The last ten years has seen a huge investment in technology in education, a trend that may be curtailed in the current economic climate. The fruits of this investment are apparent in many schools, yet there are differences in the extent to which technology has been adopted and implemented in each setting, differences largely explained by contextual factors. It therefore follows that identifying and understanding these factors presents an effective and cost-efficient means to support the integration of technology for learning across the education system. With this aim in mind, this presentation articulates a conceptual tool for practitioners, policy makers and academics, which draws upon research conducted across UK educational sectors over the last two years. The tool provides a way to discuss the opportunities for reducing the barriers to adopting novel technologies as well as reflect upon on how these might be addressed within an individual setting.

This talk shares key research messages, presented through a framework, concerning the contextual factors shaping the adoption of technologies in schools. These messages draw upon the research carried out over the last two years by Capital (Sharples et al, 2009; 2010, Manches et al, 2010): a two-year project commissioned by Becta to evaluate the progress of the UK Government’s ‘Harnessing Technology’ Strategy.

In the first year of this work, a research-based investigation was carried out into the conditions of innovation and implementation of technology-based innovation in Education. This work helped identify ten claims, prominent in research and practitioner literature, about the widespread adoption of technologies to support learning (e.g. “learners in all sectors can benefit from new forms of technology-enabled assessment”).

In the second year, these claims were investigated more thoroughly, examining their validity as well as the various factors shaping the adoption and implementation of each form of technology that help explain variation in practice between educational institutions. This research has covered a range of emergent technologies, from e-assessment to mobile devices and gaming, where the focus has been on the conditions that shape the take-up of these technologies. Data collection has included interviews, expert reference groups, innovation forums, scanning of grey literature (e.g. media reports, blogs, online forums), as well as more formal literature reviews.

A thematic analysis of the findings elicited eight recurrent contextual factors representing challenges to the adoption and implementation of educational technologies into schools. These factors could be categorised under four thematic headings: Environment, Learning content, Tools and Agents. The theme Environment includes the factors: home-school relationship and the design of spaces within school. Learning Content refers to the structuring of what is taught and assessed. The theme Tools refers to the factors concerning the reliability of devices and how easily certain technologies (e.g. social software) can be appropriated into the school. These themes are complex and interconnected, perhaps none more so that the final theme, Agents, where leadership and practitioners’ attitudes, skills and confidence repeatedly surfaced as factors shaping the likely adoption of technologies.

In this talk, we present the range of factors identified in the framework, with a selection of case examples illustrating their influence in everyday practice. Consequently, this talk is targeted at both researcher and practitioner audiences. The key contribution is to provide a refined conceptual tool (with supporting examples) grounded in two years of research that helps reflect on the range of barriers to innovation in different institutions. Clarifying these challenges will inform the strategies to maximize the potential of available technologies to support learning.

References


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