9 Where to read further

Biography

There is extensive literature on teachers' lives and why we teach but much less on teaching in higher education. Key early texts on teachers' lives were Ball and Goodson (1985) and Goodson (1992). Ivor Goodson, in particular, has maintained a long commitment to teacher life history. An NFER paper (Spear, Gould and Lee, 2000), though dated, sums up the literature on why teach. Those with an interest in why teach ICT as a subject might look at Hammond (2002). A very readable account of an earlier time for beginning to teach is Hannam, Smyth and Stephenson (1976) – it will help you believe that there has been progress in how we treat new teachers!!

The section on Plowden and the progressive legacy has been informed by Gillard (2004). Those wanting to reassess the first Black Papers go to Cox and Dyson (1969a, 1969b). Cox and Dyson, authors of the original Black Papers, were more liberal minded than those that used their work, as recent obituaries make clear, see, for example, Cox on Dyson (Cox 2002).

Wikipedia is a good repository for history of technology and its role in the media. Go there for more on television programmes such as *Tomorrow's World, Doomwatch, Dr Who and Star Trek*. An earlier point of reference on the ecological impact of science offered was Rachel Carson's *Silent Spring* (Carson 1992)*.*

There are several web sites (addresses below) with pictures and information about early computers. These include *People History*, which is largely USA based, and the UK *Centre for Computing History*. To see examples of the first specialist computer magazines, try *Magforum.com*.

On line archives of the broadsheet newspapers and of the BBC are helpful for accessing reports and surveys for the take up of technology in retailing and social activity. They also include obituaries, including to some of the pioneers of computer in industry, for example see the Times (2008) obituary on David Caminer. This serves as a reminder that for commerce the interest in computers in the 1950s was the capacity to process routine calculations quickly.

In regard to curriculum reform, Stenhouse's work was read widely (e.g. Stenhouse 1975) and see Elliott (2006) for an appreciation of his impact on the Integrated Humanities Project.

Several academic colleagues have offered views on 'where we have been and where are we going' in the use of computing, these include Dillon (2004), Watson (2001) and Somekh (2000). Meanwhile Reynolds, Treharne and Tripp (2003) take a wide view on the hopes invested in computers.

Technology

Web sites mentioned earlier, such as *Wikipedia* and the *Computing Museum,* are very informative on technological developments over time. A review of technology in primary school is offered by Govier (2007). Rushby and Seabrook (2008) reflect on the development of early software which complements some of the ideas put forward in this book. Two editions of *Journal of Computer Assisted Learning* provide a snapshot of uses of technology at the introduction of the National Curriculum. Contributors include Rogers (1990) on science; Griffin and Davies (1990) on Information Technology, Blease (1989) on implications fro the primary curriculum; Adams (1990) and Ball (1990) on implications for the English and Mathematics curriculum respectively. More recent studies on the introduction of the Internet to schools and the use of IWBs can be found in the journals listed at the end of the section. A further important reference looks set to be the National Archive of Educational Computing – web address below.

Application

The flip side of early software – the drill and practice programmes - were critiqued by Chandler (1983). Another early voice was that of Kelly (1984). A provocative account of the early introduction of computers in one school in Canda was given by Olson (1998). There are huge number of case studies on *Logo* but see the seminal work of Papert (1980), and his follow up (Papert 1993); see also Agalianos, Noss and Whitty's (2001) attempting to make sense of it all. The *Impact Report* was carried out by a team at Kings College (Ed Watson 1993) and the case studies give a very good and readable picture of the range and scope of computers at the time. Good overviews are also provided in Underwood and Underwood (1990) and Underwood (1994). The interactive video in schools project generated several papers and a review by Norris, Davies, and Beattie (1990). Squires and McDougall (1994) popularised the idea that in choosing and using software we should consider the interaction of teacher, technology and pupil. NCET and now Becta have carried out numerous studies. One early influential document was *IT Works* (NCET 1994a) – an attempt to bring together the existing literature and try to identify what is was about computers that might support achievement. Around the same time there were important studies on *ILS* (NCET 1994b) and on interactive media (NCET 1994c). Details of ImpaCT*2* and Test Bed can be located on the Becta web site (Becta 2007, Becta, undated) including access to Harrison et al (2002); Somekh and Underwood (2006). See also a review of the thorny issue of computers and attainment (Cox et al 2003).

