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**Creating Optimal Literacy Learning Environments Using
Synchronous Technologies to Support Aboriginal Adult
Learners Effectively – A Narungga Perspective**

*Michelle Eady, B.A. (Psychology & Linguistics) CU, Dip Ed. UOW, M.Ed.
(Curriculum Studies) LU.*

A thesis submitted for the degree of
Doctor of Philosophy
University of Wollongong

Faculty of Education

June 2010

STATEMENT OF ORIGINALITY

This thesis reports the original work of the author, except as stated.
It has not been previously submitted for a degree at this or any other university.

Michelle Eady

June 2010

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Refereed Journal Articles

Eady, M., Herrington, A., Jones, C. (2010). Literacy practitioners' perspectives on adult learning needs and technology approaches in Indigenous communities. *Australian Journal of Adult Learning*, 50(2) (pp. 260-286).

Refereed International Conference Publications

Eady, M., Verenikina, I. & Jones, C. (2010). Indigenous sharing, collaboration and synchronous learning. In *Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications 2010* (pp. 960-969). Chesapeake, VA: AACE.

Eady, M., Herrington, A., Jones, C. (2009). Establishing design principles for online synchronous literacy learning for Indigenous learners. In *Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications 2009* (pp. 1049-1054). Chesapeake, VA: AACE.

Refereed National Conference Publications

Eady, M. (2008). *Using design-based research to produce strategies for synchronous literacy learning for Indigenous learners*. Paper presented at Emerging Technologies Conference. Wollongong, NSW, Australia.

International Conference Presentations (refereed on abstract only)

Eady, M., Verenikina, I., Nielsen, W. (2010). *Computer literacies and Australian Indigenous communities: sharing, scaffolding, and supporting in an online learning environment*. Paper presented at Canadian Society for Studies in Education. Montreal, QC, Canada.

National Conference Presentations (refereed on abstract only)

Eady, M. (2009). *Practitioners' views on literacy needs: a voice that must be heard*. Australian Council of Adult Literacy. Perth, WA, Australia.

Online Interactive Presentations (refereed on abstract only)

Eady, M. (2009). *Supporting the self-identified learning needs of Indigenous communities*. Paper presented online at Manitoba Association for Distributed Learning and Training Conference. Winnipeg, MB, Canada.

Eady, M. (2008). *e-Channel literacy: Bridging the distance*. Paper presented online at Australian Council for Adult Learning, Literacy Live Professional Development Session.

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I would like to acknowledge the traditional custodians of this land and pay my respects to the Elders both past, present and future for they hold the memories, the traditions, the culture and hopes of Aboriginal people everywhere. I would like to acknowledge all of the Aboriginal literacy practitioners and learners who have opened their hearts and minds to the idea of learning together using technology. We must always remember that under the concrete and asphalt, this land is, was and always will be traditional Aboriginal land.

Paying respect to the first peoples on whose land we are,
Acknowledging the loss of lands, cultures and treasures,
Knowing the consequences for people, communities and nations,
Believing we can walk together to a better future,
This research is a step in that direction.

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Acknowledgement of the Community of Point Pearce

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A special acknowledgment to the staff at Contact North|*Contact Nord* for their support during the time of this research, I am very thankful for the privilege and permission to use the training slides that I collaborated on with the staff for the purpose of this study.

To my colleagues at Sioux Hudson Literacy Council, words cannot express how much I appreciate your support, encouragement and faith in what I do. Thank you from the bottom of my heart.

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COMMUNITY PERSPECTIVE

There are many ways of learning and this process is another futuristic method of getting people to gain knowledge. It seems that we go from what was in the past to what is possible in the future. However, we must retain those valued cultural aspects of our lives which strengthen us, like our family, culture, language and identity.

Like everything, when we unite, there are those things which are outstanding and those that we need to build on because sometimes, we come at the subject from different eyes, and that's okay too because overall, we want to make educational outcomes the best that we can make it for the most disadvantaged people on the planet, in all countries everywhere; those who have been dispossessed, deprived, disempowered but have survived. We have to make it right and sometimes using modern technology of the future is another method of this empowerment. This project helped us to see this and go in that direction.

~Alice Rigney, Narungga Elder
May 2010

“Sophistication is the ability to approach culture with the minimum amount of anxiety.”

~Northrop Frye (1912-1991)

ABSTRACT

Current reports of literacy rates in Australia indicate a persisting discrepancy in literacy skills between Aboriginal and non-Aboriginal Australian adults at a time when the literacy demands of work and life continue to intensify. There are many perspectives of the literacy needs of Aboriginal adults, including opinions from the literature, literacy practitioners, and Aboriginal community members themselves. These needs include adult basic education skills such as reading, writing and mathematics education, as well as employability training and the ever-increasing demand for technology competencies.

