From ‘Posh Pen and Pad’ to Participatory Pedagogies: One Story of a Netbook Implementation Project with 108 Pupils in Two Primary Schools

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ABSTRACT
This paper looks at the implementation of wireless netbooks within two primary schools in the UK for all children at key stages 4 and 5. It looks at current concepts of ematurity and technological implementation and offers a new model based on three interlocking factors, the educational status of the technology, the capacity for innovation of the organisation, groups and individuals and how far the technology can be aligned with the needs and concerns of individuals and teams and their prevailing pedagogical approaches. This model is examined in the light of an action research project and illustrates how pedagogical reframing is important in any technological intervention. It also examines role, identity and practice changes required by both learners and teachers in order to improve the learning experience within a school.

Keywords: E-Maturity Models, Implementation Strategies, Independent Learning, Net Books, Next Generation User Skills, Pedagogy, Technology

BACKGROUND

“The only way of dealing with variety is variety.”
After Ashby (1956)

This paper sets out the findings from a research project based in two primary schools in one local authority in the UK. As part of an on-going initiative to improve web access for learners in the schools, four classes comprising 108 year 4, 5 and 6 pupils had been supplied with personal wireless netbook computers. Thus, as far as possible, all pupils in each class had personal ownership of a netbook, which they could use at home and at school. Parents and carers had had to make a contribution to the purchase of the netbooks with the schools acting as suppliers. The research project was initially commissioned by the Local Authority as an external impact evaluation of the netbook initiative. In consultation with staff at the two schools it was decided to develop the initial conception

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of the project so that it included a strong action research element focusing on independent learning skills, personalisation of learning and the pedagogical changes required in order to facilitate greater learner autonomy. It was believed that the combination of the elements of an external evaluation, which focused on the impact of netbook use on pupils, combined with self-critical practitioner enquiry, that focused on pedagogical adaptation to the presence of the netbooks, would not only provide a more persuasive set of impact data but also generate professionally relevant insights into how the netbooks affected teaching and learning.

To tell this particular story we have drawn on the teachers’ own accounts created as part of their action research and aspects of the evaluation data in order to describe the key issues they faced and the mediating and moderating factors that helped or hindered the project’s development. The story is structured by the use of a model of ICT implementation that we have developed from our previous research (Hadfield et al., 2009). This paper focuses on the implementation ‘story’ of the netbooks project, rather than its impact, which is discussed in Royle and Hadfield (2010). The original research design, findings and research instruments are also detailed in the full project report.

**METHODOLOGY**

The project methodology was based on combining elements of an external evaluation, in order to allow for the external funders to assess the impact of the intervention, and linked school-based action research based projects, which supported the teacher researchers in both schools to share their experiences and successes. The external evaluation consisted of an online survey which looked at pupils learning preferences, their status as independent learners, their skills as computer users and the digital technologies they used habitually at home. This was supplemented by documentary analysis of teacher’s planning materials, and interviews with teachers, school leaders, and pupils.

The action research strand was based on the report authors acting as ‘second order’ action researchers (Elliott, 1991; Losito et al., 1998) supporting groups of class teachers in each school to undertake their own enquiry into the potential of the netbooks to support pupil learning. These two groups were supported over two cycles of action research that lasted some six months and were brought together in a series of meetings and via an on-line blogging facility. As a group they developed a framework to explore the potential of netbooks within their curriculum and to what extent this relied upon changes to their teaching. This led both groups to develop foci for their action research based around two issues:

- How could netbooks be used to support independent and personalised learner activities for pupils?
- What implications did this have for the role of the teacher as a leader and facilitator of learning?

The ethical framework used during the project covered both strands of the project and was approved by the University’s ethics committee. It was based on clearly delineating between the two strands so all participants were aware of the different purposes the strands served and the role of the external university research team in each. For the external evaluation work the university team took full responsibility for ensuring the informed consent of all participants and for producing an ethical protocol that clearly informed participants about the purpose of the evaluation, the degree of anonymity that would be provided and how the evaluation data would be used. In the action research strand the university research team supported the teacher researchers in developing their own ethical protocols, which reflected each school’s approach to the governance of action research and their existing procedures for informing parents. Of paramount importance were the issues of creating and sharing digital artefacts and the management of pupils’ on-line identities. Again the approach adopted to these issues reflected...
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