Chapter 31

Learning in the Primary School Classroom using the Interactive Whiteboard

Damian Maher
University of Technology, Sydney, Australia

ABSTRACT

The Interactive Whiteboard (IWB) is a recent innovation and with it has come a renewed discussion of the nature of interactions in the primary school classroom. In this chapter the interactive affordances of the IWB, where users can physically manipulate two-dimensional objects on the board, are discussed. In focusing on this aspect, the types of resources used via the board are examined as are the multimodal features. In considering the nature of interactions between participants whilst using the IWB, interactions between teachers and students and between students and students are discussed. There is a focus on the ability for the IWB to support dialogic interactions in a more student-centered classroom. In examining interactions through the IWB, the way boards can be used to connect students to content, such as Web sites, is explored. In focusing on interactions with other participants the use of video conferencing is discussed.

INTRODUCTION

Over the last decade, the Interactive Whiteboard (IWB), which is classified as an interactive whole-class technology, has become increasingly common in many classrooms in the developed world. The use of the IWB impacts on the level of interactivity that occurs in the classroom. This notion of interactivity can be considered in a number of different ways.

First, there is interactivity of the board, where students and teachers are able to physically manipulate two dimensional representations of objects. Secondly is the interactivity of participants in the classroom when using the IWB. Here interactions can be between teachers-to-students and students-

to-students. Lastly, there are interactions of content and people which can be mediated via the boards. This level of interactivity includes access to web sites as well as to students and experts via video conferencing technologies.

This chapter focuses on primary school class-rooms where the IWB has been incorporated into learning and how the IWB can be used to support interactivity. In focusing on interactivity, research is drawn on that has been conducted by the author as well as the research of others.

BACKGROUND

The first IWB were produced and sold for use in the business world. By the late 1990s the educational uses of the boards were realised and they started to be installed in some classrooms. It was not until the turn of the century that the IWB made large inroads into the classroom; this was due in part to affordability. For example, in the UK the sales of IWBs rose over 3 years from 27 375 to 99 848 in 2005 (Futuresource, 2009) and now has 70% of classrooms installed with IWBs. Denmark and the Netherlands have 40-42% of their classrooms installed with IWBs whilst Australia, the USA, Mexico and Ireland have just under 30% (Lee, 2010).

Along with the affordability of the IWBs, another important factor in the rapid uptake of the IWBs was the acceptance by teachers as pointed out by British Educational Communications and Technology Agency (BECTA) (2007):

This sharp rise in the use of ICT resources in the curriculum has been driven to a large extent by the adoption of Interactive Whiteboards (IWBs) and related technologies. Interactive whiteboards are a popular technology, in heavy demand by schools and practitioners. They offer transparent benefits to learning and teaching. That is, it is easy for institutions and teachers to recognise how IWBs enrich and enhance learning and

teaching, something which may not always be so immediately transparent to practitioners in the case of other technologies. (p. 66)

Another reason for the uptake in counties like Australia is the large support received from parents in schools who fund many of the boards.

What is the IWB and What does it Do?

BECTA defines an IWB as "a large, touch-sensitive board which is connected to a digital projector and a computer. The projector displays the image from the computer screen on the board. The computer can then be controlled by touching the board, either directly or with a special pen" (2003). The board is multipurpose as it can be used in a similar way to a whiteboard and serves as a screen projector, a sound system, and a visualiser, to name only a few of the functions. The board, via the computer can connect to writing tools like Word and through the use a keyboard, allows writing to be constructed in a whole class or group setting.

The interactive aspect of the board means that participants can use pens or with some boards their fingers to manipulate objects on the board. Lessons can be downloaded from the internet which can then be used in their original form or be modified to suit the needs of the teacher and students. Lessons can also be created from scratch.

Originally, only one person could use the board at any one time. New IWBs are now being produced that allows two and three users to interact with the board together which creates new opportunities for both whole class and group work.

INTERACTIVITY OF THE BOARD

The IWB comes with a range of inbuilt tools that allow users to interact with them in a number of different ways. The board has many of the func-

11 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/learning-in-the-primary-school-classroom-using-the-interactive-whiteboard/88170

Related Content

The Effects of Technology Integration in the Classroom for Students With ADHD
Aleen Kojayan, Aubrey L. C. Stattiand Kelly M. Torres (2021). *International Journal of Curriculum Development and Learning Measurement (pp. 1-10).*
www.irma-international.org/article/the-effects-of-technology-integration-in-the-classroom-for-students-with-adhd/269744

Delphi Technique in the Development of Emerging Contents in High School Science Curriculum
Michael Bobias Cahapay (2020). *International Journal of Curriculum Development and Learning Measurement (pp. 1-9).*
www.irma-international.org/article/delphi-technique-in-the-development-of-emerging-contents-in-high-school-science-curriculum/260744

Integrated Technology for Culturally Competent Communication in Urban Schools
Maura Wechsler Linasand Joan E. Aitken (2014). *K-12 Education: Concepts, Methodologies, Tools, and Applications (pp. 27-40).*
www.irma-international.org/chapter/integrated-technology-for-culturally-competent-communication-in-urban-schools/88140

Efficiency of Indigenous and Intercultural Higher Education and Research Programs: The Case of the Autonomous Indigenous University of Mexico
José G. Vargas-Hernándezand Ernesto Guerra-García (2021). *International Journal of Curriculum Development and Learning Measurement (pp. 29-44).*
www.irma-international.org/article/efficiency-of-indigenous-and-intercultural-higher-education-and-research-programs/285979

What Matters?: A Case Study of Primary School Teachers' Perspectives on Transition to School
Aihua Hu (2021). *Supporting Children's Well-Being During Early Childhood Transition to School (pp. 205-221).*
www.irma-international.org/chapter/what-matters/262412