A Virtual Online Seminar: Integrating Pedagogy and Technology

Lorraine Taylor

Abstract—**Research confirms that designing effective online learning environments positively affects students understanding, motivation and retention. This paper analyzes the design and facilitation of an online seminar created for a graduate level university course that was held for ten days. It highlights current research on effective social constructive pedagogies and frameworks used to design online learning environments. It examines effective facilitation and discussion techniques that serve as vehicles for collaborative and motivational learning. This paper concludes that educators can ensure that online learning communities enable learning through effective construction, design and facilitation of online environments.**

Index Terms—**Pedagogy, technology, instructional design, social presence.**

I. INTRODUCTION

Research findings in recent years provide compelling evidence of the importance of encouraging student control over the learning process. There is a need for pedagogies that are personal, social and participatory to be incorporated into online learning environments. Learners are now active participants and co-producers of learning resources rather than passive consumers of content [1]. Students and teachers need to move towards a social and participatory pedagogy rather than one based on the acquisition of pre-packaged facts [1]. This paper analyzes the design and facilitation of an online seminar created for a graduate level university course that was held for ten days. It highlights current research on effective social constructive pedagogies and frameworks used to design online learning environments. It examines effective facilitation and discussion techniques that serve as vehicles for collaborative and motivational learning.

II. DESCRIPTION OF PEDTECH ISLAND

PedTech Island is a virtual learning space created and designed to actively research, debate, and collaborate on effective ways to learn smarter by weaving pedagogy and technology into online learning design. The seminar participants were graduate level university students. PedTech Island's design was grounded in social constructive pedagogies and online instructional design frameworks. Facilitation of the seminar occurred over a ten day period and involved participants developing a social online presence, interacting with other attendees, collaborating, and capturing cognitive challenges through learner-centered dialogue. This

paper details the pedagogies, frameworks and theories used in the designing and facilitation of the PedTech Island seminar. PedTech Island was a virtual learning space created using Wikispaces, Twitter, and HootCourse.
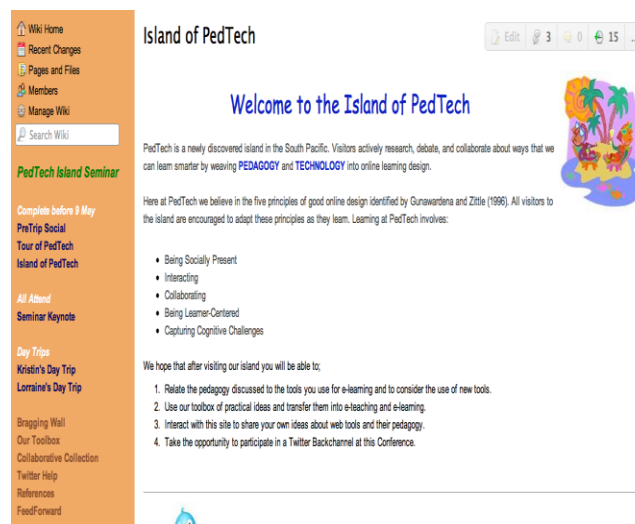

Fig. 1. PedTech seminar welcome page

III. PEDAGOGICAL FRAMEWORKS IN ONLINE LEARNING ENVIRONMENTS

Online learning environments involve more than just the acquisition and dissemination of information [2]. Information is not the same as knowledge and a clear distinction needs to be made between information and knowledge [2]. Vast amounts of information are now being collected into digital junkyards that are of little use in driving innovation and understanding. Effective online learning involves more than accessing truckloads of information by individual learners.

Learners are constructors of meaning as is seen in the expanding social web tools that signal changes in the learning landscape. Learners are active participants, creators of knowledge and seekers of engaging personal experiences [3]. In such a digital world we need to expand our vision of pedagogy so that learners become active participants and co-producers rather than passive consumers of content. Online learning needs to be participatory and social, supporting personal life goals and needs [3]. Good pedagogy needs to be built into the design of learning environments by promoting close links between learning objectives and learning activities.

A. Social Learning Theory

Social Learning Theory focuses on learning that occurs within a social context and involves personal experiences,

observations and interactions with other individuals [4]. Learners do not simply gather information on their own but collaborate among themselves sharing ideas and creating useful knowledge. This collective intelligence acknowledges that when working cooperatively and sharing ideas, a community of learners can be significantly more productive than individuals working in isolation [3], [5]. Collaborative learning leads to a deeper level of learning, critical thinking, and shared understanding.

