The role of the Internet in the primary school classroom

Chris Campbell
University of Wollongong

UNIVERSITY OF WOLLONGONG
COPYRIGHT WARNING

You may print or download ONE copy of this document for the purpose of your own research or study. The University does not authorise you to copy, communicate or otherwise make available electronically to any other person any copyright material contained on this site. You are reminded of the following:

This work is copyright. Apart from any use permitted under the Copyright Act 1968, no part of this work may be reproduced by any process, nor may any other exclusive right be exercised, without the permission of the author.

Copyright owners are entitled to take legal action against persons who infringe their copyright. A reproduction of material that is protected by copyright may be a copyright infringement. A court may impose penalties and award damages in relation to offences and infringements relating to copyright material. Higher penalties may apply, and higher damages may be awarded, for offences and infringements involving the conversion of material into digital or electronic form.

Recommended Citation
NOTE

This online version of the thesis may have different page formatting and pagination from the paper copy held in the University of Wollongong Library.

UNIVERSITY OF WOLLONGONG

COPYRIGHT WARNING

You may print or download ONE copy of this document for the purpose of your own research or study. The University does not authorise you to copy, communicate or otherwise make available electronically to any other person any copyright material contained on this site. You are reminded of the following:

Copyright owners are entitled to take legal action against persons who infringe their copyright. A reproduction of material that is protected by copyright may be a copyright infringement. A court may impose penalties and award damages in relation to offences and infringements relating to copyright material. Higher penalties may apply, and higher damages may be awarded, for offences and infringements involving the conversion of material into digital or electronic form.
The role of the Internet in the primary school classroom

A thesis submitted in fulfilment of the requirements for the award of the degree

Doctor of Education

from the

University of Wollongong

By

Chris Campbell

Faculty of Education
2006
Declaration

I, Chris Campbell, declare that this thesis, submitted in fulfilment of the requirements for the award of Doctor of Education, in the Faculty of Education, University of Wollongong, is wholly my own work unless otherwise referenced or acknowledged. The document has not been submitted for qualifications at any other institution.

Chris Campbell
December, 2006
Abstract

Computer related technology is increasingly used in society today, and has impacted in various ways on classrooms across the world. In New South Wales, Australia, there has been an increasing emphasis on teaching using information and communication technology (ICT), and in particular the Internet. Previous research has suggested that few teachers are significantly integrating ICT into their class teaching and learning activities (Oberg & Gibson, 1999; Robertson, Grady, Fluck, & Webb, 2006). This study has investigated how the Internet was used to support teaching and learning in primary school classrooms.

Case study methodology was used for the study to provide an in depth view of how some teachers have integrated the use of the Internet into their classroom teaching and learning activities. Data for this study were collected from four public primary schools in New South Wales, during one ten week school term. The study focused on students in Years 3 to 6 in five classes as well as on their class teachers.

The study found that while all of the teachers used the Internet to some degree to support teaching and learning activities in the classroom this was done in various ways and with varying success. In particular, ICT infrastructure, access and use varied between classes and schools. Also of importance were the pedagogical aspects of integrating Internet technology into the classroom teaching program.

The implications stemming from this research include the need to offer more professional development on how to integrate ICT into class teaching for teachers as well as providing them with ready access to online resources and adequate ICT infrastructure.
# Table of Contents

Declaration........................................................................................................ii
Abstract........................................................................................................... iii
Table of Contents ............................................................................................ iv
List of Tables .................................................................................................. viii
List of Figures .................................................................................................. ix

Chapter One
Introduction ...................................................................................................... 1
  1.1 Introduction........................................................................................ 1
  1.2 Background to the Study ................................................................... 2
  1.3 Purpose and Rationale of the Study ................................................. 3
  1.4 Statement of Research Questions .................................................... 6
  1.5 Significance of the Study................................................................... 7
  1.6 The Research Design ....................................................................... 9
  1.7 Definition of Terms .......................................................................... 10
  1.8 Structure of the Thesis .................................................................... 12

