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Applying social constructionist theory of learning to improve student educational experience: an *elgg* experimental study

Tung Lai Cheng School of Business and Administration Wawasan Open University Email:lctung@wou.edu.my Tel: 04 2289323 ext.431

Abstract

The social constructivism theory proposes that groups construct knowledge from one another, learners learn best when interacting with other learners in a group. Given the rising popularity of both distance learning and social networking tools that are linked to socio-constructive pedagogical ethos, it seems logical to merge these two popular technologies with the goal of improving online teaching and learning. The integration seems to hold promise for distance learning mode. To reduce the gap in the literature, the present experimental study explores the educational benefits of social media tools on distance learners' perspectives and experiences in an online course taught using both elgg and Learning Management System (LMS) platforms. Findings from this study indicate that learners enjoyed the social learning experience afforded by the elgg social media tool better when compared to LMS to support one another in their distance learning experiences. It was also noted that learners, with little experience of social networking and sharing features on elgg, exhibited high involvement in courserelated work and graded exercises in most cases. Additionally, learners shared information only at the level required by the instruction mode. Nevertheless, learners noted they perceived their learning experience was enhanced by their interaction with each other and the instructors. Future research on the topic should extend to a larger group of learners, perhaps inclusive of the perspectives from the instructors to help expand the literature in this area.

Keywords: social constructionism, connectivism, distance learning, student interaction, social media and networking, learning management system

Sub-theme: Transforming learning via social media

I. Introduction

New technologies that influence how information is created, shared and connected holds promise for education, especially in the online distance education mode. Historically, much of online distance education has been plagued by issues such as learners' feelings of isolation, a lack of participant interaction from learner-to-learner and from learner-to-instructor, and this can lead to higher dropout rates compared to conventional education (Veletsionos and Navarrete, 2012). Simultaneously, with the emergence of Web 2.0 technologies and the recent popular growth of social networking applications, distance learners have increasing opportunities to practice the 21st-century skills, specifically: collaboration, knowledge sharing and the development of critical thinking skills. As noted by Siemens and Conole (2011) "... the idea of the Internet – distributed, social, networked – influences the structure of education, teaching, and learning". The authors observed that the emergence of new internet technologies has re-made how people communicate and interact with each other and how society creates and shares content with each other. The implications for education are significant. The changing technological environment provides new opportunities for teaching and learning focused on the use of social networking sites to create better, more functional learning communities.

General interest in student-centred pedagogies has shifted to the use of social media tools as a replacement of traditional teaching and learning tools to enhance student learning. The integration and use of social networking technology as a distance learning platform seems to hold promise (Brady, Holcomb and Smith, 2010; Siemens and Conole, 2011; Veletsionos and Navarrete, 2012). Many distance education institutions have traditionally employed Learning Management Systems platform (LMS) and/or Content (Course) Management Systems (CMS) platforms. While generally, LMS and CMS promotes a certain amount of information exchange between learners, these suffer from the fact that they do not happen in "real time", they lack the feature of users having an online social presence, fail to support personalisation and are very much lesson-focused. Studies on distance education have also shown that learners are more successful in their coursework when they able to develop a sense of community and belonging when they do not get the opportunity to meet and in interact face-to-face with their peers, cohort members or instructors (DeSchryver, Misha, Koehler and Francis, 2009). Anderson (2005) noted that the key variable interaction in the online learning environment pivots on the role of social presence among the learners. The contention is that social presence leads to reduced feelings of detachment while simultaneously encouraging more interaction and participation. Although LMS or CMS are popular in education, newly emerging social networking technology (such as *elgg* and Ning), created specifically for an educational environment, provides another kind of opportunity for distance educators to tap into in order to encourage 'social presence" and facilitate a sense of community among students. A main feature of social networking technology is that it focuses on the learners rather than simply content, which encourages development of a "learning community".

Nevertheless, studies on technological innovations in teaching and learning suggests that for technology-rich interventions to be successful, they need to be accompanied by sound pedagogical enhancement (Doering and Veletsianos, 2008; Veletsianos, 2010). This study is an attempt to explore the pedagogical linkages between a social constructionist theory of learning and social networking media (*elgg*) in the distance learning environment. Yet, this study also seeks to evaluate learners' experiences in conjunction with the socio-constructive pedagogical ethos in teaching and learning to better understand what the social networking technology might afford to distance learning generally.