B. Pedagogy 2.0

The key elements of Pedagogy 2.0 are an emphasis on personalization, participation and productivity [3]. Social software tools make it easy for learners to engage deeply with their peers, instructors, other subject-matter experts and the community at large [3]. PedTech Island's virtual seminar offered a place for a group of university students to gather in a virtual way. They were able to collaborate, share their knowledge and construct new knowledge. McLoughlin and Lee [3] support the idea that a community similar to PedTech Island could go beyond their collaborative group to include people beyond the traditional classroom [6]. These wider communities resemble a network of learning environments that are made possible with the social and collaborative technological tools available today.

IV. INSTRUCTIONAL DESIGN OF A VIRTUAL ONLINE SEMINAR

PedTech Island was designed using current instructional design concepts. Steeples, Jones, and Goodyear [6] developed a continuum for e-learning design that includes the provision of resources, communication and social interaction, learning assistance, cognitive interaction and feedback on performance. The learning space that is created is a place for interactions between individuals, between individuals and their environment and between individuals and information [7]. The continuum of e-learning design was incorporated into the design of PedTech Island.

A. Integration of Wikispaces, Twitter and Hoot Course

Web based tools and technologies continue to grow, thereby expanding opportunities to integrate social media and technologies into teaching and learning. Socially based web tools and technologies are capable of supporting informal and asynchronous conversation [1]. This allows learning to take place anytime and anywhere. Students are driving change and prefer social networking tools that allow them to be mobile as they work and learn. We are now witnessing a blurring of the distinctions between learning, work and play [3], as mobile computing devices are becoming an essential part of daily lives. These e-learning technologies provide the tools and capacity for networked learning communities to expand and transform notions of learning that produce healthy and productive lifelong learners [8]. Wikispaces, Twitter and HootCourse were integrated into the design of PedTech Island to encourage student interactions and dialogue.
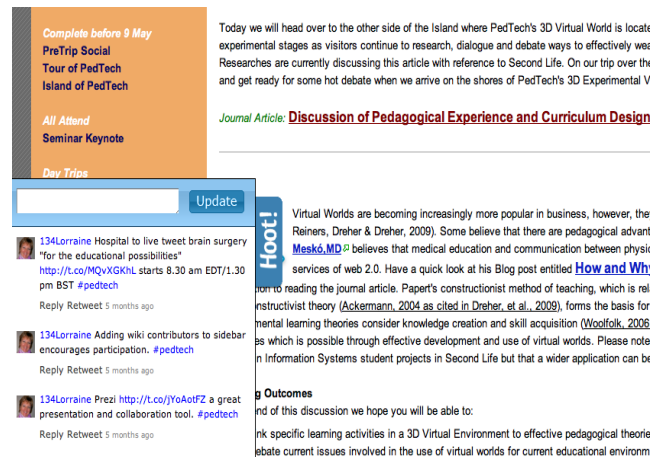

Fig. 2. PedTech seminar integration of Wikispaces, Twitter, and HootCourse

B. Authentic Content and Task Oriented Discussions

The value of the traditional textbook is being questioned, yet, there is a need for emphasis on authentic content to support a foundation of learning. This content today is often in the form of hyperlinks to journal articles, YouTube videos, podcasts and blog posts [6]. Instructors today now have the advantage of drawing from a wide range of sources to ensure authentic content forms the basis of learning that drives task oriented discussions. More importantly, instructors today are not disseminators of resources and information but have become co-learners and co-collaborators.

Authentic content encourages learners to cognitively engage with the materials provided [4], [6]. PedTech Island included journal articles relevant to the three participatory sections within the wiki. As well, a variety of resources were made available with an option to preview. This allowed the learners to make contrasts between the material presented and their own perspective. Furthermore, interaction was encouraged through the asynchronous dialog forum. The design of the virtual seminar promoted and encouraged self-directed and self-regulated learning through personal choices in reading materials and a collaborative toolbox that was added to by conference attendees. This ensured that content was related to task oriented discussions that resulted in more collaborative resources being added to the wiki. The initial resource base expanded throughout the seminar as learners shared their resources.
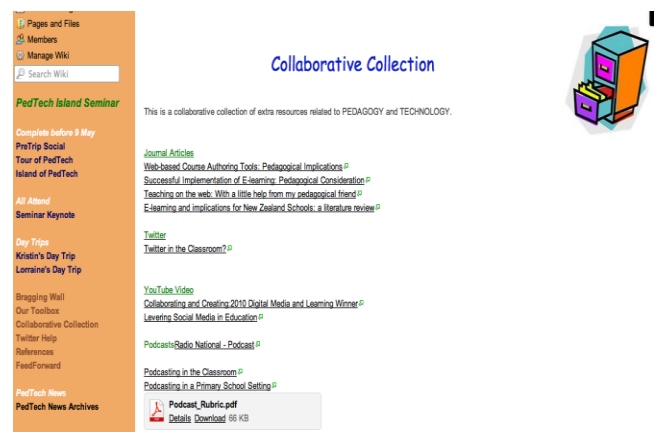

Fig. 3. PedTech seminar collaboration resources

C. Effective Scaffolding

Current research points to a growing appreciation of the

need to support and encourage learner control over the learning process and to provide assistance that is available when needed. The challenge of educators is to enable self-direction, knowledge building and autonomy by providing options and choices while still supplying the necessary structure and scaffolding [1]. Support is often provided through help systems, visual aids and feedback [5] that are integrated into the design of the learning environment.

