

# Chapter V

## Interactive Whiteboards and the Normalisation of CALL

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### ABSTRACT

*This chapter discusses the concept of integrated CALL by drawing upon data collected for a PhD research project that investigated the impact of interactive whiteboard (IWB) technology in the English language classroom. In the first part, the chapter presents and discusses data which indicate that the IWB technology represents a further step towards the integrated phase in the development of CALL envisioned by Bax (2003). According to Bax, this refers to the stage when the computer becomes invisible, embedded in the everyday practices of the educational context in which it is used—that is, the computer becomes normalized. In the second part, the chapter discusses one factor that inhibited the complete normalization of IWB technology in the context investigated. The chapter concludes by making suggestions for further research.*

### INTRODUCTION

Several authors who have attempted to analyze and understand the history of CALL (Levy, 1997; Warschauer & Healey, 1998; Bax, 2003) have pointed out that CALL has developed in various ways over time. Thus, in the 1960s, computers tended to be used for pattern practice drills, based on a behaviorist learning model which assumed that students learn through imitation and repetition. Later on, in the 1970s and 1980s,

CALL software began to be based on cognitive approaches to communicative language teaching aimed at allowing learners maximum opportunity to be exposed to the target language in a meaningful context so that they could construct their own individual knowledge. Some examples of CALL software in that era included text reconstruction programs and simulations. More recently, advances in technology, the expansion of the Internet, and the increase in computer-mediated communication (CMC) have changed the way in

which computers are used in language learning. Thus, in the 1990s, these developments, combined with a new socio-cognitive view of communicative teaching, which placed greater emphasis on language use in authentic social contexts, contributed to a shift from a focus on learners' interaction with computers to one concerned with learners interacting with other humans via the computer.

More recently, Bax (2003) made an important contribution to the analysis of the history of CALL by proposing the concept of Integrated CALL. According to him, "this refers to the stage when the technology becomes invisible, embedded in everyday practice" (p. 23). In fact, anecdotal evidence indicates that it would not be erroneous to say that teachers who make use of computer technology long for the day when computers are so integrated in all aspects of classroom life that they can go almost unnoticed, vs. the current situation where they are usually relatively obtrusive, involve specialized training, and so on. Bax (2003) sees CALL in relation to other technologies in society and stresses the possibility that computers may only become fully effective in language teaching and learning when they have become normalized.

Bax (2003) also highlights that only the use of ICT (information and communication technology) in the language classroom would not be enough to normalize ICT in that context. In order for this to happen, teachers and learners would need to feel comfortable enough with the technology and use it as an integral part of the teaching/learning process, "without fear or inhibition, and equally without an exaggerated respect for what it can do" (p.12). Therefore, before reaching the stage of normalization, teachers and learners need to go through a complex process of technology integration in which they need to adapt to new ways of teaching and learning. This usually involves conflicts and challenges, which if not dealt with probably might inhibit normalization of new technologies in that specific context.

Chambers and Bax (2006) point out that one of the barriers to the normalization of CALL is the fact that computers are usually located in dedicated computer suites, which are not "owned" by the teachers and are not readily accessible by them. Countries such as the UK and Australia have tackled this problem by equipping classrooms with IWB (interactive whiteboard) technology. This is a relatively new technology in education, which has been used in many education institutions all over the world as a tool to bring the functionality of the computer into the regular classroom.

The IWB is a touch-sensitive electronic presentation device. Fully functioning interactive whiteboards usually comprise four components: a computer, a projector, appropriate software, and the display panel, which is a large free-standing or wall-mounted screen up to 2 meters by 1 meter in size. Figure 1 illustrates how this technology works.

The Promethean™ system (the brand of IWB that will be used in this research) uses electromagnetic sensing technology with an electronic pen. The company has also developed a whole suite of software and peripheral hardware to complement the use of an interactive whiteboard, such as "ACTIVstudio" software and the "ACTIVslate"<sup>1</sup> and "ACTIVote" systems.<sup>2</sup>

The first interactive whiteboard was manufactured by SMART Technologies Inc. in 1991. Since the early '90s, classroom adoption of IWB technology has grown steadily in many European countries and throughout North America, and it is becoming increasingly commonplace in educational institutions, from primary schools through universities. The UK was the first school-level market to substantially invest in the use of IWBs. There has been a considerable investment in the installation of IWBs in schools in that country. The percentage of primary schools with IWBs increased from 48% in 2003 to 63% in 2004, and secondary schools from 82% in 2003 to 92% in 2004 (DfES, 2004). In 2005, the UK government allocated £50 million for the purchase of

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