Chapter 6

# Realising the Potential of Virtual Environments
## A Challenge for Scottish teachers

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## ABSTRACT

*A national schools intranet is currently being developed in Scotland with universal access anticipated in late 2009. This new technology will provide teachers with access to a variety of tools with which to develop their teaching and learning. Drawing on the experience of the Applied Educational Research Scheme (AERS), a five year research programme funded to build research capacity in Scottish Education, this chapter seeks to explore the potential for teachers in Scotland to realise effective use of this new technology in their professional learning. The chapter uses current research literature on teacher professionalism and professional learning in Scotland to establish the context in which Scottish teachers are currently working. It then draws on three vignettes drawn from research within AERS to argue that the development of virtual environments to support professional learning in Scotland requires further, significant collaborative working between the practitioner, policy and research communities.*

## INTRODUCTION

Glow, the national schools intranet, is currently being made available to Scottish schools with universal access expected in 2009. In essence GLOW will offer schools, teachers and pupils: secure and personalised access to the intranet and internet; virtual learning opportunities; and a range of tools to enable users to collaborate, cooperate and communicate across

the network (GLOW, 2008). Almost in parallel with the development of GLOW the Applied Educational Research Scheme[1] (AERS) has been striving to build educational research capacity, support and sustain the research infrastructure and, crucially, to develop more effective collaboration among researchers, policy-makers and practitioners. In the early developmental stages of AERS the potential of virtual environments was recognised as a possible means of supporting these aims. Working in collaboration with the Centre for Applied Research

in Educational Technology (CARET) at the University of Cambridge, AERS adopted the Sakai virtual environment in late 2004 primarily as a platform for a diverse range of research and other collaborative activity. Within AERS the Learners, Learning and Teaching Network (LLTN) consisted of three substantive research projects examining teachers as learners in the context of professional development; the impact of neighbourhood on pupil engagement in learning and the concept of 'community of enquiry' as a collaborative model of engagement in educational research. The LLTN recognized the potential of virtual environments to impact on each of these areas and took a lead in developing the Sakai virtual environment as a means of supporting collaborative research and enquiry. Initial interest in using virtual environments in this way was extensive with a broad spectrum of different types of groups seeking support from the LLTN in their use of the environment. These included special interest groupings involving practitioners, policymakers and researchers engaging in joint discussion and collaborative enquiry and small, often dispersed Higher Education (HE) educational research teams.

As the work of the LLTN further developed it afforded researchers the opportunity to work more closely with schools and teachers, and in particular, to explore the use of virtual environments as a means of supporting teaching and learning. At the time of print participating schools were developing virtual environments in a range of different ways:

- As a means of engaging pupils by collating subject-based resources and access to discussion with other pupils and teachers outside school hours;
- As a supportive environment for specific classes and a means to increasing engagement of parents/carers;
- As a resource supporting professional learning by facilitating virtual collaboration within and between schools.

This varied application of the Sakai virtual environment within the AERS community provided researchers within the LLTN the opportunity to explore the potential impact of virtual environments on a range of different areas of Scottish education. In the sections which follow, this chapter seeks to outline the ways in which the LLTN progressed this work (which was effectively an action research project). The chapter discusses some of the theoretical ideas which informed the work as well as briefly describing the context in terms of teacher professional learning in which it developed. An illustration of the empirical work of the project is presented in the form of three vignettes which form the basis of discussion and reflection. In this way the chapter seeks to offer insight into how teachers may realise the potential of virtual environments and the GLOW digital network to impact positively on both their own and subsequently, pupil learning. Three key questions provide the framework for this analysis:

- What is the current landscape of teacher professionalism in Scotland?
- How fertile is this environment in terms of nurturing teacher learning and innovation?
- In what ways can virtual environments support teacher engagement in collaborative enquiry and research?

## Engaging Teachers in Virtual Collaboration

There is now a strong body of literature supporting the need for teachers to be engaged in collaborative working '…to build strong professional cultures of collaboration to develop common purpose, to cope with uncertainty and complexity' (Hargreaves 2000; p.165). In addition it has been widely recognised that there is a need for more effective collaboration in research between policy makers, practitioners and educational researchers (Furlong and Oancea 2005; Smedley 2001; McLaughlin and Black-Hawkins, 2004) both UK

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