Mobile Technologies as a Catalyst for Pedagogic Innovation Within Teacher Education

Helen Caldwell, University of Northampton, Northampton, UK

ABSTRACT

This article reviews the use of mobile technologies within teacher education at the University of Northampton. In order to develop a strong commitment to digital literacy, the School of Education is using sets of teaching iPads with trainee teachers and has allocated an iPad to every member of the academic staff. Experiences from mobile technology projects involving ITT students, primary teachers and academics are shared to illustrate how mobile technologies have been a catalyst for new pedagogies based on a social constructivist model of learning in the teacher education programmes. The author aims to develop creative, self-directed learners who can work in collaborative teams within a professional community of teachers, academics and students. The author has considered ways in which mobile devices extend learning beyond taught sessions, and how the use of apps to make shareable digital artefacts can lead to purposeful engagement. To this end, the School of Education is focusing on a set of core apps that facilitate the creation, collaboration, curation, and capture of content.

KEYWORDS

Blended Learning, Communities of Practice, Educational Technology, iPads, Mobile Technologies, Online Learning Communities, Pedagogical Innovation

INTRODUCTION

The University of Northampton is making increased use of blended learning approaches in preparation for a move to a new campus in 2018, which will involve a reduction in space and an absence of lecture theatres. Within this context of change, the School of Education is exploring approaches to teaching and learning with mobile technologies based on a social constructivist model of learning that moves away from teacher directed pedagogy towards a flexible learner-centred approach. The idea of using mobile devices to facilitate self-directed and social learning is a central feature of our approach, however it may necessitate a redefinition of teaching and learning roles (Caldwell & Heaton, 2015). In this paper, I draw upon examples from our recent practice to consider ways in which mobile technologies have acted as a catalyst in the process of pedagogical innovation. Innovation is an elusive concept and what is innovative to one learning context may not be to another, however, we have chosen to emphasise the practical application of ideas, echoing Denning’s definition of innovation as ‘the adoption of a new practice in a community’ (Denning 2004) and Gulbrandsen and Aanstad’s (2014) suggestion that innovation is something new that is put to practical use.

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BACKGROUND

Technology Driven Innovation

Although technology is generally recognised to have the power to transform education (Puentendra, 2006; Cope & Kalantzis, 2008) several educators express the opinion that a technology-rich learning environment requires a shift in roles and responsibility for learning, and that achieving this is a challenge for teachers (Chandra & Mills, 2015). Luckin (2010) suggests that this shift can be characterised as one from Pedagogy (teacher-determined) to Heutagogy (learner-determined). One of the challenges facing university lecturers in the field of teacher education is how to encourage student teachers and in-service teachers to explore, adopt and apply new approaches to teaching and learning (Moats, 2014; Livingstone, 2014). Because of this, we need to find ways to develop and disseminate pedagogical innovation that increase the likelihood of the transfer of new approaches to teaching and learning from university to classroom.

Many university programmes now embrace the use of devices such as mobiles to support and engage in teaching and learning (Bertarelli et al. 2011), though some writers would argue that many universities still fail to grasp the opportunities afforded by technology because of a lack of knowledge of what can be achieved through its use (Selwyn 2007; Twining et al., 2015). Nevertheless, writers on the topic of teaching and learning suggest that the case for the positive impact of technology on teaching and learning is considerable and compelling (e.g. Tamin et al., 2011; Higgins, et al. 2012) not least because it enables universities to reach out to new and larger audiences and for learning to take place in new ways. Within our context, we have found that online learning communities and social networking tools such as blogs provide a visual platform for sharing digital artefacts and promote the concept of social learning. In this paper, we will consider how learning communities can complement the use of mobile technologies in Teacher Education.

Learning Communities

A learning community can be viewed as a social grouping that actively seeks to co-construct knowledge and in which learners are more in control of their learning journeys in comparison with traditional methods of teaching such as lectures or seminars (Oliver & Herrington, 2000). Belonging to a learning community is said to give increased agency to learners, enabling them to take collective responsibility for determining what they need to know and cutting across boundaries and formal structures (Wenger, 2011). In theory, learning communities should provide a way of developing and sharing collective knowledge, improving both the personal knowledge of the participants and their knowledge within the domain (Wenger & Lave, 1991).

Since Wenger’s early work on social learning (Wenger, 1991) there has been a widespread increase in online learning and in the use of online learning communities as an instructional method, (Ozturk & Ozcinar, 2013). Online learning communities have the potential to link people across time zones and to remove geographical boundaries (Wenger et al. 2002; Gannon-Leary & Fonainha, 2007). When combined with mobile technologies, they have added communicative potential, giving learners a measure of control over the pace and place of learning, and a degree of engagement that traditional approaches to teaching may not afford.

However, many studies note that some face to face contact can be a strength and make a case for multimodal learning, mixing physical interaction with asynchronous learning (Hammond, 1998). Contemporary learning communities may thus combine physical and virtual spaces and make use of a range of social media and networking technologies. It may be that one of the reasons for a lack of hard evidence regarding the efficacy of using learning communities to bring about pedagogic innovation is the difficulty of analysing the many modes in which such communities interact (e.g., virtual meetings mixed with physical meetings, synchronous interactions mixed with asynchronous interactions, text-based posts mixed with multimedia posts). In our experience, mobile technologies have functioned as the glue pulling together this varied activity.
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