

Creating Social Learning Spaces to Enhance the Learning Experience

Natasha Madhav¹, Meera K. Joseph², Bhekisipho Twala³

^{1,2,3}*University of Johannesburg, South Africa*

¹ nmadhav@ie.ac.za; ² meeraj@uj.ac.za; ³ btwala@uj.ac.za

Abstract: Social media has been used effectively for teaching and learning for many years in developed countries. It seems there needs to be an understanding of the affordances that social media could bring to the learning space in the African context. We use qualitative research and content analysis to see how and why the learners used social media in a private Higher Educational (HE) institution in South Africa to enhance their learning experience. The course was split into face-to-face lectures and social media use by the learners and facilitators. The learners were required to engage with various social media tools to collaborate and share skills with their classmates and facilitators. We also explore the affordance of social media. Content analysis was done to see the participation of the learners in the course's Facebook page. Data was also collected from the focus groups that led to findings that indicate that WEB 2.0 tools had the potential to support learner collaboration that is self-directed and engaging. Learners adopted social media with confidence and used it to learn beyond the borders of the physical classroom. Daily interactions and the sharing of artefacts resulted in an informal and vibrant learning ecology that became self-sustainable. We propose a conceptual framework that forms part of the learning ecology for the course studied.

Keywords:

Social media affordances, Self-directed learning, Learning ecology, Guided learning, Mobile learning and Learner engagement

Introduction

We refer to social media as the set of Internet applications such as Facebook, Twitter, YouTube, WhatsApp or any digital technology that has shared content which dominate the way in which individuals collaborate and enhance creativity. Unlike the past, the incoming students in the HE institutions are 'born into a world woven from cabled, wired or wireless connectivity' (Bauman, 2010: 7). South African Higher Education Institutes in particular are facing many challenges today arising from factors such as under-prepared learners, technological availability, escalating costs, infrastructure maintenance and development, and the low levels of learner pass and throughput rates. Bosch (2009), a lecturer at the University of Cape Town, postulates that there is potential to use social media for teaching and learning, however, there is little research findings on the use of these tools and services. The learning needs of the learners are of primary concern to Higher Education institutions. According to Beetham, McGill & Littlejohn (2009), educational institutions are failing to meet the expectations of learners who necessitate that learning be relevant, engaging and purposeful to their real-life needs. With these challenges facing the institutions, there is a pressing requirement for educators to find more innovative solutions to promote learner engagement. Due to the necessity to improve pass and throughput rates, this study explores the use of social media as a supplementary tool to enhance learner engagement on and off campus.

According to McLoughlin and Lee (2010), the affordances of social software tools such as blogs, wikis and social networking sites can be applied to the learning environment to facilitate social and self-directed learning. Various social media services and tools are on offer and the total number of subscribers has increased exponentially over the past few years in parallel with the increase in connectivity through improved infrastructure as well as access to more affordable devices that allow for connectivity (McLoughlin and Lee, 2010). Initially, the use of social media was predominantly for personal reasons however, it is now used more frequently for advocacy campaigns, special interest groups, marketing purposes and for education. The pedagogical benefits of using WEB 2.0 applications promote inclusivity, collaboration, increased interaction, reflection in dialogue, student autonomy and shared content creation.

The affordance of social media can be described as a quality of an object, or an environment, that allows an individual to perform an action (Doering & Veletsianos, 2008). Spires, Lee, Turner and Johnson (2009) state that the affordance of WEB 2.0 tools will provide students with instant access to information. “It also provides them with authoring capabilities to create, mash up, comment on, and edit content, and allows them to communicate with people globally” (p.7). Barczyk and Duncan (2013) argue that the use of social media is progressively changing education due the additional affordances it offers to learning. Many educational practitioners believe social media can be harnessed for learning purposes and has significant benefits to the way we learn. Conole and Dyke (2004) list these affordances as accessibility, speed of change, diversity, communication and collaboration. Higher Educational institutions have made great advances in implementing technology into learning, yet the advantages of using social media for learning remain vastly unexplored (Hemmi, Bayne, & Land, 2009). Rambe (2012) indicates that social media affordances promote 21st century learning such as creating a culture of creativity and innovation, collaboration, engagement and interaction. Rambe (2012) further explains that understanding the concept of affordances in relation to teaching and learning would guide academics in their use of technologies for learning and identify potential limitations and inappropriate uses of these technologies.

