

New Information Technologies and the Ambiguous Future of Schooling – Some Possible Scenarios

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Few change issues are more compelling for schools today than the introduction of new technologies. Computers in particular are widely advocated as harbingers of an educational revolution where children will have independent access to rich sources of information, be able to integrate and apply knowledge in sophisticated ways and where their teachers will become coaches, guides and facilitators to assist young people in the new forms of learning that will engage them. At the same time, critics of the computer revolution argue that much of it replaces education with entertainment, that the quality of information that can be accessed is often very poor, that children will learn in more and more isolated ways from each other, and that critical elements will be drained out of the educational process by focussing on technical competence alone.

Bigum and Kenway take their readers through this highly contested and controversial field with a balanced and thoughtful review and evaluation of the main standpoints that educators take towards new technologies in education. They describe and critique the positions of groups they call the Boosters, the Doomsters, the Anti-Schoolers and the Critics – leading to their own exposition of a practically workable and educationally justifiable stance that schools might best take towards high technology and future schooling.

INTRODUCTION

Nowadays, computerisation is a term commonly associated with change in many fields of human endeavour. In education, computer technology has promised much over the past fifteen years and schools, together with other educational institutions, especially in the main Anglophone nations, have invested considerable sums of money over this period in coming to terms with this technology. As the ubiquity and power of computer technology have increased, so too has the pressure on schools to respond. More recently, the growth of the Internet and its public prominence have added it to the growing list of computer technologies with which schools believe they have to contend.

Two features of the uptake of computers by schools over the last fifteen years are noteworthy: the relatively short time it has taken for computers to become an “essential” component of most ‘first world’ classrooms and the broadly held views concerning their educational importance. Schools and school systems have been

sufficiently persuaded of the importance of computers in classrooms that they have made significant and ongoing expenditure on computer hardware, software and support, so much so that today, the major consideration is not whether to buy but what to buy¹. The investment in computer technology by policy makers, administrators and teachers is consistent with a widely held discourse which associates computers in classrooms with technological progress, future employment opportunities of students as well as enhanced learning in the classroom (Iacono & Kling, 1996).

The relationship between computer use in schools and the educational value of computer technology is not as obvious as it might first appear. In the early 1980s, the educational merits of computers in classrooms were yet to be established. Schools acquired modest numbers of the first eight-bit microcomputers such as the Apple IIe and Commodore 64. Acquisition of more computers and the replacement or upgrading of out-of-date machines continued while teachers worked hard to establish useful things to do with them in classrooms (Bigum et al., 1987). In the 1990s, many schools boast networks of many computers and some schools have adopted policies which require all students to own a laptop computer. As schools continue to improve and add to their computing resources, Becker (1996) has estimated that to properly equip a school with computer technology and support teachers in their use will cost an additional \$2,000 per pupil, per year. The investments schools have made and are likely to continue to make are clearly substantial. Apart from diverting resources from other areas of the curriculum, the growing use of computers in schools gives computer technology an educational legitimacy that otherwise it would not have. Regardless of what they are used for in classrooms, computers are now firmly linked to public perceptions of modern educational practice and their growing use in the home appears to be linked to a now general acceptance of their educational worth.

In terms of a growing social acceptance of computer technology, the educational worth of computer technology, aided by the ongoing purchase of computers by schools has meant that some school age students have better access to better hardware and software in their homes. The change in home ownership of computers is only one of a number of changes associated with the growing use of computers that have taken place outside schools since the early 1980s (Bigum, Fitzclarence, Green, & Kenway, 1994). The world in which schools first began to use computers is much changed, largely due to increasing computerisation and global computer networks (Sassen, 1991; Castells, 1991) but schools have continued to respond to computer technology in much the same way as they always have (Bigum, 1995), acting in accord with a rather narrow and limited view of the role of computer technology in education and in the world more generally (Kenway, *in press-b*).

In an era in which government expenditure on education is declining (Kenway, Bigum, Fitzclarence, Collier, & Tragenza, 1995) and the promotion of the new information and communication technologies continues apace (Kenway, 1995a), schools will find it increasingly difficult to finance the acquisition of contemporary computer technology. The commitment of most schools to a discourse of