II. Why Social Constructionist Theory of Learning Matters?

Why does social constructionist theory of learning (SCTL) matter in distance learning, anyway? Education today, is significantly different, in many ways, from what it was before the internet. In the digital age, the traditional top down, centre-out approach to education is beginning to gradually diminish, and looking back over time, many things have changed. Things like learner-generated content,

informal interactions, short messages, and computer-mediated (nonverbal) interactions are the norm for digital age learners (Wiske, 2011). The central question here for most educators and researchers is: To what extent are existing pedagogies in teaching and learning approaches able to support the needs of today's digital age and future learners? The central premise of SCTL is that through relational dialogue such as conversation, learners shape their identities by sharing information and how they see themselves in the process of acquiring new knowledge. As learners interact, they receive feedback from both the environment and other learners which, in turn, helps them assess and adjust their self-presentations of learning from each others.

In SCTL, knowledge is something that is socially constructed: learning takes place within a learning community. Each member within the community helps each other, lends support, and interact with one another; and the learner progresses from novice to expert under the guidance of an expert community of practice members (Bronack, Sanders, Cheney, Riedl, Tashner, and Matzen, 2008; Kelm, 2011). While there are a number of approaches to SCTL, the key features seem to be able to be summarised as follows (Devins and Gold, 2002; Gergen, 1994):

- □ Use of language as a social resource that is organised into narratives, conversations or stories, thus, provides the meaning of which "we" come to experience our world and construct "reality".
- □ Meanings and understanding of contexts are creates through a rational process between people exchanging ideas which were embedded during conversation.
- □ Just being "in" and anticipating in different relationships in different contexts, we acquire new meanings via a social process leading to a new or revised version of reality (or understanding on certain ideas or context).

Conversely, Duffy and Cunningham (1996) argued that constructivism is based upon on the view that *learning does take place* but learning is an active process through "constructing" rather than acquiring the knowledge per se. The underlying application of the social constructivist approach to distance learning is noted by Dalsgaard (2006), who argues that social networking technology provides learners with personalised tools and engages them in social networks, thus allowing learners to direct their own problem-solving process. The author's contention was that social constructivism emphasises the importance of the student being actively involved in the learning process, unlike the traditional educational approach of learning, where the responsibility rests with the instructor to deliver knowledge while the learner passively receives it. Blending the two approaches, now, seems to be at right time and right place. Leslie and Landon (2007) contended that these approaches aligned well in "learner-centricity". They observed that people desire to form groups in order to support their learning and that using a social networking approach helps to create both an environment and an infrastructure for informal and borderless learning. Similarly, Anderson (2005) comments that the motivation for distance learners is to move from the lonely isolation of self-paced learning into a *learning community of inquiry* provides a sense of mutual support and encouragement.

Indeed, a generation ago students were required to memorise the names of various geographical countries and their state capitals, nowadays, rather than memorise that information, students simply look up information from the internet where it is freely available to view or download. The focus has shifted from traditional memorisation of information to learning to how to access the information with a few clicks of the fingers (Kelm, 2011). In the SCTL environment, the focus has shifted from the teacher to the students. The classroom is no longer a place where the lecturer pours knowledge into passive students, as a matter of fact, the students are urged and expected to be actively involved in their own learning process. The teacher functions more as a facilitator rather than the sole "knowledge giver". Now, the teacher coaches, mediates, prompts, and helps students develop and assess their understanding, and thereby their learning. The SCTL environment focuses on knowledge not as inert factoids to be memorised, but as a dynamic element to search for information and understanding (Fosnot, 2005; The University of Sydney, 2011).

Harasim, Hiltz, Teles, and Turoff (1995) wrote that future learners will have access to formal and informal education of their choice, primarily in the boundary-less information world of the internet, by actively participating in learning *with*, and *from*, experts and peers. This concept opens new opportunities and challenges for educators. Kelm (2011) and Fosnot (2005) note that the advancement of information technologies and the internet has changed how people receive, search and share information with each other. The features of social networking tools coincide with the principles espoused by social constructivists' theory of learning seems to make an ideal learning environment and effects pedagogy by promoting active engagement and improving the learning experience as a whole.