Strydom, Mentz and Kuh (2010) state that various studies conducted by the Indiana University Centre for Postsecondary Research has revealed that there is a strong correlation between student engagement and student achievement in Higher Education. They argue that by engaging students in contemporary educational activities, the performance of at-risk students in terms of grades can significantly progress. Kuh (2009) emphasizes two major factors that influence student success for the better: social interaction and engagement in academically pertinent activities. The exploration of the potential of the use of social media to enhance student engagement and promote self-directed learning can offer some resolution.

WEB 2.0 tools were originally limited to more affluent societies, however, more than one billion people outside the United States and Europe use the Internet globally. Mobile and wireless technology have also reported significant growth in Africa, India and China (Cisco, 2012). McGee and Diaz (2007) state that social media tools afford academic institutions opportunities to create students-centred environments. This enables lecturers to become less authoritative, but facilitators of exploration and collaboration – thereby enhancing student engagement. The World Wide Web together with WEB 2.0 tools allows learning to happen anytime and anywhere. Firpo and Ractham (2011) states that an additional benefit of social

networking is the creation of online communities that can encourage interaction and participation beyond the classroom.

Research conducted by Chen and Bryer (2012) indicate that lecturers already exploited social media to create innovative learning environments, however, within the South African context, this phenomenon is under-reported. We consider that there is a requirement to explore a theoretical foundation for the use of WEB 2.0 tools and present a conceptual framework as an attempt to further explore the notions of social learning and social media affordances in this regard.

Social media and learning

Mobile computing devices and the use of social media has already created opportunities for interaction in the United States of America and provided opportunities for collaboration and allowed students to engage in communication (Gikas and Grant, 2013). Barczyk & Duncan (2012) argue that the use of social media is progressively changing education due the additional affordances it offers learning. Many educational practitioners have indicated social media can be harnessed for learning purposes for various disciplines including engineering and health sciences and has significant benefits to the way we learn. Conole and Dyke (2004) list these affordances as accessibility, speed of change, diversity, communication and collaboration. Higher Educational institutions have made great advances in implementing technology into learning, yet the advantages of using social media for learning remain vastly unexplored (Hemmi, Bayne, & Land, 2009). Rambe (2012) indicates that social media affordances that promote 21st century learning such as creating a culture of creativity and innovation, collaboration, engagement and interaction.

Research conducted by Chen and Bryer (2012) indicate that educators already exploit social media to create innovative learning environments; however, within the South African context, this phenomenon is under-reported. Bosch (2009), a lecturer at the University of Cape Town, postulates that there is potential to use social media for teaching and learning; however, there is little research findings on the use of these tools and services.

The future development and sustainability of our economy depends on the ability of Higher Education institutions to prepare students to reach higher levels of achievement (Scott, Yeld & Hendry 2007). However, in spite of several efforts to improve education, academic institutions around the world fail to develop 21st century students that have the skills to collaborate, be critical thinkers and be self-directed. South African Higher Education Institutes in particular are facing many challenges today arising from factors such as under-prepared students , restricted technological availability, budget restrictions and escalating costs, infrastructure maintenance and development, managing lecturers' and students' expectations and the low levels of student pass and throughput rates. (Strydom, Mentz & Kuh 2010).

