

Interactive Whiteboards in Japanese Education

Gordon Liversidge¹

Abstract. The use of interactive whiteboards (IWBs) is widespread in the United Kingdom, Australia, and to some extent in the United States and Canada. However, this potentially learning enhancing technology has been adopted very little in Japan at any level of education, apart from some international schools. Furthermore, one of the world's two leading IWB manufacturers has recently closed their Japan office. This paper examines cultural issues and reports of fieldwork mainly from within Japan, but also from Australia, and Thailand. The overall conclusion is that the main factor is the very different philosophy of education.

Keywords: interactive whiteboards, compatibility, iPad, reflective practice.

1. Introduction

Shimizu (2006) revealed his concern about interactive whiteboards: “Our country aims to be one of the world’s leading IT nations, but has made little progress in embracing it in education” (p. ii). Almost ten years later the number of IWBs in use in educational institutions is still less than one per school or university. This is well below the number of boards necessary to get the take-off or to the tipping point necessary to achieve the learning rewards for the cost and effort invested in installation and training. This poor usage has prompted one of the two world’s main manufacturers, SmartBoard, to recently close their Tokyo office and withdraw from Japan.

The IWBs and other interactive technologies are not necessarily a panacea. However, if used well with the correct kind of support, IWBs can be a very important part of the curriculum framework, as they are in the UK education system and some international schools. In 2006, spending a year at London University’s

1. Otsuma Women’s University, Tokyo, Japan; gordon@otsuma.ac.jp

Institute of Education many, not familiar with Japan, were surprised to discover that technologies developed in Japan were often not used in education (Liversidge, 2007).

Although the leading IWBs are not Japanese, the following study sought to re-examine the reasons for the lack of use of IWBs. Thailand was included because of certain cultural and historical similarities to Japan, especially that it was the only East Asian country, other than Japan, which did not come under Western colonial domination in the 19th century.

2. Method

Visits were made to observe classes in international schools in Tokyo in 2010 and 2013, Canberra and Melbourne in Australia in 2011, and schools and universities in Bangkok and Chiang Mai, Thailand in spring 2013. Information technology (IT) and information and communication technology (ICT) directors, principals and teachers were also interviewed. Full-time faculty at fifteen universities in Tokyo were interviewed, and visits were made to media and IT centres. Consultations were held with both SmartBoard and Promethean at their Tokyo offices, and representatives were invited to universities to demonstrate their products, both to faculties and administrations.

3. Results

Some of the international schools in Tokyo and Bangkok were outstanding examples of how a technology should be blended into and become an integrated part of the curriculum. Usually teachers used the IWBs at the beginning of classes, especially to introduce new topics. Students were encouraged to gather close to the IWBs and participate with questions, discussion and actually writing on or touching the IWBs. The teachers could access materials from the school server or the Internet. Two schools followed the prescribed Japanese curriculum but had gathered a large data base of materials from which activities and lesson plans were developed and stored on the institutions' servers. This enabled the schools to teach these subjects in English.

In universities, the number of IWBs is exceedingly low. Most lecturers or teachers, even non-Japanese, have never seen or used one. In the case of larger universities, the fragmentation of faculties means that people do not know what is happening elsewhere. Media centres knew of IWBs but said that attempts to encourage faculty staff to use them had failed.

The SmartBoard and Promethean offices were helpful in providing information as to where their boards were being used. In the case of one well-known university in Tokyo with sixty thousand students, the only IWB was to be found in the rugby club's office, presumably because it allowed the manager, coach and players to save diagrams of formations and tactics. The internationally highly-ranked universities in Bangkok and Chiang Mai also had almost no IWBs.

4. Discussion

4.1. Technical

In Japanese schools, the number of students ranges from around thirty in primary education classes, to up to as many as fifty in high school classes. Moving desks, so students can all be closer or nearer to the front of the class, does not happen very often. So, even with the ever increasing quality of IWBs and their projection systems, at times it is difficult for all the students to see the screen.

Compatibility issues are no longer the problem they used to be. [Betcher and Lee \(2009\)](#) in discussing software stated that “While there is limited compatibility between brands, the value of this online community should be a major factor in any evaluation of an IWB product” (p. 34). However, software has now been developed that enables teachers to move materials between SmartBoard and Promethean and other brands. There are also interactive monitors ‘TV whiteboards’ which are non-proprietary in that they will run using any software Mac, PC, or Linux, not just IWB software. As such they may lessen the need for IWBs. iPads and other tablets have attractiveness in that they are easy to use, and students can now interact with computers and the projector using Wi-Fi, again weakening arguments for the use of IWBs. Some schools in Thailand and Australia now provide students with iPads, and have decided against installing IWBs.

New short-throw projectors provide full-touch interactivity when projected onto a normal wall or standard whiteboard. This again renders some of the special functions of IWBs as unnecessary. With technologies changing so rapidly, it appears that it will be more difficult to persuade administrations to install a large number of IWBs.

4.2. Financial

It can be argued that the slowness of spread of IWBs in Japan is simply because there was, and still is, not enough profit for Japanese companies and other vested

interests. Japanese companies do make IWBs but only have a very small market share. The two world leaders are Canadian and British companies. They have the systems that allow teachers to post, share, access, and adapt materials.

A second reason why IWBs have not spread is that they were really the first electronic instructional technology designed primarily for use by teachers. Other electronic technologies such as film, radio, television or personal computers, were first designed for the general consumer or offices, and then adapted for use in education. So there was no existing primary market for products for which educational institutions become a secondary market.

4.3. Philosophy

When discussing the potential of IWBs, [Liversidge \(2010\)](#) states that “For teachers and lecturers, most important are ease of use of the technical aspects, reliable and learnable software, support from the producers, and access to good materials with an online community” (p. 30). Generally speaking, teachers and lecturers, especially at the university level are very reluctant to share materials, discuss how courses are proceeding and what worked or did not work. Furthermore, ‘reflective’ practice, the closest translation of which is ‘hanseiteki na’ in Japanese implies a negative criticism. The constructive analysis of reflective practice and sharing and discussion is not encouraged within the teaching environment. Institutions also do not see any reason to provide or allow time for it. Thus, one of the core strengths of IWBs of sharing and collaborating does not occur often within or across Japanese educational institutions.

In junior and senior high schools where IWBs are used, the methodology used is ‘lecture and explain’, often not even asking or allowing opportunities for questions. The purpose of the methods used is directed at passing the entrance examinations. Despite the criticism, there are many capable Japanese teachers. However, they are restricted by having to keep on the entrance exams which have multiple-choice or select an item type questions. This does not allow or encourage participation or presentation on topics where in the classroom IWBs would be an invaluable tool.

5. Conclusion

Using the interactive whiteboard as a computer screen in a class or lecture allows the teacher and also the student to be at the front of the class, while taking full advantage of all the multimedia available. At the university level in Japan, it seems unlikely that IWBs will be adopted on a large scale. The most sensible and

productive approach would be to install some IWBs in smaller rooms for content courses and seminars.

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