III. The use of *elgg* in teaching and learning: applications

The impact of social networking media has been phenomenal; it has continued to gain prominence with both child and adult users. Social networking sites are online based media where users create and build personal networks that enable them to connect to other users either for personal or professional reasons. There are numerous social networking tools that are able to facilitate teaching and learning. Examples of social networking tools that are currently popular among educators are elgg and Ning, but these are by no means the only ones. The impact of such social networking media on learning environments, especially when these are adapted to enhance the breath and depth of information resources as well as the inter-connectivity between the learners and lecturers, presents an opportunity for educators to keep learners engaged (Wankel, 2009). Thomas and Thomas (2012) contend that many institutions are resistant to change and view these new networking technologies as a "young-person's game", which is to say, more of an obstacle than an opportunity. Institutions which choose to harness networking technologies will be championed for innovation compared to those who avoid these opportunities. Siemens (2010), in his personal blog, argued that social technology networks might be seen by some as subverting the role of the teacher in the classroom and learning, generally, but in fact, it can make the "classroom walls thinner" or "wall-less". Experts are no longer "out there" or "over there". In line with the popularity of these technologies, research about re-purposing these technologies for educational activities in distance education is quite a fertile research ground, as implementations are usually not large-scale or university-wide, and mainly confined to a specific level of study. With that premise in mind, and drawing from the literature, the following are a few case studies which examine the application of SCTL pedagogy via social networking media (elgg) to improve learners' educational experience.

Case #1 "My Westminster"

Oradini and Saunders (2008), two professors from the University of Westminster, England, presented an evaluation study of the use of a social networking site called My Westminster, powered by *elgg*, that allows users to create their own profiles, upload photographs and documents, create and join discussion groups, send instant messages, publish blogs and presentations all in one single display. The University teaches around 24,000 students, mainly through face-to-face interactions, with minor distance learning courses available for working adults. Their study covered all academic employees of the universities and students who accessed the system from September 2007 to January 2008. Both quantitative and qualitative data were collected via questionnaires, personal blog posts and community forum posts. There were 3,048 registered users of My Westminster, of which approximately 2,300 were students and the rest were academic staff. The results of the evaluation showed that student users, in particular, were split in their opinions about whether the system was useful or not. Commonly, student users commented that the system is invaluable for making new friends and helping connect to their peers for support, particularly when a new semester begins. Other students felt it was helpful and liked it because it was a closed community, which they regarded as better than open public commercial social networking systems like Facebook or MySapce. For instance, students commented that the benefits of the closed system included having a university-owned social networking system that makes it easier to find help, and assisted in knowing where to go for educational assistance and inquiries. Others commented that although it appears to be both a formal, yet informal form of learning, it was seen as an educational

space, where they have greater control, autonomy and freedom. Among students not in favour, most cited not having sufficient time to accomplish tasks and having too many systems for them to interact with (fatigue), because some already used systems like Facebook, so the My Westminster system might seem to them to be redundant. Academic staff users mostly felt the system helped them and students to build a sense of community and belonging. However, like student users, many faculty members felt that they had very little time to use the system. The authors also noted that clearly "one size does not fit all" when it comes to preferences, and Facebook can function in different ways depending on the preference of users and that seems to provide an important contribution to its popularity, generally.

Case#2 "Teaching Online Education Technology Class Via elgg"