Currently within South African academic institutions, students browse and search for information on the Internet, and sign in to an institutional Student Management System (LMS) to access content, and to complete tasks and assessments related to their studies. Whilst some students and lecturers embrace new learning opportunities, others resist the change and may develop negative attitudes towards technology and technology enhanced learning. Hedestig and Söderström (2008) indicate that in order to avoid a negative uptake, there needs to be a comprehensive exploration and how technology affordances can enable interactions and

engage students in online environments. Globally, young adults are using WEB 2.0 tools to communicate, collaborate, engage and learn.

A learning Ecology

Often, traditional approaches to learning were accompanied with pre-packaged learning materials, fixed due dates and assessments. In order to improve levels of learner engagement and drive self-directed practises, traditional approaches to learning need to fall away. Desharnais and Limson (2007) argue that learner's should be given more control and responsibility over their learning process. This means that learners should be given the responsibility to become constructors of knowledge and develop their own learning paths. Felix (2005) indicates that learners need to construct and reconstruct through experiencing things and reflecting on those experiences. Principles of constructivist learning indicate that learners should become self-directed using their unique experiences to construct knowledge in multiple ways through the use of various tools and resources. For the purpose of this research learners will be introduced to a learning ecology as a will provide a framework for them to engage collaborate and become self-directed.

Barron (2006) described a learning ecology as learning that is active, living and in an evolving state; and further defines a learning ecology as the "*set of contexts found in physical or virtual spaces that provide opportunities for learning*" (p.195). Barron's (2006) research emphasised that learning can be distributed over several settings using various resources and that "*learning about an area of interest can be distributed across resources including personal contacts, text-based resources, Internet exploration, and more structured learning opportunities*"(p.194). Her proposed ecology framework highlights themes of connection and interdependency which is crucial when considering the use of WEB 2.0 tools. Richardson's (2002) model for holistic learning will be adapted later to develop the learning ecology for this inquiry. The reason for the adaption is that the model, as indicated by Jackson (2013), focused more on a structure predetermined by a curriculum with course objectives, content, resources and processes that engage learners in activities. As we move into the 21st century, learners require capabilities that will include technology and a support. Richardson's (2002) model will be used to propose a conceptual framework that forms part of the learning ecology for our Digital Photography course. We explain four main components in his model.

Self- Directed Learning: Fiedler and Pata (2009) argue that in order to foster self-direction, learning negotiations and decisions on technological tools and services are required. Using self-directed learning practises, this phase of the learning ecology framework aims to exploit the affordances of WEB 2.0 technologies to foster self-direction, self-reflection, interactive learning and increased engagement.

Guided Learning: Svendsen and Mondahl (2011) indicates that the role of educators should become that of initiators and facilitators of learning activities. Through the process of guided learning, the instructor or facilitator guides the learner on how to find information, relate information to the learner experience, and places a focus on problem-solving within real-world situations (McAuliffe, Hargreaves, Winter, & Chadwick, 2008).

Community of Practise: Wenger (2006) describes a community as a form of social interaction in which members share a common goal in wanting to improve by collaborating and constructing new knowledge. In a socially networked environment, participating in a social constructivist learning ecology affords learners a ubiquitous learning environment that

encourages collaborative activities, discussions and sharing within their communities of practice.

Content Delivery: Bretag (2010) indicates that the need for educators to rethink the delivery of content has become crucial to creating a classroom environment that is collaborative and engaging. Summers and Svinicki (2007) indicate that learners should be provided with authentic opportunities to construct and create their own learning content. Social media provide many opportunities to completely rethink delivery of content and to adopt more learner-centred approaches. For the purpose of this enquiry Facebook was utilised as supplementary learning tools to provide a space for learners to reflect and share their thoughts and understandings and provide opportunities for feedback and possible scaffolding of new ideas.

Objectives

The main objective of this research is to explore how social media can **Create Social Learning Spaces to Enhance the Learning Experience**

The sub-objectives are:

To explore students' experiences of using social media in their classroom

Research Design and Methodology

We use qualitative content analysis of the Facebook pages to explore and harness the affordance of social media tools and services to support classroom learning. Due to the limited research on the utilisation of social media in the classroom, this study was an exploratory study making use of a qualitative content analysis. Coldwell and Herbst (2004) define qualitative research as observation of a subject's opinions, beliefs or behaviour. Babbie (2010) further describes qualitative research as interpretation of underlying significance and patterns of relationships established during the observation.

