Chapter XXVI
The Pedagogical Potential of Interactive Whiteboards 2.0

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ABSTRACT

The first part of this chapter discusses the transformative potential of Interactive Whiteboards (IWBs), by analyzing the opportunities of using this technology in conjunction with Web 2.0 tools to support constructivist practice in the language classroom. The second part draws upon research data and literature review results to examine the role played by teachers in the realization of this potential. A special focus has been placed on the various evolutionary stages that teachers go through as they integrate IWB technology into their teaching. The research data derives from a case study conducted with nine English teachers from a secondary school in Germany. The study was conducted within an interpretative research paradigm, and data were collected via qualitative research instruments, namely interviews, classroom observations and the video recording of one IWB training session. Research findings revealed that the teachers investigated were gradually becoming aware of the transformative potential of IWB technology.

INTRODUCTION

The creative and transformative potential of new technologies has been widely discussed in the literature (Hubbard & Levy, 2006; King, 2002). One of the claims that have been made is that new technologies create new opportunities for the implementation of a constructivist-based learning environment, in which learning is seen as an active process of knowledge construction through interaction (Vygotsky, 1978). From the teachers’ perspective, it has been pointed out that access and use of technology can help teachers to rethink their practices and, in doing so, may lead to a professional development that goes beyond the acquisition of new skills and knowledge about the technology (King, 2002; Meskill et al, 2007).
This chapter discusses the transformative potential of interactive whiteboard (IWB) technology by considering two main factors: a) the role played by teachers in the realization of this potential and b) the IWB applications that create new opportunities for transformative learning. The main focus will be on how IWB technology and WEB 2.0 tools can be combined to support constructivist practice in the language classroom. The term “IWB 2.0” (Wenger, 2007) has already been coined to describe the possibilities of melding IWB technology with Web 2.0 tools. However, there is a need for more extensive discussion of how this could be done in practice.

**INTERACTIVE WHITEBOARD TECHNOLOGY FEATURES**

An IWB is basically a surface onto which a computer screen can be displayed via a projector. It is touch-sensitive, which means that all applications on the computer can be controlled by touching the board, either with your finger or with an electronic pen/stylus. Through interaction with whiteboard, the users can change the displayed information on the computer and save them for later use. In other words, the IWB with its projection capability and touch-sensitive feature facilitates interaction with a computer in the classroom in a similar way as known from blackboards. Many different brands of IWB are currently available. Some examples are: Activboard (Promethean), Smartboard (Smart) and Starboard (Hitachi).

Most IWBs are supplied with specific software tools to exploit the potential of the board. This software enables the use of “electronic flipcharts,” which are blank pages for creating teaching materials. Pages can be turned backwards and forwards. The number of pages that can be used is unlimited. By making use of the software, the teacher has access to various tools which enable several activities, such as: handwriting, colouring, highlighting, dragging and dropping, hiding and revealing, handwriting recognition, web browsing, creating snapshots, designing interactive exercises and so on. IWBs can also be used to present and control other software, for example, any teaching application, Web browsers with all related tools or video applications.

IWBs are often used in conjunction with remote devices, such as graphic slates and learner response systems (voting systems), which help to enhance the scope of pupils’ participation and

*Figure 1. One of the researchers using the interactive whiteboard during a workshop session*