

Chapter 98

iTE:

Student Teachers Using iPad on a Second Level Initial Teacher Education Programme

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ABSTRACT

Research on the use of iPad in initial teacher education is limited. This paper outlines a study to examine how the professional learning and pedagogical knowledge development of student teachers could be supported following 1:1 iPad deployment on a second level initial teacher education programme in Ireland. Findings show that iPad can be utilised both as an effective pedagogical tool and as a medium for the creation of new learning spaces where student teachers' professional and pedagogical knowledge development is supported through feedback, peer-learning, resource sharing and critical reflection. Creating resources with and for iPad as part of a collaborative design process can also support student teachers in developing and integrating technological, pedagogical and content knowledge (TPACK) within their approaches to teaching, learning and assessment. Implications for initial teacher education providers and the integration of technology within schools are outlined.

INTRODUCTION

Information and communication technology (ICT) is now embedded in everyday life and offers a wide range of possibilities for teaching and learning in schools. In Ireland, its importance and potential in an educational context is acknowledged in the National Digital Strategy (Department of Communications, Energy and Natural Resources, 2013) and explicitly outlined in recent major national policy on education. For example, the National Strategy to Improve Literacy and Numeracy among Children and Young

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People (Department for Education and Skills, 2011) includes digital media in its definition of literacy and stresses the role it can play in all aspects of education from early childhood to adulthood. At post-primary level a new Framework for Junior Cycle (Department of Education and Skills, 2012a) positions digital media as a key medium for student learning, while the development of ICT skills is identified as a central element within the recently outlined self-evaluation process for schools to ensure that students become active learners “during lessons and outside of lessons” (Department of Education and Skills 2012b, p.33). ICT is now also a mandatory element of all initial teacher education (ITE) programmes, with student teachers expected to use it “effectively to aid pupil learning” (Teaching Council 2011, p.27). Most recently, the National Digital Strategy for Schools 2015-2020 (Department of Education and Skills, 2015, p.33) provides an action plan for integrating ICT into teaching, learning and assessment practices in schools over the next five years to “ensure that ICT is embedded in the planning, design and delivery of all teacher education courses and programmes”.

This paper outlines a research study which examined 1:1 (one-to-one) iPad deployment on the *Dioplóma Gairmiúil san Oideachas* (Professional Diploma in Education), a one year, Irish medium, initial teacher education programme for post-primary teachers in Ireland. Irish medium schools are to the forefront in adopting iPad for use by teachers and pupils. Consequently, iPad was a course requirement for all student teachers accepting a place on the programme in 2013-14, making it the first initial teacher education programme in Ireland to adopt iPads 1:1. The specific purpose of this study was to investigate if, and in what way, iPad supported the professional learning of student teachers on the programme and to examine its role in the development of their pedagogical knowledge and approaches to teaching and learning.

iPAD IN INITIAL TEACHER EDUCATION

The availability of technology in schools does not automatically impact on the pedagogical practices of teachers, and even when used, can be cast in a supportive role to traditional teacher-transmission of content knowledge (Butler, Shiel, Leahy, & Cosgrove, 2013; Chai, Koh, & Tsai, 2010; European Commission, 2013; Petko, 2012). Mobile technology, however, is more difficult to ignore. With its emphasis on social interactivity and connectivity, it has the potential to transform practice in schools by reshaping how, when and where learning takes place (Melhuish & Falloon, 2010). Pegrum, Howitt, and Striepe (2013, p.464) define mobile learning as that which is “mediated through digital mobile devices” and Apple’s iPad has emerged in recent years as a field leader among mobile tablets. The importance of integrating mobile technology within initial teacher education programmes cannot be overstated, as this in turn can promote its future use by teachers in student learning (Hammond et al., 2009; Maher, 2013). Research, however, on the use of iPad in the context of initial teacher education is limited, and among those studies undertaken there is an emphasis, furthermore, on initial teacher education at primary level.

Ayres, Tyrrell, and Poon (2013) for example, examined the impact on school placement tutors and found that iPad facilitated the provision of visual and audio feedback to students and the sharing of files through cloud storage. Pegrum et al. (2013) focused on the learning of pre-service student teachers and similarly found that iPad facilitated resource sharing, as well as enhancing personal organisation. Furthermore, it enabled student teachers to access programme content from “multiple real-world spaces” and to critically reflect on audio recordings of their own teaching (Pegrum et al., 2013, p.475). The

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