Current and active projects worldwide are attempting to alleviate literacy issues and lessen the glaring skills discrepancy in Aboriginal communities by providing opportunities for flexible learning contexts in online, live-time, and mobile environments. The goal of implementing these synchronous platforms is to provide flexible learning opportunities to suit learners' busy schedules and needs, while enabling them to learn in "anytime, anywhere" environments.

The purpose of this research was to investigate how the literacy needs of adult learners in an Australian Aboriginal community could effectively be supported by the use of synchronous technology. The aim was to develop best practices to support adult literacy learners in Aboriginal communities within this context.

The research questions were three-fold. Firstly, the research identified the adult literacy needs in Aboriginal communities as derived from three sources; the literature reviewed, literacy practitioners interviewed, and from discussion with community members. Secondly, the types of supports and technology already in use by literacy practitioners in Aboriginal community settings were examined. Thirdly, and central to the research, was the creation of a set of principles and a model to be applied in similar teaching and learning contexts.

The theoretical framework for this research was a combination of three theoretical perspectives; Vygotsky's (1978) sociocultural theory, Lave and Wenger's (1991) situated learning model and Henderson's (1996) multiple cultural model. The three perspectives, depicted as encompassing circles, became more refined and introspective of the learning landscape of Aboriginal communities as each layer of theory was added.

To investigate the creation of an environment that best supports adult Aboriginal literacy learners with the use of synchronous technologies, a research approach that could incorporate practitioner knowledge and community participation in the creation of a solution was desirable. A paradigm that could also provide opportunities to test the solution was needed. For these reasons, the design-based approach (Reeves, 2006) was employed.

The process of research when using a design-based approach was undertaken in four phases. Initially design-based research involved the identification of the problem of literacy skill acquisition, and support and technology currently implemented. In the second phase, a collaborative community engagement project was developed as a solution to the problem identified. This was based on the draft-guiding principles drawn from the literature, consultation with literacy practitioners, and the community. The third phase of the research involved three iterations of the project in which the guiding principles were refined and the project reflected and improved at each phase. Finally, in the fourth phase of the research, eleven design-based principles emerged that will guide future research in the areas of online learning and Aboriginal adult literacy learners. This phase also presented an original model that added a further dimension to the assembled theoretical framework. The proposed Community Strength Model offers a conceptual approach to systems of learning in Aboriginal communities, starting with community-based goals and directions, and building shared learning experiences through authentic voice and community strength.

Together, these design-based principles and Community Strength Model can inform future directions in curriculum design and teaching approaches for community-based synchronous learning for Aboriginal adult learners.

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LIST OF ABBREVIATIONS

ABS	Australian Bureau of Statistics
ACAL	Australian Council of Adult Literacy
ACL	Alberta's Commission on Learning
AFLF	Australian Flexible Learning Framework
AISR	Australian Institute for Social Research
ANTA	Australian National Training Authority
ASPBAE	Asian South Pacific Association for Basic and Adult Education
BA	Bachelor of Arts
BEd	Bachelor of Education
CBNC	Crossing Boundaries National Council
CD-ROM	compact disc read-only memory
CDU	Charles Darwin University
CELTA	Certificate in English Language Teaching to Adults
CEO	Chief Executive Officer
CFG	Community Focus Group
CSM	Community Strength Model
DBP	Design-Based Principle
DBU	Digital Bridge Unit
DFEEST	Department of Further Education, Employment, Science and Technology
DGP	Draft-Guiding Principle
ESL	English as a Second Language
GLA	Good Learning Anywhere
GO	Getting Online
Grad Dip	Graduate Diploma
HSC	High School Certificate
IALLSS	International Adult Literacy and Life Skills Survey
ICT	Information and Communication Technology
ICQ	homophone for the phrase "I seek you"
IT	Information Technology

K-Net	Kuhkenah Network
Kindy	Kindergarten
KO	Keewaytinook Okimakanak
LBS	Literacy and Basic Skills
LLC	Limited Liability Company
LLN	Language Literacy and Numeracy
m-learning	mobile learning
MoE	Ministry of Education
MTCU	Ministry of Training, Colleges and Universities
NADC	National Aboriginal Design Committee
NILA	National Indigenous Literacy Association
NWOK	Native Ways of Knowing
NRS	National Reporting System
ONLC	Ontario Native Literacy Council
OPFG	Online Practitioner Focus Group
PC	Personal Computer
PEI	Yanomami Intercultural Education Program
PhD	Doctor of Philosophy
RA	Relationships Australia
RJ	Research Journal
RTO	Registered Training Organization
SHLC	Sioux Hudson Literacy Council
StatsCan	Statistics Canada
TACT	Teacher Assistant Career Training
TAFE	Training and Further Education
UAG	University Attendee Group
UNESCO	United Nations Educational, Scientific and Cultural Organization
Web CT	Web Course Tools
ZPD	Zone of Proximal Development

DEFINITION OF TERMS

For the purpose of this research, the following definitions will be used:

1. Elder education

Elder education is a term used in the Narungga community. It defines the wealth of knowledge, wisdom and experience that an Elder possesses and passes on to others. To be imparted with Elder education means an Elder has shared his or her knowledge with you.