The use of social media has become popular among South African students; however, it is used mainly for personal reasons. In 2013, Rosebank College, one of many Higher Education Institutions in South Africa, continued to experience the problem of low pass, low attendance and low throughput rates. With these challenges facing the institutions, there is a pressing requirement for lecturers to find more innovative solutions to promote student engagement. Due to the necessity to improve pass and throughput rates, this study explores the use of social media as a supplementary tool to enhance student engagement on and off campus. Students studying at Rosebank College, in their first year of study, complete a course called Digital Photography. This course aims to provide a practical overview of using a variety of WEB 2.0 tools to position the student to communicate, collaborate, interact, and construct information. This study explores the use of social media in particular Facebook page: <https://www.facebook.com/groups/323390661120295/> as a complement to their face-to-face course taught on campus in an attempt to encourage learner engagement with various social media tools. In Table 1 we provide interconnected codes developed through open coding were grouped together resulting in emerging themes as indicated in the right-hand column.

Table 1: Code derived to reflect emerging themes

Codes emerging from Data Analysis:	Theoretical Framework : Learning Ecology
Flexible Student – centred Learning all the time Constant Reflection Encouraged creativity Self-Evaluation	Self-Directed Learning
Learning includes constant navigation Lecturer provides constant feedback and guidance.	Guided Navigation
Online discussion Interactive Collaboration beyond classroom borders Increased Engagement	Community of Practise
Utilisation of mobile technology Lack of access on campus Expensive to upload via mobile phones	Content Delivery

We also conducted Focus groups in May 2013 with 5 students and posed five related interview questions:

1. How did the use of the Digital Photography Facebook page support the learning activities within and outside the classroom?
2. What was your experience of social media in allowing you to be part of a social learning community?
3. How would you like to use social media as tool in the future and why?
4. What were the benefits of using social media for the course Digital Photography?

5. What are your views of Facebook being banned as I know part of the course design was to request for open access?

The results of the focus group interviews and the content analysis are compared in the next section. All participants agreed to partake in the Facebook group page for research purposes and the students volunteered to be interviewed.

Data collection and Results

A two phase research approach was employed to obtain data about and from learners enrolled at the College. The first phase of the research was document analysis, where a variety of sources – including learner material, photographs, and digital artefacts that have been generated and shared in various social media spaces – was gathered. The final phase of this research used purposive sampling to assemble a focus group interview comprising of the lecturer and five learners who have demonstrated high as well as low levels of participation in the social media spaces in order to gain a balanced view of learner activity.

Data gathered was obtained from interview transcripts from a single focus group interview. The sources included among document analysis were:

- Student Guides,
- Digital Photography Group Facebook Page.

Facebook Tool Usage

According to Schultz-Jones (2009), a network map diagram provides information on the level of activity between participants through the connection of points or nodes. Figure 1 is a network map diagram of the interaction between participants in the Digital Photography Facebook group.

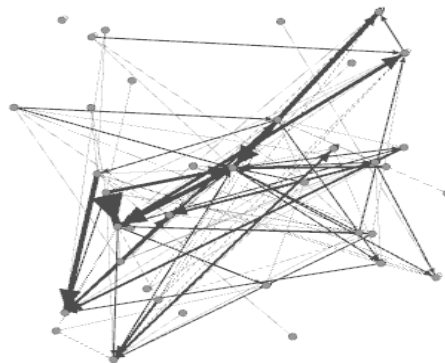


Figure 1. Network map of the Digital Photography Facebook Group

The map provides an overview level of connection amongst the participants. The image provides some information on the frequency of contact between different individuals. The thick lines in the image indicate the ties or frequent posts that occurred between certain individuals. There is also evidence of nodes in the network diagram, which indicates that interaction was limited or no interaction at all. Few isolated nodes indicate there were 3 or 4 members that did not partake in the interactions. Details from the focus group interview revealed that some students experienced time constraints as well increased mobile costs. Barriers experienced by some students will be discussed later in the chapter.

