

# **Young, Competent Internet-Users: A Theory-Based Profile**

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A thesis submitted to the University of Technology, Sydney  
in fulfilment of the requirements for the degree of  
Doctor of Philosophy

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## **CERTIFICATE**

I certify that this thesis has not already been submitted for any degree and is not being submitted as part of candidature for any other degree.

I also certify that this thesis has been written by me and that any help I have received in preparing this thesis, and all sources used have been acknowledged in this thesis.

Signature of Candidate

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## PUBLICATIONS AND PRESENTATIONS

Publications and presentations associated with this research include the following:

### Publications

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### Presentations

NSW Postgraduate Research Conference, 29 April 2005, “An Integrated Theoretical Approach to Building a Profile of the Young, Competent Internet-User”. New South Wales Institute for Educational Research, Sydney, Australia.

International Education Research Conference, 28 Nov – 2 Dec 2004, “Building a profile of the young Web-based learner”, Australian Association for Research in Education, Melbourne, Australia.

16<sup>th</sup> Annual World Conference on Educational Multimedia, Hypermedia & Telecommunications, 21-26 June 2004, “Towards an Integrated Theoretical Approach to Examine Learning Within Web-Based Environments”. Association for the Advancement of Computing in Education, Lugano, Switzerland.

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Fifth Annual Postgraduate Research Students’ Conference, 22 August 2003, “Learning processes and outcomes evident in Web-based environments”. University of Technology, Sydney, Australia.

NSW Education Research Forum, 30 May 2003, “Investigation of the learning processes and learning outcomes of individuals engaged with the World Wide Web”. New South Wales Institute for Educational Research, Sydney, Australia.

## ABSTRACT

This thesis presents a qualitative case study of the skills and characteristics of five competent Internet users aged between 10 and 13 years as they engage in Internet activities reflective of their day-to-day use of this culturally valued cognitive tool. The thesis focuses on their learning during these activities and describes the educational profiles of these young learners.

To uncover and more fully understand the learning experiences of young, competent Internet users an integrated theoretical framework was established. Specifically, relevant components of Situated Cognition, Distributed Cognition and Activity Theory, combined with understandings from several cognitive theories developed my understanding of the Internet-mediated learning environment. This integrated theoretical framework resulted in an Internet-Mediated Learning Model which has enabled a holistic understanding of this complex learning system. This model identifies the three major components making up the Internet-mediated learning system: individual, mediating tool (the Internet) and society, and acknowledges the intertwined relationship between these three elements.

The Internet-Mediated Learning Model considers the cognitive processing capabilities and active participation of the individual; the design features and distributive properties of the Internet; and the transmission of social knowledge and participation in local and global communities afforded by Internet-mediated activity.

The integrated theoretical framework was also instrumental in the research design of this study. Most importantly, as a result of the theoretical stance underpinning the study it was deemed appropriate to allow the participants to engage in Internet-mediated activity which was reflective of their day-to-day use of this tool, that is, authentic activity.

The data were collected in two distinct phases using four research methods: questionnaire, observations, think-aloud protocols and follow-up interviews. In the

first phase a questionnaire, which included a practical component, was developed to ensure the selection of participants who were competent Internet users. Each participant then chose their own Internet-mediated activity in which to participate. Whilst the participants independently completed this activity they were observed and asked to think-aloud. In the second phase, after analysis of the initial data, a follow-up interview was conducted to further explore some of the issues which emerged from the first phase of data collection. This interview also included a practical component using the Internet.

Analysis of the data resulted in a profile of the young, competent Internet-user. This profile revealed learning characteristics and skills of the user captured in three broad areas which, for this study, have been titled: Participant Citizen, Tool-Mediated Citizen and Adaptive Citizen.

The Participant Citizen captures the skills and knowledge being developed during Internet-mediated activity which relate to transmission of social knowledge and practices and which enable Internet-users to participate in local and global communities. The Tool-Mediated Citizen uncovers learning related to the design features of the Internet and considers the distributive properties of the tool. The Adaptive Citizen reveals learner characteristics which enable Internet-users to manage and negotiate the Internet-mediated environment.

Taken together, the Internet-Mediated Learning Model and profile of the young, competent Internet-user provide an in-depth understanding of learning in this unique and complex environment. This study highlights the value in reconsidering the learner skills and characteristics relevant to current and future generations and questioning our application of preconceived notions of learning to the new and relatively unexplored Internet-mediated learning environment.

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