Veletsianos and Navarrete (2012) conducted an exploratory study to identify and understand learners' experiences in an online education technology course facilitated through a social networking platform, elgg, at the University of Texas at Austin, USA. The course ran for a duration of 6-weeks, and on each day the course instructor would introduce a new topic and students were asked to read, watch or listen to resources online, and then respond to self-reflective questions on their personal blogs (in the *elgg* platform), all students were required to read their peers' reflections, post questions, and respond to all questions/comments left on their blog. This process was continued and grades were given accordingly at the end of these activities. The authors explained that this process shaped participation and created space for student-centred interaction and discussion to take place. Students' self-reflections about what they learned were shared among their peers with feedback, and with occasional involvement from the instructor to direct students to particularly noteworthy comments and to learn from each other. Findings from this study indicated that students enjoyed and appreciated the social learning experience by supporting one another. Many students noted that their learning experience was enhanced through their interactions. However, one thing to note about this study was that students' participation was limited to course-related purposes and students did not seem to mix social and educational participation. They also seem to have required additional support to manage the expanded amount of information presented to them. Though students indicated networked learning opportunities are promising and cherished the opportunities for interaction, the authors also noted that some students seem to lack skills in managing their learning strategies, such as the ability to find and categorise content for future retrieval and to easily traverse networks of interest. This study also suggested that ongoing participation and collaboration within the context of a social network seemed to alleviate the issue of isolation and lack of support, which is especially important in the distance learning environment. While this research only focuses on a small sample size, (14 enrolled postgraduate students), it does offer insights and information for future larger population studies.

Case#3 "Lost in social space - *elgg* experience for institutional learning"

Dron and Anderson (2009) conducted a study of an online undergraduate course: Development in Learning Technologies taught via the elgg platform at the University of Brighton, UK. Students enrolled were primarily majoring in computing and digital media programmes. Most students had previously experienced the Blackboard (CMS) environment as the primary communication channel between their peers and as a method of providing instruction before taking the course which employed the *elgg* system. The instructor created an *elgg*-based community where the main tasks were posted for each week, much of the dialogue was achieved through blog comments, and students were required to maintain their own blogs, tagging entries relevant to the course. The instructor played a moderately active role through dialogue within the main community, email responses, real-time sessions and through comments on students' personal blogs. According to the researchers, the findings suggested that students greatly enjoyed the amount of freedom that the elgg platform provided, and that the networked learning experience was generally positive. Although some students found the workload was much higher and that they had difficulties fitting into the self-directed working patterns called for in distance learning, however, by far, the majority of the students found it highly rewarding. Another positive remark was that most students were found to have gone beyond the confines of the course requirements to explore and, occasionally, contribute additional materials and ideas to the wider learning network. Since the authors themselves were the instructors of the course, they were able to note the changing social behaviour for two particularly shy students in the context of the course's social

activities because they were able to build a connected network of friends. While their findings reveal most students' experiences were generally positive, some students found the mode too confusing and disorientating and they reported dislike for the *elgg* interface. The researchers further commented that well over half of the students were active users of social networking sites such as Facebook, MySpace or Beboo, prior to this course and several mentioned that the *elgg* interface seemed clunky and primitive by comparison. The final remark of the study was that some students were "lost in social space" and they needed additional support and scaffolding to participate in the social networked learning environment.

IV. Study Methodology

The Wawasan Open University (WOU) was first established in September 2006 to meet the challenge of openness to a wide group for higher education in Malaysia. The WOU is a charity-backed, non-profit, private university dedicated to *informal adult learners* in Malaysia. The openness policy has lowered the barrier to higher education by removing conventional affirmative action-based entrance requirements and allows adult learners to take courses without the typical constraints of time and location that exist in traditional universities (Wawasan Open University, 2012). The reality of achieving openness in higher education, largely centred on open distance learning (ODL), can be difficult. There are a formidable set of barriers for open distance learning to overcome and the more immediate challenge is how to improve and increase learners' education experience when much of online distance education has been plagued by issues such as learners' feelings of isolation and lack of interaction from learner-to-learner and from learner-to-instructor, which all too frequently leads to higher dropout rates compared to conventional education as presented by research studies (Veletsionos and Navarrete, 2012).