To complement the network map results: Table 1 provides usage statistics of students using Facebook. The Digital Photography course had 19 students enrolled, however, towards the end of the semester, the Facebook group page had a total of 44 members that included the lecturer, researcher and fellow students of Rosebank College. This was particularly interesting to note that other students joined the Facebook group page to become part of discussions and collaborations.

Table 1 Facebook Statistics of Digital Photography Page

Item	Total Number
Post views	556
Likes	243
Photos uploaded	112
Comments	85
Members	44

Therefore this group page served the purpose of creating an engaging and collaborative environment. Furthermore, uploaded photos, “Like”, as well as comments from lecturer and students stimulated students to participate, reflect and collaborate.

Emerging Themes

The Learning Ecology Framework was used as a theoretical lens to analyse the primary data resulting in a number codes as depicted in Table 1. In that table we provided the interconnected codes developed. Based on Richardson’s (2002) model we propose (Figure 2) a schematic representation of the conceptual framework that forms part of the learning ecology for the Digital Photography course.



Figure 2. Conceptual framework for the learning ecology

Exploiting the power of WEB 2.0, the model presented aims to create a constructivist self-directed learning environment that will encourage learners to engage, collaborate and network. Figure 2 will be explained in accordance with the four components depicted in the diagram.

Self-Directed Learning

In this case study self-directed students were given the opportunity to create their own learning spaces to reflect, share, engage and collaborate. Even though the course consisted of many face-to-face lectures, students were required to engage with different social media tools to collaborate, discuss and share skills. Student A indicated *“Facebook allowed me freedom to express my thoughts as we could be less formal.”* Further comments from students *“Facebook motivated us to post our pictures, be creative with and share our techniques”* and *“We could share our pictures and expose our creative sides with each other and receive feedback from friends about them”* highlighted the social media ability to encourage creativity. Students were encouraged to participate in continuous discussion about Photography, techniques used in Photoshop thus resulting students in posting and sharing their pictures.

To this end, generally student’s perceived blogging and the Facebook group page as empowering them to become independent and motivated students. However, a few students found maintaining their blogs and collaborating on the Facebook page challenging due to the lack of internet access and increased mobile costs. These barriers will be discussed later in the article.

Guided Learning

The presence of the lecturer within the learning ecology was essential in guiding students in becoming autonomous and developing their skills to search for information, engage in discussions and construct learning content. Effective management, facilitation and implementation were crucial to the success of course and in creating a constructive learning experience.

Ensuring that face-to-face classes remained part of the learning ecology, students were provided with the opportunity to engage in the classroom, discuss concerns and exchange ideas without feeling isolated. Students were introduced by the lecturer during classroom sessions to the concepts of blogging, e- portfolios and Facebook Group pages and various links on how to get started. Pettentati and Cigoginini (2007) advise that students need to be introduced to new tools through demonstration and exercises to ensure students never feel disengaged. Students were introduced to the Facebook page by the lecturer as indicated in Figure 3. The social platform of this page encouraged 17 members to connect within one day reaching 44 at the end of the semester.

