An investigation into adult learners' experiences of developing distributed learning networks with self-publishing technologies

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Certificate of Original Authorship

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

Signature of Student:

Date:

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List of Peer-reviewed Publications and Conferences

Bartlett-Bragg, A. 2003a, 'Blogging to learn', *The Knowledge Tree*, no. 4, December, <http://www.flexiblelearning.net.au/knowledgetree/edition04/html/blogging_to_learn_intro.html>

Bartlett-Bragg, A. 2003b, 'Blogs – enhancing reflection in e-learning', paper presented to the *e-Learning: A virtual promise? 4th international conference on human-system learning*, Glasgow, 2–4 July 2003.

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Bartlett-Bragg, A. 2005, 'Preparing for the future', *International Journal of Design Sciences & Technology,* vol. 12, no. 2, pp. 115–22.

Farmer, J. & Bartlett-Bragg, A. 2005, 'Blogs @ anywhere: High fidelity online communication', *Proceedings of the balance, fidelity, mobility: Maintaining the momentum, ASCILITE conference,* Brisbane, 4–7 December , pp. 197–203. <http://www.ascilite.org.au/conferences/brisbane05/blogs/proceedings/22_Farmer.pdf>

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Bartlett-Bragg, A. 2007, 'Reflections on pedagogy: Understanding adult learners' experiences of weblogs', in T. Burg & J. Schmidt (eds), *BlogTalks reloaded*, Herstellung, Vienna, pp. 119–241.

Bartlett-Bragg, A. 2008a, 'e-Learning experiences', in J. Athansasou (ed.), *Adult education & training,* David Barlow Press, Terrigal, NSW, pp. 295–308.

Bartlett-Bragg, A. 2008b, 'Pedagogical practice for learning with social software', in T. Hansson (ed.), *Handbook of research on digital information technologies: Innovations, methods, and ethical issues*, Information Science Reference, Hershey, PA, pp. 160–76.

Bartlett-Bragg, A. 2008c, 'Reframing assessment', in J. Luca & E. Weippl (eds),

Proceedings of world conference on educational multimedia, hypermedia and telecommunications 2008, AACE, Chesapeake, VA, pp. 4020–4.

Bartlett-Bragg, A. 2009, 'Reframing practice: Creating social learning networks', *International Journal of Development and Learning in Organisations,* vol. 23, no. 4, pp. 16–20.

Definitions of Terms used throughout the Thesis

A list of definitions of terms related to social software and weblogs that may be referred to in this thesis are outlined below. It is relevant to note that some terms were popular at the time of the study, but are no longer common usage, or the technology has evolved and the term is redundant (these are highlighted).

Aggregator: A software application, often called a 'feedreader' used to gather a subscriber's feeds and present them in a browser page. The aggregator is automatically updated on a regular basis with new content from the feeds as they become available.

Asynchronous technology: Communication technologies that allow exchanges in elapsed time. For example, email, or discussion boards, frequently used in LMS. SMS sent via mobile phones is commonly included in this category.

Architecture of participation: Coined by Tim O'Reilly in 2003, refers to systems (software) that are designed for user contributions, where a community of users influences the content and / or design of the processes.

Blogs (weblogs): A website publishing software, generally written by a single author, displaying dated entries in reverse chronological order. Additional features enable the author to categorise and archive each entry. Most blogs allow readers to use a comment function to provide feedback to the author.

BYOD: Bring your own device, a term frequently used in contemporary contexts that refers to a preference for using personal devices rather than those supplied by an institution or organisation. Hence, bring your own. Typically includes laptops, mobile phones, and tablet devices.

CMC: Computer-mediated communication, generally assumed to be accessed via the internet, typically used to refer to discussion boards and chat rooms.

Distributed Learning Network (DLN): In this research study, a DLN is defined by a network of learners, connected through the internet, where communication, sharing, and learning is distributed across the collective, shared understandings through the network as a whole, not the individual. See Chapter Two, Section 2.2 for further description.

ePortfolio: Electronic portfolio – typically referring to a collection of artefacts, similar to an electronic CV. Recent developments have seen a new range of software applications that provide the online structure, such as Mahara which is being used extensively in the Australian vocational education sector. However, it is argued that an individual collecting and presenting their work in any online format, in particular using weblogs, is publishing an ePortfolio.

Folksonomy: A user-generated categorising system or taxonomy facilitated by applying popular or commonly referred to tags or labelling terms. (Redundant: this term is rarely used in current social software terminology).

ICT: Information and Communication Technology – commonly used in a broad context to describe any communication technology. However, more recently it has been accepted as referring to web-based technologies.

LMS: Learner Management System, e.g. Blackboard. Used by both Higher Education Institutions and enterprises to manage and report on learner activities, and to store and distribute learning materials. Generally available to users through any internet connection; however, some organisational contexts may have restricted access to onsite only.

mLearning: to learning delivered using mobile devices, initially only through web-enabled mobile phones, most recently being used with iPhone (smartphones) and iPad (tablet) applications. Very few mobile phones were web-enabled at the time the study was conducted and they were not being commonly used for learning.

PLE: Personal Learning Environment – a learner-centred approach that allows the learner to select and maintain different social software platforms that best suit their learning needs and context. Frequently, the weblog is the underpinning platform that supports the aggregation of content from other social software applications, such as Delicious (social bookmarking).

Podcast: A digital audio file distributed over the internet, downloaded by subscribers for playback on computers or portable devices, such as mobile phones.