This study is an attempt to explore the pedagogical linkages between a social constructionist theory of learning (SCTL) and a social networking tool (*elgg*) in the distance learning environment, for teaching and learning, in order to better understand what the social networking technology might offer to distance learning generally. The study was conducted in July semester of 2012 and all participants in this study were students enrolled in a Human Resource Management, entry-level undergraduate course. The author was the course coordinator, and this was the first time that students were given two supportive learning resources, LMS (WawasanLearn) and elgg, to improve their learning experience. Students had previously, and concurrently using LMS in addition to the *elgg* for this study. Twenty (20) students who enrolled for this subject were required to use *elgg* as part of their coursework in addition to LMS. The course had a consistent structure throughout the semester. At the end of semester, questionnaires (surveys) were distributed to the participants and were used to gather their perceptions and experiences using the *elgg* platform. The same cohort of students was asked to compare their learning experience with both LMS and elgg. In order to initiate investigation of whether elgg can potentially benefit learners, while creating personal space for learner-centred exploration and discussion, the course coordinator included activities such as a blog, bookmarked sites, discussion topics, and debate issues related to their Tutor-Marked Assignments (TMA) to argue for or against a particular thesis in a debate in lieu of responding to social constructionist theory of learning. From time to time, the course coordinator's activities would include commenting on student blog entries, occasional alerts that would direct students to particularly noteworthy comments from their peers, and an establishment of an ethos of openness throughout the course by encouraging students to suggest ways to improve it and learn from each other.

To evaluate the learners' experiences in a distance learning course facilitated through *elgg*, the following research questions were posed to the research participants.

Question 1: How did you (students) perceive the use of an *elgg* as the main learning mechanism through which the course was presented compared to traditional LMS?

Question 2: What are you (student) experiences in a distance learning course taught on a social networking platform?

WOU *Elgg*: The Platform

Presently, there are two educationally focused social networking tools that are able to provide educators and students the opportunity to use the technologies while minimising the safety and privacy issues that these technologies often have. These tools are *elgg* and Ning. Ning (http://ca.ning.com/) is comparable to blogging social networks where users can easily setup a site with their domain name. The site features a small amount of user control over presentation. In setting up a social network with Ning in Education is similar to setting up WordPress as a blog with WordPress features. Elgg (http://elgg.org/), on the other hand, is an open source framework released under the GNU General Public License (GPL) and is built on LAMP, a platform consisting of Linux, Apache, MySQL, Perl, PHP and Python. The software itself has its own plug-in architecture that enables designers to implement a variety of Web 2.0 tools such as weblog, file repository, social bookmarks, online profile, RSS reader, collaborative document authoring and micro-blogging in a central space for users. Additionally, all users' content can be tagged with keywords, so that they can be connected with other users with similar interests. The main distinct feature of *elgg* is that the user can create a personal learning community such as a "group". Users are able to create personal profiles and create customized "friend" lists, they can post status updates, follow activity streams, and subscribe to be notified of other users' actions within the environment. This is similar to the functionality of Facebook. However, where *elgg* differs from a regular commercial social network, such as Facebook or MySpace, is the degree of "control" each user is given over who can access their content. Each profile item, blog post, or uploaded file can be assigned its own access restrictions. For instance users can set each file or comment from fully public to only readable by a particular group or individual within the community. The elgg platform was selected over Ning in Education because of its advantages in issues such as cost, user control, flexibility, infrastructural architectural setup, safety and privacy.

The WOU *elgg* (http://*elgg*.wou.edu.my/) is closed to individuals not affiliated with the course due to privacy and safety concerns and is hosted by Wawasan network platform. The WOU *elgg* is the first attempt to explore social networking functionality that carries the SCTL ethos and aims to improve and enhance student learning in a distance learning environment. To illustrate the main features incorporated in the WOU *elgg*, the following figures show snapshots of the display interfaces. For instance, Figure 1 shows the generic student user profile page where the student is able to post to a personal message board such as status updates, enlisting personal friends, and a personal blog page. Figure 2 shows a generic user's personalised dashboard, in which the user is able to make amendments such as edit or remove the default installed features according to his or her personalised taste and desires.

	John Doe	▼ Message board	¢ 6
	Brief description: Hi You'all ! Glad to be here!		
	Location: Penang, Malaysia		
	Interests: Hiking, swimming, cycling		
	Skills:	Post View all	
Edit avatar	Contact email: john.doe@wou.edu.my	▼ Bookmarks	Ö Ö
Edit profile	Telephone: None		
► Blogs	Mobile phone: None	No bookmarks	
 Bookmarks Files 	Website: None	▼ Blogs	Ø C
Pages	Twitter username: None	No blog posts	
Videos	About me		
 Wire posts 	I am Business major student enrolled in Human Resource Management course this semester. This is my first time use this form of social networking site and looking forward learned more about this course and enhance knowledge	▼ Friends	Ø 6