Chapter Two
Review of the Literature................................................................................. 13
  2.1 Introduction...................................................................................... 13
  2.2 Policy in Educational Technology ................................................... 13
    2.2.1 The Global Context .................................................................. 14
    2.2.2 The Australian Context ............................................................ 18
    2.2.3 The New South Wales Context................................................ 20
  2.3 Implementing ICT in Schools .......................................................... 23
    2.3.1 Studies of the Implementation of ICT in Education ................. 23
      2.3.1.1 Leadership of ICT Implementation ................................... 25
      2.3.1.2 Teacher Professional Development ................................. 26
    2.3.2 Barriers to Using ICT ............................................................... 29
  2.4 Using ICT in the Classroom ............................................................ 32
    2.4.1 Integrating ICT in the Classroom ............................................. 35
  2.5 The Internet in the Classroom.......................................................... 37
    2.5.1 Using the Internet to Enhance Student Learning..................... 39
    2.5.2 Information Literacy ................................................................. 41
    2.5.3 Email ........................................................................................ 43
  2.6 Technology in Society ..................................................................... 45
    2.6.1 Digital Divide ............................................................................ 45
    2.6.2 ICT Use at Home ........................................................................ 48
    2.6.3 Internet Use at Home ................................................................... 48
  2.7 Conclusion........................................................................................... 50

Chapter Three
Methodology .................................................................................................. 51
5.2.4 The Main Research Question: How is the Internet used to enhance teaching and learning activities in the primary school classroom? ................................................................. 169
5.2.5 Implications of the Study ........................................................ 172
5.3 Limitations to this Study ............................................................ 173
5.4 Recommendations for Further Research .................................... 174
5.5 Conclusions ............................................................................. 176

References .......................................................................................... 177

Appendix A
E-learning journal .................................................................................... 193

Appendix B
Teacher Checklist ................................................................................... 196

Appendix C
Student Questionnaire ........................................................................... 197

Appendix D
Consent and Information Forms .......................................................... 199

Appendix E
Country Areas Program Tasks ............................................................. 208

Appendix F
Class C Handout ................................................................................... 211
List of Tables

Table 3.1 Measures of advantage/disadvantage for the areas surrounding each of the schools participating in the study. ................................................. 58
Table 3.2 E-learning journals and surveys completed by the participants in the study. ............................................................................................. 59
Table 3.3 Strategies used to ensure validity (based on Creswell, 2003) 71
Table 4.4 The types of Internet use, the number of students who commented and the total number of comments that occurred throughout the study by students in Class A. ....................................................... 78
Table 4.5 Number and percentage of Class A student uses of various search engines. ................................................................................. 82
Table 4.6 The types of Internet use, the number of students who commented and the total number of comments that occurred throughout the study by students in Class B. ....................................................... 94
Table 4.7 Number and percentage of Class B student uses of various search engines. .................................................................................. 96
Table 4.8 The types of Internet use, the number of students who commented and the total number of comments that occurred throughout the study by students in Class C .................................................. 106
Table 4.9 Number and percentage of Class C student uses of various search engines. .................................................................................. 108
Table 4.10 The types of Internet use, the number of students who commented and the total number of comments that occurred throughout the study by students in Class D ................................................ 120
Table 4.11 Class D student uses of various search engines................... 122
Table 4.12 The types of Internet use, the number of students who commented and the total number of comments that occurred throughout the study by students in Class E. .................................................. 133
Table 5.13 Student use of the Internet at home, SIEFA data including a socio economic indicator and home as the preferred location for all classes. ............................................................................................. 164
List of Figures

Figure 3.1 Outline of schools participating in the study. .......................... 57
Figure 3.2 Excerpt from a completed e-learning journal......................... 66
Figure 3.3 Teacher’s checklist for Internet use........................................ 67
Figure 5.4 The relationship and interdependence of ICT infrastructure, use and access. ................................................................. 167