

ICT for Pre-service Teacher Educators

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Abstract: Pre-service teachers have diverse perceptions of ICTs in educational forums. This paper discusses one University's attempt to assist pre-service teachers to use and plan for ICTs as an integral part of the learning process for early childhood, primary and secondary students through their completion of a 1-semester course.

Introduction

Treuhaft (1995) states that "Educational institutions do not exist in a vacuum", and as such we must reflect current trends in society. As technology pervades our society we must ensure our graduating students have the knowledge, skills and attitudes to educate our children to participate in tomorrow's world. One of the underlying issues for teacher educators in 21st century is to promote the capacity of Information Communication Technologies (ICTs) to improve teaching, learning and assessment in classrooms.

In 1997, Education Queensland released their "Schooling 2001 Project". The aim of this project was to improve student learning outcomes through the integration of technology (Education Queensland, 1998). Funding was provided to state schools, to achieve a number of targets. These include: the use of computers in every classroom across all key learning areas and all year levels, school networks that give every classroom access to the Internet, and all teachers with a minimum level of skill in the use of computers for learning.

Funding, personnel and professional development opportunities were available to assist all teachers to reach the Minimum Standards for Teachers in Learning Technology (1998). These standards cover four main areas: IT skills, curriculum applications including classroom planning and management, school planning and student centred learning. It is expected that all practicing teachers in Education Queensland will achieve the Minimum Standards by the end of 2001.

Context

In 2000, USQ introduced a course, "IT for Educators" as an elective course for teachers in response to Education Queensland's Minimum Standards for teachers. In 2002 this course will become a core course for all Bachelor of Education students. One of the benefits for our students taking this course is to increase their employability by Education Queensland, the major employer of our graduates.

Education students at USQ can now access ICTs in their pre-service education in four ways. Firstly, in first year students complete an "Introduction to Computers" course, which is taught by another faculty and is not linked to education. All students within the University complete this core course because it is seen as an essential element for the employment future of all Australian professionals. Secondly, students can take courses in ICT's in education as a major (6 courses), a minor (4 courses) or electives. Thirdly, students are briefly exposed to ICTs in the context of their general study courses. And finally, the "IT for Educators" course is now a core part of the course for all Bachelor of Education students in the areas of early childhood, primary and secondary. This course gives pre-service teachers experiences to ensure students can demonstrate the Minimum Standards for teachers by graduation. Universities are unable to credential students and formal credentialling must occur when they take up their first teaching position in a State School.

The IT for Educators course comprises of the following major areas:

- * Review of Basic IT skills: word-processing, file management, Email, Internet searching, PowerPoint, basic web authoring, and different forms of electronic communication;
- * Discussion of Education Queensland's Policy and Guidelines for Using Computers in Learning;
- * Demonstrating educational uses of the web; and
- * Planning for curriculum and technology integration.

Students engage in individual and group activities both online and in person where they investigate the possible uses of technology in the field of education. Unfortunately many students have limited experience either using or observing appropriate use of technology in the classroom; this results in significant discussions regarding use of ICTs to support teaching, learning, assessment and administration within educational contexts.

Assessment within this unit takes several forms: a portfolio of samples demonstrating students IT skills, a short teaching session where students teach a IT micro-skill within a lab situation, contributions to multiple electronic communication forums, and the planning and preparing of a teaching unit or series of learning episodes where curriculum, literacy, and technology are integrated to solve a problem or perform a task.

Conclusion

There have been significant developments in ICTs, their access and use in all educational facilities. Teachers' current skills, pedagogy, beliefs and attitudes will influence how the computer is used in their classroom. Sheingold (1991, p18) states "it is not the features of technology alone, but rather the ways in which those features are used in [the classroom] that shape its impact". Prior to completing the course, pre-service teachers preconceptions regarding the use of technology in classrooms is usually limited to drill and practice use for fast finishers and word-processing of reports.

Rosenberg (2001) and others have stated that teachers must change from sage on the stage to the guide on the side. This course focuses on the new role of educators as being one of a facilitator or manager of learning rather than one of imparting knowledge. Students are required to create real or life-like tasks where the use of ICT is integral to the learning process and curriculum is student centred. Students are aware that how they use technology in their classroom after graduation is not limited to their personal IT skills and it will depend on the resources available, their personal pedagogical style and their ability to create a flexible learning environment.

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