Figure 2: The generic student user dashboard

In order to analyse the study, the researcher uses the methodology of the qualitative and interpretive research paradigm. Qualitative data requires the ability to question, translate, coordinate and determine the viability of the meaning of re-occurring issues and phenomena. Under the interpretive paradigm, a case study method was employed where the collected qualitative data was analysed for the emergence of key themes using a coding method. Coding is the process by which categories of responses are established for open-ended questions. The researcher read through all the written scripts, sorted the scripts into specific response categories and grouped them into common themes based on repeated words and ideas expressed in the subjects' responses. The survey questionnaire was used to collect social demographic data and prior experiences with social media in addition to two open-ended questions that sought feedback on student's perceived learning experiences via this platform.

V. Findings and Results

Out of twenty (20) students who enrolled in this course who were required to use *elgg* concurrently with LMS; only 10 students were actively participated and agreed to fill out the non-mandatory survey questionnaire at the end of the semester. Forty percent (4 out of 10) of the student participants were new to the university (2 semesters or less) and sixty percent (6 out of 10) of the student participants were experienced computer users. Eighty percent (8 out of 10) were working professional adults who have some or minor knowledge in the field of human resources. All participants reporting were comfortable using internet for learning purposes. With regards to the use of social network technologies in their personal life, eight out of ten participants reported having an active Facebook account and actively engaged with the platform to communicate with their peers, using the medium primarily for social networking purposes.

The researcher examined students' survey feedback to each of the two open-ended questions to comprehend the emerging themes regarding *elgg* in their personal learning experiences. To analyse the open-ended survey questions, the researcher read through all of the responses to determine themes present in the responses. The themes were reviewed and placed into categories. The responses categories were re-examined and grouped as follows:

- □ Social Interactivity and Connectivity
- □ Cooperative Learning
- □ Appreciation of Differences of Opinion

The following discussion on the themes identified focuses on the social attributes of the students' learning experience and perceptions towards the social networking platform as opposed to a learning management system (LMS).

Social Connectivity and Interactivity

At the beginning of the course, students were asked to create a personal profile on the *elgg* that users creates an "avatar" by sharing either a photograph of themselves or a cartoon character self representation; post information about their majors and interests both inside and outside of class; and view one another's profiles to get to know each other. These introductory activities were an attempt to introduce students to one another and to the course coordinator, in order to establish a social presence. Social presence as defined by Garrison, Anderson, and Archer (2000) is the participants' ability to project their personal characteristics into the community, thereby presenting themselves to other participants as *real people* in a distance learning space. All ten student participants stated that they found great value in their interactions with their peers and the course's virtual social environment. For example, one particular participant summarised the whole learning experience as "socially connected and yet interactive enough to help me learn through the course". Also noted by participants:

"I like the ways it is *almost* like Facebook that I can post my status update on the message board and my peer who are online can response back to my post and it make me feel like I do converse with a real people even though I did not really see them in the real life..."

"I think that this new learning management [*elgg*] is more user-friendly and more interactive than the Facebook that I accustomed to as thought I am actually engaging in a face-to-face conversion with my study cohorts in this course... I especially like the avatar feature that I can use my favourite cartoon character to representing me in the site..."

Other comments were gathered from six participants who mentioned that their interactions with other peers was important in helping them make sense of the subject matter, especially by discussing the assignment questions and topics and they shared that the experience of interacting through the cyberspace extended their learning beyond simply reading from a textbook. For instance, one student wrote that 'although I seldom really exchanged a dialogue with my peers on this site [*elgg*] however; by just following the thread of message posting and responding either from my course coordinator and peers I am able to make sense and understand the topics of discussion that help me in my own assignment...".

