the existing blackboard

Every teacher prefers a certain way of teaching, based on a distinctive style and a vast accumulation of knowhow. For this reason, a display that doesn't block the view of the blackboard was selected, thus allowing the blackboard and the ICT System to be used together.

■ Durability

Because the display is permanently installed in the classroom, it must be durable enough to withstand impacts from small children without breaking.

As a result, Panasonic multi-touch screen displays passing all of these criteria were selected. For the displays to be used in junior high schools, 65-inch models were chosen so they could be used as a natural extension of the existing blackboards.

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Example of Use in Class

Its ability for instant use makes the Electronic Whiteboard suitable for various classroom activities.

Compared with elementary schools, where the same teacher presents all of the teaching materials, the teachers change for each subject in junior high school. In this situation, it is highly advantageous to have the same equipment in every classroom. Himeji Municipal Toko Junior High School uses ICT Systems based on Electronic Whiteboards throughout the school.

1. Textbooks and other teaching materials are enlarged and displayed

Textbooks and other teaching materials are recorded by Document Cameras, and then enlarged and displayed on the Electronic Whiteboard. Classes proceed with the teacher marking important points on the Electronic Whiteboard. This clearly shows key points to the students.

2. Student projects are displayed for presentations

Student documents are displayed on the Electronic Whiteboard by a Document Camera for presentations.



Lessons using original videos produced by the teacher are very effective for increasing the students' interest.

Since this can be done immediately, without advanced preparation, many students are given the opportunity to make a presentation. The teacher can write onto the screen to explain various points, allowing the entire class to learn from the presentations.

3. Lessons use new teaching materials, such as videos and digital textbooks

The installation of this system has made it easy to play videos. For example, by playing an English conversation video on the Electronic Whiteboard, tenses such as progressive and past tense can be taught in an easy-to-understand



The installation of Electronic Whiteboards has enabled the use of digital textbooks. Unlike previous textbooks, they contain a variety of content, such as video and audio, so classes can have deeper, denser themes.

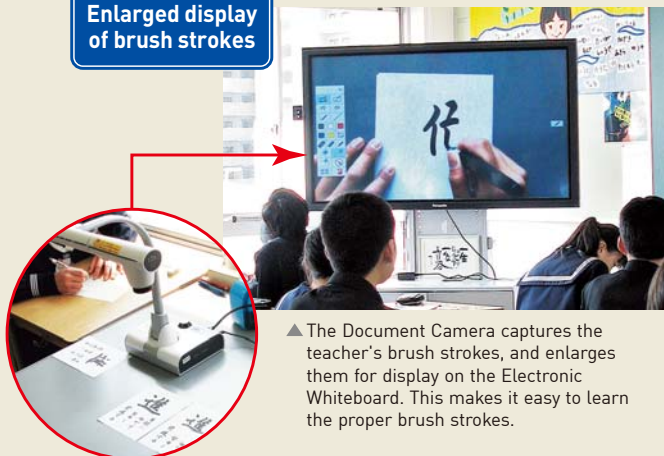
manner. And videos are an excellent way to catch and hold the students' interest. The use of digital textbooks is also increasing. Since digital textbooks also contain video and audio content, they are able to give classes greater depth than conventional textbooks.

4. Document Cameras can enlarge and display a variety of materials

Document Cameras can also be used for materials other than flat documents. For example, the teacher can show examples of writing with a brush, or equipment for scientific experiments can be recorded by the Document Camera and displayed on the Electronic Whiteboard so the whole class can see it.

Example of Linking an Electronic Whiteboard and Document Camera

Enlarged display of brush strokes



▲ The Document Camera captures the teacher's brush strokes, and enlarges them for display on the Electronic Whiteboard. This makes it easy to learn the proper brush strokes.

Enlarged display of experiments



▲ Experiments are captured by the Document Camera and enlarged for display on the Electronic Whiteboard. It is possible to write directly onto the screen to emphasize important points.

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Examples of Classes Using the ICT System

■ Physical education classes using tablet PCs

The students' movements are recorded using a tablet PC, and then played on the Electronic Whiteboard back in the classroom. While watching their own images on the large screen, which is something that they cannot normally do, they are able to check their own movements.

■ Group work linking the PC classroom with tablet PCs

With the Himeji Style School ICT Environment, students can create their own work (with individual guidance) in the PC classroom, where there is one notebook PC for each student. Then, in an ordinary classroom, where groups of 4 students are provided with one tablet PC, they can proceed with collaborative learning and give presentations on the Electronic Whiteboard (group learning). In this way, a learning environment has been

achieved that utilizes the features of each ICT device.

■ Collaborative classes that network schools

School administration systems installed in the city are equipped with videoconference functions that can be connected to elementary and junior high schools. Using the Document Cameras that are permanently installed in each classroom as a web camera, collaborative classes are possible between distant schools. For example, remote classes can be held with a native-language-speaking ALT (Assistant Language Teacher.)

■ Using the Internet in class

The Electronic Whiteboard is also able to display Internet screens. This makes it possible to create an overseas atmosphere for English-language classes, providing lifelike teaching materials.

After Installation

Introduction of the ICT System increased the attraction of the city, and prevented the loss of students.

- Teachers are able to use the system on a daily basis, without being concerned with operating methods.
- Classes are easy combining blackboards and Electronic Whiteboards.
- Since the system was installed school-wide, all of the teachers take an active role in system utilization.
- A network can be established between schools. The effect of "integrated elementary and junior high schools" on education is increased.

As a result, there are some examples of people who are transferred to Himeji for work to move there permanently because of the quality of educational ICT, which also helps to activate the community.

Students have become more interested in classes. Teacher awareness has increased. The ICT System encourages both of these advantages.

Introduction of the ICT System has made it possible to create classes that hold the students' interest.

The system has been introduced in all classes, so the teachers are more interested in actively using it.

Classes are easier to understand, and all class members can easily share the system.

The Electronic Whiteboard withstands impacts if someone should accidentally strike it.

Profile of Himeji Municipal Toko Junior High School



ICT System Effects Are Recognized by Parents and Guardians

Himeji Municipal Toko Junior High School was established in 1947. A Parents and Guardians Questionnaire conducted each year includes the question, "Are classes fun and easy for the students to understand?" Replies of "Yes, they are" have increased from 53% (in 2012) prior to introducing the ICT System to 69% in 2014. This clearly shows the effect of introducing and using the ICT System.