

Chapter 3.7

Interactive Whiteboards in the Web 2.0 Classroom

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ABSTRACT

This chapter summarizes the work underway to chart, critically evaluate, and systematize the introduction of interactive whiteboards (IWB) into modern foreign language classrooms in England. It is suggested that there is a developmental cycle whereby teachers take some time to understand the technology and become competent in its use. They then look to its advantages in presentation and the motivation of students before becoming aware of its pedagogical value and develop a changed classroom practice. This cycle is based upon enhanced teacher understanding of the nature of interactivity and the potential offered by the IWB in meeting a variety of learning needs. The relationship between IWB use and Web 2.0 arises from the potential of both to add impetus for teachers to structure lesson development and enhance activity. It is supported by teacher understanding of

questioning techniques, and increasingly, by consideration of the use of gestures at the IWB. While IWBs are not a solution to all learning problems, it is suggested that they offers scope for greater student involvement and understanding in the learning process.

INTRODUCTION

The interactive whiteboard (IWB) is part of the growing variety of equipment used in conjunction with a computer and data projector to incorporate software, Internet links and data equipment for whole class use. Increasingly schools are equipping each subject area, and in many cases every classroom, with an interactive whiteboard to supplement or replace traditional white or blackboards. This is happening in many parts of the world, for example in Mexico there has been a focus on IWB installation and use, wherever possible, to ensure that the full potential of the equipment and associated software can underpin quality lessons to be taught on the widest possible scale. This shows a fundamental belief that IWB technology and pedagogy can make

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a difference across a range of subjects (Hennessey, Wishart & Whitelock, 2007; Belli, 2005; McFarlane, 2005). Research shows that this may be true for certain young people and for a period of time but that fundamental changes promoting continued educational achievement are only possible where teachers recognize the significance of the word “interactive” and develop their approaches to teaching to promote this. Such approaches are concerned with driving student involvement and increasing understanding. They are based on the recognition of students’ differing learning needs in order to ensure conceptual understanding and cognitive development (Armstrong et al., 2005; Hall & Higgins, 2005; Kent, 2006; Smith et al., 2005; Sturcke, 2004; Jones, 2004).

Glover and Miller (2003) have traced the pattern of increasing use in terms of the influence of “missioners, tentatives and luddites” within schools. More importantly they have demonstrated that teachers need to be helped through a three-stage development process so that they can move from traditional to increasingly more interactive approaches, specified as:

- a. *Supported didactic*, where the teacher makes some use of the IWB but only as a visual support to the lesson and not as integral to conceptual development.
- b. *Interactive*, where the teacher makes some use of the potential of the IWB to stimulate student responses from time to time in the lesson and to demonstrate some concepts.
- c. *Enhanced interactivity*, where the teacher develops the materials so that the students focus upon the IWB as a means of prompting, explaining, developing and testing concepts for most of the lesson.

It is only at the third stage that the potential of the board as the focus of learning based upon a new understanding of the learning process, is recognized and realized by the teacher (Miller & Glover, 2004; Ziolkowski, 2004; Watson, 2006).

The capacity to use the equipment in this way is dependent upon both technical fluency in the use of the equipment and associated software, and pedagogic understanding and flexibility to exploit the possibility of interactivity between teacher and student, and student and student. To achieve this has much in common with the educational development of all ICT and reflects a move, whether recognized or not, to the use of the Web 2.0 platform (Belshaw, 2007). Web 2.0 is here understood to be related to a focus on learning through concentration on multimedia use, age and ability linked group and individualized learning, and an awareness of variations in personal learning styles (Xhakli, 2008). This brings with it a change of emphasis from the teacher centered transmissive approach to learning to one characterized by interactivity, collaboration, user-generated content and immediacy of feedback. This is based on short attention switches from the teacher to the IWB as a mediating agency allowing access to other ICT technology within the classroom.

In a sense the IWB presents a new meta-language for classroom use. It certainly has developed its own vocabulary, which offers new technical terms. These become part of the basic language from initial training sessions with phrases such as “calibration,” “drag and drop,” and “hide and reveal” being early concepts for the user to understand. With the use of the interactive potential, phrases such as “virtual manipulatives” (Weiss, 2005) signify understanding of both process and pedagogic possibility, and as the integration of technology and pedagogy becomes better understood teachers and learners become aware of associated words from subject specific areas such as “the use of artifacts,” which in both mathematics and modern languages has its own significance within the IWB focused classroom.

Language, however, is more than vocabulary, and IWB users become aware of the use of intonation, whereby the same word or phrase used in a different way signifies another meaning. This can be illustrated by considering the word “interac-

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