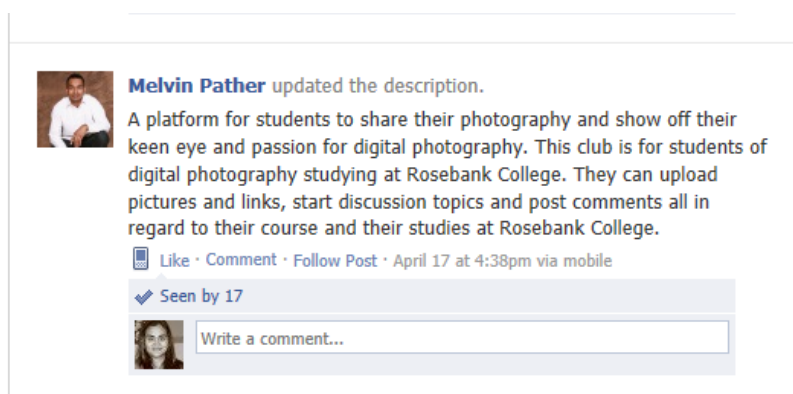


Figure 3. Welcome to Facebook page

Exercises and probing questions by their lecturer *“Your test is approaching soon. Who can describe what approach was used to take this photo?”* encouraged students to collaborate and

engage. Student E stated: “interactions on Facebook allowed me to remember and answer question on slow shutter speed”.



Figure 4. Facebook Discussion on Slow Shutter Speed

This post was viewed by 36 people which is suggestive of the ability of Facebook to disseminate information within a group beyond the physical classroom. Its ability to enable peer-to-peer and instructor feedback in a user-friendly environment also fosters self-directed and reflective practices. Prompt lecturer feedback directing students in taking responsibility for their learning were also important characteristics of a successful learning ecology.

Overall, it seems as if the class activities not only provided students with the opportunities to practice their skills, but also to explore the potential of social media to engage, collaborate, aggregate and share content. The posts on the group Facebook page (Figure 4) is also suggestive of reinforcing of ideas and techniques - not with only one student, but its ability to be disseminated among 31 students. Encouragement, experimentation, trial and error were also encouraged by the various comments posted by the lecturer as noted in the comment posted by their lecturer Melvin Pather (Figure 4).

Community of Practice

Research conducted by Summers and Svinicki (2007) indicate that social and learning elements are interconnected and foster a sense of classroom community. Mason and Rennie (2009) reveal that WEB 2.0 technologies not only support social interaction but increased a member's sense of belonging and emotional connectedness.

Evidence in the study indicate that students felt that this was a positive learning experience and that using social media for other courses such as Digital Photography created a sense of community and belonging. They professed that Facebook group page enhanced their

enthusiasm to share and learn. As one student pointed out, *“The Facebook page created a space for us to share with others and learning was not dictated by the lecturer.”* Another student further indicated *“I felt that learning went beyond the classroom as I was constantly on my mobile phone and I was also encouraged to share thought and ideas online whereas in the classroom they may I may not have participated at all as I felt shy.”*

During the course of this inquiry, students comment on being part of the Facebook group: *“Facebook’s allowed me to belong to a classroom community were we shared ideas and photos”*. Students who did not belong to the course were also encouraged through the informal conversations amongst peers to join the group and post their pictures. The Facebook usage statistics reveal that although there are only 19 students in the classroom, the group has grown 44 members. Another student indicated that *“Facebook gave me instant access to other students over the weekend,”* clearly revealing the potential of Facebook to extend beyond the borders of the physical classroom.

Spires et al (2009) propose that within a new learning ecology, lecturers must be prepared to make a pedagogical shift to use technology and create networked learning environments that harness collaboration, student engagement, problem solving, and the sharing of innovative ideas. In this way, the physical classroom can become part of a global network or community that helps engage and empower students to be enquiring and innovative. These results coincide with Barron’s (2006) learning ecology view that individuals learning within and across settings. It was eminent by the times that the posts such as were made learning on campus led to learning activities outside of the college.

Classroom hours which are generally from 8:30 am to 17:00 pm, evidence of posts disclose discussions that occurred outside of classroom hours notably at 18:24 pm and 19:11 pm. This was an important finding indicating that Facebook allowed for conversations to extend beyond the classroom, resulting in dialogues that could occur 24 hours of the day.

Content Delivery

Exploiting the use of the Facebook in this enquiry allowed for a student owned page that encouraged creativity, freedom of expression and engagement. Finding within this inquiry revealed the increased use of mobile technology and the need for sound infrastructure to be in place.