Scaffolding was carefully designed into PedTech Island. Each of the main tasks was presented in the same way building a solid framework for the learning environment. A carefully selected journal article was chosen based on a specific topic. A magnifying glass icon signaled a closer examination of that article based on specific learning outcomes. An open box icon encouraged participants to unpackage the concepts relating their reading to their own situation. A toolbox icon encouraged collaboration of ideas and the adding of new ideas and resources to each individuals existing skill set. Scaffolding was further provided through specifically created videos that were embedded into the wiki offering support and guidance.
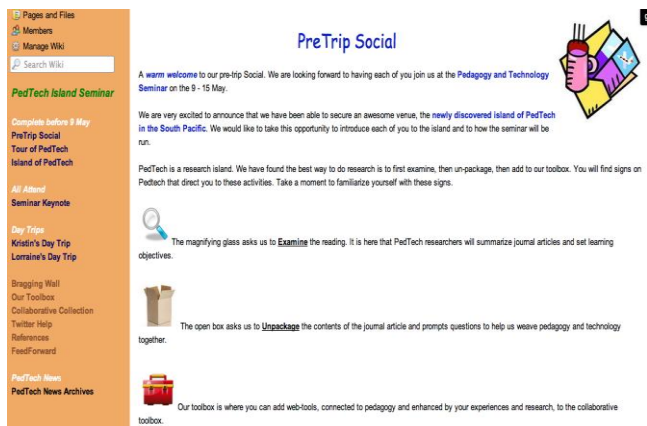

Fig. 4. PedTech seminar learner support

Fig. 5. PedTech seminar embedded tutorial video

V. FACILITATION TECHNIQUES USED IN ONLINE ENVIRONMENTS

A. Develop a Social Presence Online

Developing a social presence online is essential in online learning environments. According to Kehrwald [9], social presence is the means by which online participants inhabit virtual spaces and indicate not only their presence in the online environment but also their availability and willingness to engage in the communicative exchanges which constitute learning activity in these environments.

Instructors should generate a social presence in the virtual classroom by facilitating discussions effectively. Discussion forums should nurture a strong sense of community within the virtual classroom [4]. This encourages all participants to become social and present. It is important that people feel safe within a group to allow openness for success, failure and growth [10], [7]. Developing positive social presence models good online etiquette for all participants.

To promote community building and social presence, it is useful to have separate discussion forums available where students can discuss topics of mutual interest [4]. PedTech Island had specific areas that were not part of the main learning spaces but offered places to become acquainted with other learners. This was effectively encouraged through the pre-social event that was an informal place that seminar attendees introduced themselves and became familiar with the learning space found at PedTech Island.

B. Increase of Students Status and Motivation

The main aim of PedTech Island was to ensure that attendees were comfortable within the virtual environment, they were able to have opportunities to learn collaboratively, and that they were motivated to participate for the entire ten days of the seminar. Learners who are valued for their contributions gain a positive attitude toward learning and this is further encouraged when students are given positive feedback for contributing to course discussion [4]. Feedback was provided and the learner-centered social environments encouraged status changes from novice to expert as tasks and goals changed [11], [8]. Furthermore, attendees were further motivated to participate in the online discussions as the learning goals and course objectives were aligned [3], [12]. Motivation helps to develop a positive social presence within the community of learners.

C. Emphasis on Interactions

When socially based web tools are used effectively they shift learning from a teacher-centered approach to student-to-student learner centered approach. Knowledge evolves as individuals participate in and negotiate their way [5] through a learning experience. Interactions within the seminar were encouraged by creating channels where feedback and reflection were shared creating an environment that supported the learner [6]. Social participation during the seminar included learning through observation, dialogue, storytelling and conversations [7]. The use of Twitter encouraged interactions to occur anytime and anyplace. This was particularly helpful as some attendees related journal article readings to their work situations. They were able to tweet ideas and share resources. The use of HootCourse correlated the tweets within a virtual space that was easily accessible. The integration of HootCourse into the wiki allowed for a seamless flow of conversation and interaction.