Opinions comparing LMS to the *elgg* in regards to their use as learning tools, was equally *split* across the ten participants. Five of the participants commented they preferred the LMS (concurrently in use) over *elgg*. In particular one of these students stated that the activity of looking for information related to the course, "...is quite structured and straightforward and I can easily look for the documents posted by my course coordinator more easily than searching on where the document is posted at the new platform [*elgg*]". Other comments were that *elgg* tool is a "great and effective way to help me connect to my study peers, but I think the WawasanLearn [LMS] is much easier to find what I want.." and other comment was "preferred the current [LMS] learning platform more because it is much simpler and I am already used to it "

Cooperative Learning

Certain learning activities required students to use this platform to engage in conversation (threaded message posting, chat, etc) to exchange ideas from their peers, such as commenting on individual course-related entries by encouraging students to suggest ways to improve it and to learn from each other. Effandi and Zanaton (2007) and Kan (2011) noted that the instructional method of cooperative learning is believed to be a learning process which is most effective when students are actively involved in sharing their ideas and work amongst themselves cooperatively to complete academic tasks. Essentially, this approach to learning creates excellent opportunities for students to engage in problem-solving with the help of the group and peer members (Kan, 2011). A few student participants stated that they really appreciated the *elgg* platform because they were able to setup their own group and form their own group members. One particular participant summarised that "cooperation from each group members regularly". Another similar comment was; "I become more independent on doing my assignment. I can understand more of what I had learned and through the chat feature I can chat with my friends about how to do the assignment and exchange ideas". One of the interesting comments was:

"People always say that doing a distance education degree cannot really have the real experience like having a face-to-face experience. Personally, I think that this new tool [*elgg*] do let me have the similar experience. I am able to experience the team/group-based learning where my peers in this course are helping each other out even we are from remote location... furthermore, I think it helps to have a discussion blog that everybody contribute ideas and this helps me to complete my assignment faster..."

Anderson (2005) cited that cooperative activities are generally short term, bounded in a temporary period of time (such as the assignment or in a project), such that learners can cooperate outside of the knowledge of where and in which order they are studying and consists of cooperation between those engaged in the class or those not formally enrolled in a program of studies. One student wrote that the experience "seem[s] cooperative and collaborative.... everybody was in there together... and best of all, no one [was] in there to order or instruct us, almost like you are your own instructor, quite refreshing and nice in a sense...even my wife was able to help me to take notes on the discussion [thread notes] during one of the study discussions organised by one of my study peer".

As stated in previous section 50% of the participants expressed a preference of *elgg* over the traditional course management system. One student noted that "...*elgg* was the newest thing I have come across and I really liked the interface and features... offered by it... I can be collaborating with my peers in less formal ways". The negative experiences noted by some of the students were regarding particular features and congregated around issue of the problematic platform. In particular, students who had negative remarks on the platform stated complaints such as: "[The] lack of technical support and troubleshooting" when they encountered errors. One student commented that "In LMS, I am able to send email to my peers but this new platform I don't see that it has the features and function to do so". Additionally, this particular student noted that "the site [*elgg*] does not have the technical support team ...able to solve my technical issues". Another suggested that the platform site gets "cluttered and [I] have difficulty ...look[ing] for the latest discussion thread".

Appreciation of Differences of Opinion

The last occurring theme gathered from the survey responses was that several students also commented that the *elgg* platform enabled them to understand the range of opinions of other students when working on activities or assignments, and felt that it had enhanced their perspectives. Due to the nature of the course (Human Resource Management), the activities and assignments presented were always descriptive and often open-ended questions that encouraged students to read and to comprehend "off the textbook" content in order to form an answer to the question. Students were given a serious online activity that involved the use of blogs in the form of threaded discussions and they were asked to invite their peers' blogs to make comments on the presented human resource issues. Lim, Cheung and Hew (2011) contend that the asynchronous online forum has become a primary focus of educational researchers. They hypothesize that the process of typing out messages (such as in an online forum discussion) in and of itself, can promote in-depth critical thinking skills, showing an appreciation of diversity of ideas, and thus enhance students' skills and knowledge. One of the powerful aspects of a blog is that all of the contributions and entries from a previous person is recorded and students comments from the daily activities are invaluable, providing insights and perspectives that would be difficult to obtain in face-to-face classes because it would be practically impossible to hear more than 30 comments about each topic from each student. Also, having the comments in a written format allows students to go back and discuss in even greater detail later. For example, one particular participant commented:

"What I enjoyed about this course [*elgg*] was that all my peers are working adult learner like myself. We all come with different walk of life and each one of us carries their own knowledge and skills set which good to have diverse opinions and contribute different perspective in working on assignment."