The following statement made by Kop and Hill (2008) are indicative of this *“The rapid development of technology and exponential growth in the use of the Internet, along with the Web 2.0 and mobile developments, make new and different educational structures, organizations, and settings a possibility”* (p. 9). A common theme that arose from the focus group interview was the recurrent use of mobile technology. The design of the learning ecology did not include the use of mobile technology due to the costs associated with it. However, students and the lecturer involved agreed that their mobile phones allowed students to feel included, having previously felt excluded in the classroom. Students felt that their mobile phones kept them connected 24 hours a day as one student indicated: *“I was constantly connected to Facebook via my phone on campus and off campus even when I took the taxi to go home. The posts on the Facebook page encouraged me to take pictures with my phone where ever I was and then post them,”* further revealing the collaborative nature of Facebook its ability to support classroom learning.

Essentially students agreed that social networking and the portability of their mobile phones allowed them to move learning beyond the classroom and that access to a wireless network on campus would indeed enhance their learning, through improved response time and frequent

communication. This was highlighted in suggestion that *“it would be great if we had access to a wireless network in the canteen as that is where we gather and do our assignments”*.

Barriers to learning

Even though students were happy to engage in online discussions with their mobile phones they were aware of the cost of uploading pictures or videos as this would directly impact on their data usage and increase costs. During a discussion with the lecturer, he indicated that the use of social media in the classroom was not sufficiently supported on campus by the college. Despite having an access to technologies, such as email and the Internet in the classroom, social websites are blocked. The lecturer experienced frustration with the repeated requests to unblock the Facebook sites during the face-to-face contact sessions. This is indicative to the fact that many South African higher education institutions, are behind when it comes to infrastructure, technology and bandwidth availability. Research conducted by Bosch (2009) discloses that at many South African university campuses’ access to social networking sites in university labs and libraries is discouraged to an extent – that there is signage to, intended for students, indicating that access to social networking and other recreational sites are not allowed as there is the potential to slow down the networks.

Conclusion

In this paper, we have argued about the affordances that WEB 2.0 offers, a social and collaborative space for learning, as well potential barriers in education. We have explored students’ experiences of using social media in their classroom in a Higher Education Institution and presented a conceptual framework for the learning ecology. Based on the findings it is evident that the use of the Facebook group page and blogging in this inquiry highlighted the potential of WEB 2.0 tools in enhancing student collaboration and engagement beyond the physical classroom. Overall, there are signs of optimism that the implementation of social media tools resulted in a learning ecology that was self-directed and that afforded an engaging and collaborative community of practise. Evidence of their activities and digital traces show that the course established social interactions and through guided navigation students adopted social media with confidence, using it to learn beyond the borders of the physical classroom. Sharing of content such as pictures, techniques and ideas were recorded on a daily basis, thus resulting in an on-going and sustainable learning ecology. This learning ecology allowed for flexibility permitting students to collaborate and engage on their group Facebook page. Blogging, for some of the assessment task, encouraged students to reflect and develop their confidence to aggregate and publish their own learning content. Mobile technology as a new and sustainable way in which content could be delivered was a significant contributor in increasing student interactions using social media tools. However, this came with increased costs for the lecturer and students. Students and lecturer alike experienced frustrations with the blocking of Facebook in the computer laboratories and the library – even though request to unblock various sites were made at the onset of the course. Costs, technology and infrastructure are important considerations when choosing to implement social media tools with the physical classroom.

Williams, Karousou and Mackness (2011) state that providing low cost access for students to engage, communication, and networking requires new institutional and social memes and structures. With the augmented reality of cloud-based WEB 3.0 applications, HE institutions will have to quickly adapt to these new nuances for collaborative and social learning.