VI. CONCLUSION AND FURTHER RESEARCH

PedTech Island seminar was carefully designed to incorporate social constructive pedagogies and frameworks. Research confirms that designing effective online learning environments positively affects students understanding, motivation and retention. The global learning landscape of the twenty-first century is being transformed and shaped by the uptake of digital communication tools, as well as, the changing characteristics, needs and demands of students [1]. Online learning environments need to provide motivation to engage in productive discussions [4] with clear expectations for positive interactions identified. Interaction and student cognitive engagement during the online discussion are critical for constructing new understanding and knowledge [12]. Learning technologies are capable of supporting and encouraging informal conversation dialogue, collaborative content generation and the sharing of knowledge [1] as was evidenced by the design and facilitation of PedTech Island seminar.

The current move towards personalization of online learning environments requires aiding learners in developing the fundamental skills that enable them to manage their own learning. It is essential to explore and integrate social media in ways that pave the way for participation, community connections, social interaction and global networking [6]. An awareness of learner experience and the importance of evaluating the learners' pre-existing skills and capitalizing on them is a subject for further research.

REFERENCES

[1] B. G. Wilson and K. M. Meyers, "Situated Cognition in Theoretical and Practical Context," in *Theoretical Foundations of Learning Environments,* D. H. Jonassen and S. M. Land, Ed, Mahway, NJ: Lawrence Earlaum Associates, pp. 57-88, 2000.

[2] J. Derry, "Technology-enhanced learning: A question of knowledge," *Journal of Philosophy of Education,* vol. 42, no. 3, pp. 505-519, 2008.

[3] A. Sense, "The project workplace for organizational learning development," *International Journal of Project Management,* vol. 29, pp. 986-993, 2011.

[4] C. Steeples, C. Jones, and P. Goodyear, "Beyond E-Learning: A Future for Networked Learning," in *Networked Learning: Perspectives and Issues,* C. Steeples and C. Jones, Ed, London: Springer, pp. 323-342, 2002.

[5] A. P. Rovai, "Facilitating online discussions effectively," *Internet and Higher Education,* vol. 10, pp. 77-88, 2007.

[6] B. Anderson, "Writing power into online discussion," *Computers and Composition,* vol. 23, pp. 108-124, 2006.

[7] B. A. Kehrwald, "Understanding social presence in text-based online learning environments," *Distance Education,* vol. 29, no. 1, pp. 89-106, 2008.

[8] K. Kreijns, P. A. Dirschner and W. Jochems, "Identifying the pitfalls for social interaction in computer-supported collaborative learning environments: A review of the research," *Computers in Human Behavior,* vol. 19, pp. 335-353, 2003.

[9] C. McLouglin and M. J. W. Lee, "The three P's of pedagogy for the networked society: Personalization, participation, and productivity," *International Journal of Teaching and Learning in Higher Education*, vol. 20, no. 1, pp. 10-27, 2008.

[10] C. McLoughlin and M. J. W. Lee, "Personalised and self regulated learning in the Web 2.0 era: International exemplars of innovative pedagogy using social software," *Australasian Journal of Educational Technology,* vol. 26, no. 1, pp. 28-43, 2010.

[11] B. L. McCoombs and D. Vakili, "A learner-centered framework for e-learning," *Teachers College Record,* vol. 107, pp. 1582-1600, 2005.

[12] E. Zhu, "Interaction and cognitive engagement: An analysis of four asynchronous online discussions," *Instructional Science,* vol. 34, pp. 451-480, 2006.

Lorraine Taylor was born in Colorado, USA in 1963. She graduated from the University of Colorado in 1987 with a Bachelor of Arts Degree and a Diploma in Secondary Education. In 2012 she graduated with Distinction being awarded a Post-Graduate Diploma in Education in E-Learning from Massey University, New Zealand. She is currently completing a Masters Degree in Business with an emphasis in Communication Management from Massey University. She began her teaching career in the United States. In 1987 she joined the United States Peace Corps and worked as a Secondary Mathematics and Geography teacher in Papua New Guinea. She continued her teaching at International Schools in the Seychelles and Dubai. In 2006, she moved to New Zealand and taught Secondary Mathematics in both public and private schools. She has recently returned to Dubai where she plans to complete her Masters Degree. Her current research interests include knowledge management, communities of practice, and workplace learning. Mrs. Taylor is an active member of Toastmasters where she competes regularly in speech contests and was awarded third place in the International Speech Contest at New Zealand's National Convention in 2012. Her recent research article, "Peer Ecologies in a Blended Learning Environment," was published in the University of Canterbury Conference Proceedings for ULearn 2012 held in Auckland. At that conference she also presented a workshop on "Proactively Managing Social Presence". In 2011, she volunteered her time to design an online course using Articulate software for Handicap International to assist in the training of their global staff working in the field as part of the Global Giveback program sponsored by the eLearning Guild.