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'First do no harm': Factors influencing teachers' ability and willingness to use ICT in their subject teaching

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Abstract

The paper reports on a Department of Culture, Museums and Sport (DCMS) funded project which provided modest amounts of time for teachers to be freed from their classroom teaching to explore the use of information and communications technology (ICT) in their subject teaching, and to meet up together to discuss their use of new technology. The funding was sufficient to provide a day of supply cover for two groups of secondary teachers in different curriculum subjects (history and science) to meet towards the start of the academic year to discuss their use of ICT, a day of supply cover to work on their ideas and interests, and a day to meet together again towards the end of the year to share ideas and experiences.

The rationale behind the project was to allow teachers the freedom to explore their own areas of interest in the area of ICT and to avoid a prescriptive or 'coverage' based approach. There was a conscious attempt to avoid target setting and audits and teachers were encouraged to come to the end of year meeting even if they had nothing 'to put on the table'.

The concluding section of the paper describes the outcomes of the project. The main issue to emerge was the highly positive reaction of the teachers involved. Whilst for some there were significant ICT outputs, all those involved found the process useful and enjoyable, especially the collaborative sharing process in the final session. This was in marked contrast to other ICT training experiences which many of the teachers had been involved with.

Keywords: Co-operative/collaborative learning; Country-specific developments; Improving classroom teaching; Pedagogical issues; Teaching/learning strategies

1. The context of the research

Over the past decade, there has been considerable pressure on teachers in the United Kingdom (UK) to use information and communications technology (ICT) in their subject teaching. Politicians outlined a positive vision of the beneficent and transformative influence which ICT would have on educational outcomes (see, for example, Blair, 1995, 1997; Clarke, 2003) and a series of policy documents talked up the importance of

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the United Kingdom developing a technologically sophisticated teaching force which would be capable of embedding ICT in subject teaching (see, for example, Department for Education and Employment (DfEE), 1997, Department for Education and Skills (DfES), 2002, 2003). Most Office for Standards in Education (Ofsted) school inspections included a section on the degree to which the potential of ICT was being realised in schools, causing a degree of trepidation amongst departments who were not integrating new technology into their schemes of work (Harrison, 2003) and the Department for Education deemed progress in the use of ICT in schools to be sufficiently important to merit a (roughly) biennial survey, monitoring the use of ICT in schools (see, for example, Department for Education (DfE), 1993, 1995). Cochrane's (1995) assertion that 'in future, there will be two types of teacher, the IT literate and the retired' was another manifestation of the belief that competence in the use of new technology was no longer to be considered an optional 'extra' for teachers. In the late 1990s, the competence specifications for ICT in courses of initial training became increasingly stringent and detailed, extending to 15 pages for ICT alone (DfEE, 1998) and in 1997, the government announced a major programme of ICT training for all qualified teachers through the 'New Opportunities Fund' (NOF) Training Scheme (DfEE, 1997).

In spite of these pressures, and in spite of substantial investment in ICT in schools, estimated at between £1.6 and £1.7 billion between 1999 and 2002 (Abbott, 2001; Wills, 1999), uptake in teachers' use of new technology has remained disappointingly sluggish in the UK (Nichol & Watson, 2003; Reynolds, Treharne, & Tripp, 2003; Selwyn, 2003). The interim ImpaCT 2 Report noted that relatively few teachers were integrating ICT into subject teaching in a way that motivated pupils and enriched learning or stimulated higher level thinking and reasoning (British Educational Communications & Technology Agency (BECTa), 2001), and the final ImpaCT 2 Report suggested that perhaps as many as 60% of teachers in the UK were making little or no use of computers in their day to day teaching (Harrison, Comber, & Fisher, 2002). Research reports from outside the UK suggest that this problem is not limited to the UK, and that in spite of substantial financial investment in ICT in education worldwide, many teachers struggle to successfully integrate new technology into their teaching (Phillips, 2002; Zhao, Pugh, Sheldon, & Byers, 2002; Zhao & Frank, 2003).

Moreover, there is evidence to suggest that within the UK, some of the interventions, policies and investment in getting teachers to embed the use of ICT in subject teaching have not been found to be helpful by teachers. The government's 'New Opportunities Fund' training programme was criticised as being unwieldy, over-prescriptive and insufficiently geared to meet the needs of different subject specialisms (Leask, 2002; Ofsted, 2002; Preston, 2004). The idea of training teachers through distance learning in ICT proved to be more problematic than policymakers had envisaged (Naughton, 1998; Noss & Pachler, 1999), and many of the competence specifications and testing mechanisms for new teachers were found to be over bureaucratic and unhelpful (Barton & Haydn, 2004). This research was intended to explore an alternative to this approach to teachers' development in the use of ICT. In an article reflecting on the lessons learnt from the NOF training, Younie (2006) concluded that the multi-agency approach had produced serious problems. She identified the need for the development of, '*communities of practice*' and talked of the importance of a, '*collegial culture of sharing best practice, in the form of ICT resources and training*'. Our research, although on a very small scale, was intended to explore the potential of this 'collegial' approach.

2. Rationale for the research design

Although a decade ago there was some evidence of teacher antipathy or 'ideological' opposition to the use of ICT – the belief that new technology had little or nothing to offer in particular subject disciplines (see, for example, Easdown, 1994; Summers & Easdown, 1996), more recently, there is evidence to suggest that many teachers are more positive about the possible benefits of using ICT in subject teaching (Easdown, 2000; Haydn, 2004). The research design was predicated on the proposition that most teachers want to teach their subject well, that they are at least open-minded and interested in exploring the potential of ICT, and that one of the barriers to the development of ICT in subject teaching is lack of time (Barton & Haydn, 2004; Zhao and Frank, 2003). The project was designed to give teachers 'dedicated time' with which to explore their ICT agendas, both in terms of time on their own/within their own department, and also in subject groupings with colleagues from other schools. The idea was not to give teachers 'more stuff' but to give them time to explore the substantial body of resources relating to ICT which is already available to teachers.