RSS: Really Simple Syndication is a function that allows content to be imported into other web pages. RSS originated in weblog software but is now available across many

other sources, such as news and journal sites. RSS enables readers to subscribe to webfeeds from sites of their choice, monitor updates, and view them in a single page from a web-based service called an aggregator, e.g. Netvibes (http://www.netvibes.com). The power of the aggregator for learners comes from the ability to control and manage the flow of information in a centralised manner.

Social bookmarking: A browser-based service, similar to a Favourites list on an individual computer, that allows the user to share website bookmarks with others, for example Delicious. Folksonomy tagging encourages the development of shared interest networks.

Social media: A sub-set of social technologies or social software, social media typically refers to publically available software that allows people to interact with each other. Content is based on a user-generated and user-participation model and is commonly associated with sites such as Facebook, YouTube, and Twitter and can encompass weblogs, most likely to be associated with consumer facing brands.

Social network: A social network is made up of connections between nodes, generally represented by individuals, where the strength of the connection is created through relationships. A social networking site, such as Facebook, refers to a website that is based on individuals creating user profiles to connect with others.

Social software: A term attributed to Clay Shirky in 2003. The range of applications that augment group interactions and shared spaces for collaboration and social connections, and aggregates information exchanges in a web-based environment. Social software is considered a major component of the current Web 2.0 applications.

Social technologies: A term frequently used interchangeably with social software. It encompasses all social software applications as an umbrella term. Social media and social networking are sub-sets under this umbrella.

Synchronous technology: Communication technology that enables real-time exchanges, such as online chat, webinars, and video-conferencing.

User-generated content: Typically refers to content produced by the general public, rather than content controlled by a web-master. The social software applications used to provide user-generated content are all based on users being the content publishers. The

term can also be applied to specific areas of a website, for example, the comment function on a weblog, where the author of a weblog controls the content of the post, but the general public has the ability to contribute comments to each post.

Vodcast: A video podcast or video clip distributed on the internet and available for download through RSS subscription and aggregation for playback on computers or portable devices, popularised more recently by the success of YouTube (which was not available at the time of this research study). (Redundant: Vodcast is a term rarely used, the more commonly used term would just refer to video.)

Web 2.0: Coined by Tim O'Reilly in 2005, a series of new generation or 2.0 software applications available on the world wide web. Typically, it includes applications that have a rapid, low-cost approach to development, focused on mash-ups (created by combining different sources to create a composite application). The underpinning philosophical principles of development are focused on people and participation, emphasising ease of use (usability), enabling participation and communication, and facilitating networks of people with shared interests to connect. Web 2.0 software developments include the social software range of weblogs, wikis, social bookmarking, and others referred to in this thesis.

Wiki: A collaborative authoring website application that allows groups of users to easily write, edit, and publish content to the internet. Used frequently for community, group or project-based learning activities.

Abstract

Currently, higher education institutions and organisational learning contexts are experiencing significant change where educators are challenged by a reduction in available funding, a disconnect between offerings and learner expectations, and a rapidly shifting technology landscape where personal computing options are ubiquitous and frequently more engaging and flexible than options available through universities or workplaces. As organisations search for new business models and more cost effective methods to distribute content and reach a greater number of learners, the potential to implement strategies to improve learning and enhance experiences through self-publishing with social software and associated networked technologies is not being realised.

This study was conducted in 2005, when the use of weblogs and related social software was increasing in ease of use and adoption rates, with a growing number of supporters claiming the weblog was going to be the most significant technological development in online learning since the introduction of enterprise level Learner Management Systems. The basis of the study was to investigate the variation in adult learners' experiences of developed distributed learning networks (DLNs) that extended the learning beyond the physical boundaries and opinions of the classroom context through the use of self-publishing social software.

The research used an original pedagogical approach, the 5-Stage pedagogical framework (5SPF), which was developed from five years of practice for the introduction and integration of social software into learning environments. This framework enabled the collection of data directly addressing the research questions that form the basis of this thesis. The systematic approach to understanding the learners' collective experience of self-publishing provided by the 5SPF enabled a focus on the scaffolding and support required by students within this teaching and learning environment.

This innovative methodological research framework was developed through a combination of phenomenographic and interpretive methods to determine the qualitatively different ways learners experience the use of self-publishing technologies, in particular weblogs.

The range and depth of data sets obtained through the methodological framework has facilitated a rich set of findings that were complied over a relatively long period of time. This longer period of time enabled the research participants to reflect upon their responses in ways that are not possible using traditional qualitative methods.

The results indicate the pedagogically significant variations represented in phenomenographic categories of description that highlight the critical differences in the ways learners experience the process of developing and learning in a DLN, while the expanding themes of awareness informed the DLN outcome space that demonstrated the value of the 5SPF to specifically provide strategies to enable new approaches to learning through self-publishing and highlighted the need for a new approach to teaching with social software, the Connected Educator.

A retrospective review of literature and practice at the time of the study is made relevant through the analysis of results in comparison with contemporary perspectives and current research, demonstrating the validity of the 5SPF as an approach that has withstood enhancements in new technologies and increasingly signifies the need to ensure that a strategic pedagogical approach is present in the current changing learning landscape.

The thesis describes major contributions from the study, highlighting that the emphasis on technology is less consequential to a learning impact than the value attributed to the act of learning through self-publishing and the importance of a pedagogical framework to successfully integrate new technologies into learning environments.