"In the first few months, I was not so active in this site [*elgg*].. I really do not know what to do and expected me to do at the first place...felt like completely lost. However, once I was forced [part of assignment requirement] to login and writing on my own blog and commenting on other people blogs I slowly get the idea [on how to use the *elgg*] and like the idea to communicate with peers across the countries whom I never see in persons... the best part of it is that to appreciate the different ideas and opinions when working on our activities [assignments]."

Numerous student participants shared a concern that while working through a community-based approach seemed appealing and beneficial in some ways, students also noted that reading through individual blogs can be quite time consuming. Some students worried that this course would take more time than they anticipated, based on their experience with other distance courses. For instance, one student wrote on the survey feedback that "...I enjoy reading my peers blogs and the activities posted by the course coordinator, I am taking two other distance courses at the same time, and I find that I do not

have enough time to do what I needed to do..." One student shared that they were "not sure what is the focus here as we have two platforms [LMS and *elgg*] required for this course, I find it quite redundant to use both as it is not only take up my time [to look up information] and would really appreciate give the simpler version... though I do like the feature of the new learning platform [*elgg*] provided that I can shared and discuss opinions with my peers".

VI. Conclusion

Findings from this study further reinforce the results of previous studies done regarding the use of social networking tools in educational settings. The majority of the participants in this research indicated they did enjoy the social learning experience afforded by the *elgg* when compared to LMS to support one another in their distance learning experiences. It was also noted that participants exhibited high involvement in graded exercises in most cases, and would share information only at the level required by the instruction mode. Brady, Holcomb and Smith (2010) noted that it is difficult to establish a *community of practice* in distance education and its establishment cannot be forced, even when using media that lend themselves to high levels of engagement. The authors further commented that students may need more time [than a semester] to feel comfortable with using the mode and become empowered and adapted to being a part of the *community of practice*. Nevertheless, participants for this study generally noted they perceived their learning experience was enhanced by their interaction with each other and instructors. The *three* key emergent themes further supports previous study on the promise, integration and use of social networking technology as a distance learning platform (Brady, Holcomb and Smith, 2010; Dron and Anderson, 2009; Oradini and Saunders, 2008; Siemens and Conole, 2011; Veletsionos and Navarrete, 2012).

The social constructionist theory of learning can guide the use of social and digital technology tools to create learning communities and change the way students learn and interact with each other to gain knowledge. The untold beauty of incorporating social media tools is that the flexibility and immediacy makes this form of teaching and learning more appealing to present-day learners, both the "digital native" and the "digital immigrant". The incoming learners are people who might have become accustomed to social media as they may well already communicate often using social media and learn in a different way than the generation before. Thomas and Thomas (2011) noted that "teaching methods and styles adopted previously are likely to be outmoded... recognising that social media is a requirement for modern day business". The authors also posited that future research about facilitating tomorrow's learners is likely focus on the impact of social media beyond the immediate learning environment. New technologies brought by the invention of Web 2.0 and the social networking applications seem to have given distance learners opportunities to practice 21st-century skills in collaboration, sharing knowledge and to develop critical thinking skills (Siemens, 2010). As Hoffman (2010) stated: "The potential for loosening institutional controls over tool access, the rapid growth of social networking beyond college walls, and the decreasing costs for user training and ready-availability are suggestive that these new tools will spread like earlier innovations such as word processing and email as foundational tools for higher education". These new tools allow greater flexibility in designing environments rather than being stuck with content-focused containers, which fosters better and more personalized learning --an ideal situation for distance learners.

These new decentralised paradigms are likely to have a feedback effect on organisational structures related to technology because social networking learning has the potential to reinforce the power from the bottom-up. The study provides an initial research model that may be expanded and generalised for similar future studies about the social networking tools on improving students learning experiences. The future studies could focus more on the flexibility and immediacy makes this form of teaching and learning more appealing to present-day learners who might have become accustomed to social media. Additionally, the recommendation on the topic should extend to a larger group of learners, perhaps inclusive of perspectives from the instructors to help expand the literature in this area.

VII. References

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