2. Indigenous

The word *Indigenous* does not currently have an established, congruent global definition that is found in any dictionary. The United Nations Educational, Scientific, and Cultural Organization (UNESCO) (2004) stresses:

There is no universal and unambiguous definition of the concept of 'Indigenous peoples,' since no single accepted definition captures the diversity of Indigenous cultures, histories and current circumstances (p. 10).

Through its work in supporting the rights and status of Indigenous populations on a global level, the United Nations has established the following as a working definition of Indigenous peoples that will be the working definition of this research:

Those which, having a historical continuity with pre-invasion and pre-colonial societies that developed on their territories, consider themselves distinct from other sectors of the societies now prevailing in those territories, or parts of them. They form at present non dominant sectors of society and are determined to preserve, develop and transmit to future generations their ancestral territories, and their ethnic identity, as the basis of their continued existence as peoples, in accordance with their own cultural patterns, social institutions and legal systems (Martinez Cobo, 1986, p. 44).

3. Literacy

There are many definitions for the term literacy. For the purpose of this research, literacy is not viewed solely as a set of skills limited to reading and writing, but as Bougie (2008) suggests:

Literacy skills are seen as essential for individuals to realise their full personal, social and economic potential, and the foundation upon which

people may acquire additional knowledge and skills throughout adulthood (p. 3).

Literacy activities can be recognised in three ways, which when viewed together provides a wholistic view of literacy:

1. Functional; such as filling out forms or personal banking,
2. Home-based; for example, reading and managing recipe instructions or reading to children,
3. Work-related; for example reading reports, using a computer and completing tasks associated with employment (Kral & Falk, 2004).

When using the term literacy in the context of Indigenous peoples, this wholistic perception of adult literacy for Indigenous peoples broadens to include the preservation of cultural identity and attainment of community self-determination (Antone et al., 2002; George, 1997; Kral & Schwab, 2003; Zepke & Leach, 2002).

4. Literacy practitioner

The term literacy practitioner refers to the individual who might act as an instructor, mentor and guide in teaching basic literacy skills to adults. This includes both trained instructors and community volunteers who may work with small groups consisting of one to 10 learners, or more (Community Literacy of Ontario, 2009). In the context of today's learning environment, this also includes larger groups in an online setting. The writer of this thesis recognises that those who work in the field of adult literacy "have diverse and often multiple roles in the delivery of literacy programming – whether instructor, advocate, counsellor, administrator, coordinator, etc." (Sault College, 2006).

5. Platform

For the purpose of this research, the definition of platform will be adopted from Wenger, White and Smith (2009): Platform means a technology package that integrates a number of tools available on the marketplace (for purchase or for free) that one can acquire, install or rent. Platforms offer communities a simple entry into using a set of tools (p. 40).

6. Point Pearce Community (by request)

As mentioned in the first definition, the term Indigenous is used in much of the literature as a means to provide a working definition of ‘Indigenous peoples.’ There are many other terms that are used globally for this population, such as Aboriginal people, First Nations people, and Traditional Custodians. For certain groups, the language group is a preferred name; for instance, Narungga people or Cree Nation. For the purpose of this research, the community has requested that the term Aboriginal be used when discussing the community of Point Pearce and community members directly. Much of the literature in Chapter Two uses the term Indigenous that the research has left intact, however, the research questions and work described onwards will respect the communities’ wishes and use the term ‘Aboriginal.’

At the beginning of the research, the community signed consent forms that would assure their personal anonymity and the anonymity of their community. However, once the research was completed and the final presentation and document delivered to the community members, the community asked if their first and last names could be used in the acknowledgement section of this document, as well as identification of their community and their language group acknowledged. This research was done in cooperation with the community, and therefore, the researcher complied with their wishes.

7. Remote communities

Remote communities are considered geographically isolated locations that are generally limited to access by air, water or railway transportations. Depending on seasonal conditions, some road access can be used for human transport and hauling goods (McMullen & Rohrbach, 2003). Limited access to services in these communities necessitates residents to travel to larger urban centres for some personal needs, employment and amenities such as visits to hospital, high school attendance, and shopping.

8. Synchronous learning technologies

Synchronous learning refers to learners and instructors exchanging information and interacting simultaneously in an online learning community in *real time*. Synchronous learning technologies currently utilised in the area of adult literacy include Internet

conferencing, satellite broadcast, mobile or cellular phones, video conferencing and interactive chat rooms (Aderinoye, Ojokheta, & Olojede, 2007; Australian Flexible Learning Framework, 2009; Greenall & Loizides, 2001).

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