“Are Schools ready to go Online?”

A study that examines the current state of Information and Communication Technologies in secondary schools and explores the possibility of the introduction of a more flexible educational structure through online technology.

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STATEMENT OF ORIGINALITY

I hereby certify that the work embodied in this thesis is the result of original research. This work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

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Abstract

This study investigated the extent to which secondary schools utilised online technologies and eLearning within the curriculum. It explored computer technology practices and perceptions of students and teachers as well as the technology development strategies deployed by principals in ten secondary schools. The learning content of each school’s web page was also examined. It was intended that the study’s findings would add to current research about student and teacher computer practices, the integration of ICT with pedagogy and the current state of eLearning practice within schools.

The research was conducted using a case study methodology for each of the ten schools and collectively, utilising both quantitative and qualitative approaches. This enabled a holistic interpretation of the data, and was followed by a documentary analysis of the learning content in each school’s web presence. This analysis required the development of a rubric (called the eFactor) which was used to categorise and evaluate each school’s web learning content.

The data analysis findings were compared with earlier and current research about computer technology use to identify patterns of similarity and difference between existing research and this study. Similarity was found with students being more frequent users of the Internet than their teachers (Avery et al., 2007) as well as being more adept at using a wider range of computer technology than most of their teachers (Negroponte, 1995; Trinidad et al., 2005). Confirmation too that older members of the teaching staff were more reluctant to use computer technology and less inclined to nominate any educational value for that technology (Cuban, 2001).

However, other factors have emerged that may influence school computer technology utilisation and online learning practice. Across the sample of schools, there appeared to be little difference in the nature and extent of female and male student computer use for school-related purposes. One of the most compelling findings was that schools with more comprehensive technology and learning strategies, actively fostered by the school leadership, had the greatest interactive learning presence on their web pages. Schools with the least amount of interactive web presence preferred to focus strategies on achieving technology competence and usually in just one software application.

The criteria established for the documentary analysis of each school’s web presence provided a score (the eFactor) allocated to each school according to that school’s use of its webpage for learning. The case study findings were also able to identify
common practices and strategies of schools which enabled the establishment of three school groups based on the eFactor being low, medium a or high. The case studies also discriminated between the practices of the schools within each of the groups thereby enabling a clear distinction about the allocations of schools to the three groups.

Schools’ adoption of an effective online learning presence requires the development of Information Communications Technology with curriculum pedagogy and is the basis for further research. This study has provided clarification on how Internet learning can be classified thereby enabling a guideline for the development of effective learning tasks. The study has also established a link between the type of technology strategies implemented in a school and the online learning presence of that school. The deployment of multiple technology strategies with pedagogical underpinnings contributes to the diversity of eLearning and the awareness of a wider learning environment.