Ofsted (2001, 2004) give a very useful overview review of NoF training and other government initiatives. These reports support many of the points made by participants in this book though Ofsted does comment more positively on developments in the teaching of ICT as a subject. For a sympathetic account of the teacher role in fitting in the use of computer see Cartwight (2007). There is a very wide literature on barriers on the use of computers (e.g. Jones, 2004).

Philosophy

We know there is a link between beliefs about pedagogy, available tools and what the teacher does in the class but how all this comes together is a matter for further exploration. A helpful contribution to this debate is that of Cox (2004). Engeström's idea of activity theory (Engeström, Miettinen and Punamäki 1999) has been widely applied to help show the use of technology in a wider system of rules and division of labour. The idea of affordances of technology is a very powerful one – though there is a great deal of confusion as to what affordances are. Kennewell (2001) offers an imaginative attempt to apply the concept in the classroom. Sutherland and John (e.g. 2005) also discuss affordances in the context of a large ESRC supported project. A book which some of the participants described as influential in raising the awareness of activity theory and an idea of affordance was Salomon (1993). We have tried not to pigeon hole beliefs about teaching in terms of alignment with the theories of Vygotsky, Piaget and Skinner but rather a set of beliefs about what is important in learning. A similar approach was undertaken by Nixon (1994) in his study of university lectures which has been influential in writing this chapter.

Policy

John Foster at MEP provided a brief overview of his hopes for the organisation (Foster, 1971) and one view of MESU was offered by Thorne (1987). An early attempt to consider policy at a European level was made by Eraut and colleagues (Eraut 1991). Hargreaves (1994) drew out implications of these changing times for policy makers and his ideas are arguably as relevant today as when first published.

Fullan (1991) stressed the importance of understanding different perspective on educational change and has been hugely important in our understanding of why the outcomes of new policies so often disappoint. See also the influential work of Lieberman (1995). Cuban (e.g. 1986, 1993) has been a popular voice on the difficulties of using technology in schools in the USA summed up in his pithy headline 'school meets computer, school wins'. Selwyn, amongst others, has been a frequent commentator on the gap between government and practitioners' perspectives on technology (e.g. Selwyn, 1999; Selwyn and Fitz, 2001) and see also Younie (2006).

For details of national teaching strategies go to the DCFS web site (DCFS 2008) and view the *Harnessing Technology* (DES 2005) document to get an overview of policy goals for computers in teaching and learning. The *Trotter Report* was published in 1989 (DES 1989) and Project INTENT was outlined in the Journal of Computer Assisted Learning (Project Intent, 1976).

The tension between using computers to support the curriculum and to change the curriculum runs through discussion of policy. It has often been argued, and disputed, that there are stages in the use of computers, this was, for example, articulated very early on by Sendov (1986);

finding expression in the *Stevenson* (1997) and *McKinsey* reports (1997); and presently informing ideas of E maturity.

Community

Bob Lewis has been an influential figure in research into computers – see an appreciation in *Journal of Computer Assisted Learning* (Editorial 2004). Hawkridge (1999) carried out an informal review of early editions of *British Journal of Educational Technology*. Richard Fothergill was the first director of MEP. He was spoken about with affection by those participants who knew him first hand, it was reading his obituary (Anderson and Page, 2004) that planted the idea for the project

All the organisations mentioned in this section have web sites - see below for Mape, Naace and ITTE. See also Naace (2008) for a review of its history and go to the ictopus (ICT Online Primary User Support) web site, a successor to MAPE. One organisation not mentioned was ACCITT*,* an attempt to network ICT coordinators in school, which merged with the new Naace.

The idea of community of practice has been popularised by Lave and Wenger (Lave and Wenger 1991, Wenger, 1998), though our chapter steers clear of applying this term to describe the networks between colleagues. Rovai's idea of community as a sense of spirit, trust and interaction seems particularly helpful but it is an open question as to how far the research community is a learning community, a term which seems better applied in formal learning contexts.

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