# Chapter 15 Technological Trends in Adult Education: Past, Present and in the Future

John K. Hope

University of Auckland, New Zealand

## **ABSTRACT**

The purpose of this article is to provide a critical review of the past two decades of technology use in adult education. The article begins with a brief summary of technological trends, such as the introduction of the Internet and the World Wide Web, that have influenced adult education over the past two decades. Political, economic, social, and pedagogical issues that have influenced the use of technology in adult education are also discussed and possible solutions to these issues are outlined. The article concludes with an attempt to extrapolate future technological trends that could influence the direction of adult education in the decade to come.

#### INTRODUCTION

Knowles 1970s prediction that adult education would be delivered electronically in the 21<sup>st</sup> century has proved spectacularly accurate. Thirty years later potential adult learners have a bewildering plethora of electronic delivery options available at the touch of a keyboard. Almost all adult educators use distance technology in one form or another and most are either involved with electronic delivery systems, or are contemplating

such. Yettraditional face-to-face delivery methods survive alongside the new technological innovations and are likely to continue in the foreseeable future. Just as the invention of the computer and, more latterly, the widespread availability of the Internet, changed the face of the adult education at the end of the 20<sup>th</sup> century, recent dramatic changes in the political, social, educational and economic systems of the world could stimulate new trends in adult education that will once again change its visible face in directions that as yet,

we know not. This article attempts to analyse the past and extrapolate technological trends that will help us plan for an exciting but, uncertain, future in adult education.

### **BACKGROUND**

At the time of completing this article in early 2009, the last two decades encompassed the period from the late 1980s until the present. What significant technological developments influenced adult education during that that time?

Use of new technology (reading glasses) in adult education is mentioned in one of the first recorded books devoted to adult education, that of Thomas Pole who wrote of his 1811 experiences teaching adults to read in England, "when their (adults) attention is gained and fixed, they soon learn: their age makes no great difference, if they are able, by the help of glasses, to see the letters" (Pole, 1968, p. 3). We now jump several generations of technological development in adult education, such as the postal system and ballpoint pen, to the 1980s when most readers of this book will have been involved with education in some form, as either student or teacher. It is likely that most adult educators would recall that use of educational technology in the form of a computer was minimal, being confined to a small group of "early adopters" (Jones, Kirkup, & Kirkwood, 1993) who had access to mainframe computers, or very early purchasers of desktop personal computers mainly used for word processing.

In the late 1980s most adult education was hard copy print based (Bates, 1993). Some institutions were experimenting with live audio and video technology (Isenberg, 2007), television (Bates, 1993) and institutions such as Jutland Open University in Denmark investing hugely in teleconferencing (Jones et al., 1993), but these institutions were the exception rather than the rule (Moore, 1995). Over the last one hundred and seventy years since the recorded inception

of adult education, technological innovation was generally limited to print innovations. In 1981 the IBM PC arrived (Olle, 2004), allowing the decentralisation of computer terminals linked to mainframe computers to stand-alone desktop devices. The widespread and extremely rapid of uptake of personal computers in the 1980s and 1990s (Kodama, 2008) was one of the most significant technological developments of that period. Most adult learners, being by definition more mature learners rather than younger computer whiz kids, were not the earliest adopters of the new computer technological aids but the convenience of simplified editing of written text on a personal computer, available in the home, led to rapid growth in computer use by both adult learners and their teachers.

The enhanced convenience of a less significant but, still important technological leap, the invention and mass marketing of the laptop computer, was not lost on adult students either. First developed for the space shuttle programme in 1979 but not mass marketed until Compag launched their laptop in 1988 and Apple launched the first Mac laptop in 1989 (Roseberry, n.d.), the laptop is today the computing tool of first choice for people on the move. By its portable nature, the laptop computer helped bring home, workplace and tertiary institution together rather than having students limited to using computer laboratories in tertiary institutions. Writing associated with an adult learning programme could continue regardless of location, a major incentive for busy adult learners to trying to pursue their education while working and running a family. Intensive expansion and innovation in adult education e-learning through the late 1980s and 1990s was the result of the PC and later laptop introduction, leading to a subtle but profound paradigm shift in not only the design and delivery of education, but also in the very nature of learning (Harasim, 2006).

Electronic campuses, meaning electronically linked departments via ethernets within one physical institution, were in vogue in the late 1980s and

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