References

- Barczyk, C. C., & Duncan, D. G. (2013). Facebook in Higher Education Courses: An Analysis of Students' Attitudes, Community of Practice, and Classroom Community. *International Business & Management*, 6(1), 1-11.
- Barron, B. (2006). Interest and Self-Sustained Learning as Catalysts of Development: A Learning Ecology Perspective. *Human Development* 49:193–224.
- Bauman, Z. *Forty-four letters from the liquid modern world*. Cambridge, Polity, 2010.
- Beetham, H., McGill, L., & Littlejohn, A. (2009). *Thriving in the 21st century: Learning Literacies for the Digital Age*. Glasgow. Caledonian University
- Berg, B.L. (2012). *Qualitative research methods for the Social Sciences (8th Ed.)* Boston, Pearson Education Inc.
- Bretag, R. (2010). Engaging Students with Emerging and Connective Technologies retrieved on July 28, 2013 from <http://www.ryanbretag.com/blog/>
- Brown, J. S. (2000). Growing up: Digital: How the web changes work, education, and the ways people learn. *Change: The Magazine of Higher Learning*, 32(2), 11-20.
- Bosch, T. E. (2009). Using online social networking for teaching and learning: Facebook use at the University of Cape Town. *Communication: South African Journal for Communication Theory and Research*, 35(2), 185-200.
- Chen, B., & Bryer, T. (2012). Investigating instructional strategies for using social media in formal and informal learning. *The International Review of Research in Open and Distance Learning*, 13(1), 87-104.
- Coldwell, D., & Herbst, F. (2004). *Business research*. Juta and Company Ltd.
- Conole, G., & Dyke, M. (2004). What are the affordances of information and communication technologies? *Association for Learning Technology Journal*, 12(2), 113-124.
- Conole, G., & Dyke, M. (2004). What are the affordances of information and communication technologies? *Association for Learning Technology Journal*, 12(2), 113-124.
- Desharnais, R. A., & Limson, M. (2007). Designing and implementing virtual courseware to promote inquiry-based learning. *Journal of Online Learning and Teaching*, 3(1), 30-39.
- Downes, S. (2005). An introduction to connective knowledge. *Stephen's Web*. Retrieved on May 29, 2013 from <http://www.downes.ca/cgi-bin/page.cgi?post=33034>.
- Felix, U. (2005) 'e-Learning pedagogy in the third millennium: the need for combining social and cognitive', *ReCALL*. 17 (1): 85–100.

Gikas, J and Grant M.M (2013) Mobile computing devices in higher education: Student perspectives on learning with cellphones, smartphones & social media Vol 19, Oct 2013, page 18-26

Fiedler, S., & Pata, K. (2009). Distributed learning environments and social software: in search for a framework of design. In S.Hatzipanagos & S. Warburton (Eds.), *Handbook of Research on Social Software and Developing Community Ontologies*, Hershey, PA: IGI Global. 151–164.

Hemmi, A., Bayne, S., & Land, S. (2009). The Appropriation and Repurposing of Social Technologies in Higher Education. *Journal of Computer Assisted Learning*, 15(1), 19-30.

Ivala, E. & Gachago, D. (2012). Social Media for Enhancing Student Engagement: The Use of Facebook and Blogs at a University of Technology. *South African Journal of Higher Education*, 26(1), 152-167.

Jackson, N. J. (2013). The Concept of Learning Ecologies in N Jackson and GB Cooper (Eds) *Lifewide Learning, Education and Personal Development E-Book. Chapter A5 available at <http://www.lifewideebook.co.uk> accessed November 15, 2013*

Kop, R., & Hill, A. (2008). Connectivism: Learning theory of the future or vestige of the past? *International Review of Research in Open & Distance Learning*, 9(3).

Kwan, K., (2008). A Proposal for the WEB 2.0 Revolution in Online Design Education: Opportunities for Virtual Design Learning Using Social Networking Technologies York University, Canada.

Kuh, G.D. (2009). What student affairs professionals need to know about student engagement? *Journal of College Student Development*. 50(6), 683–706.

LeFever, L. S. (2008). "Video: Social Media in Plain English." Retrieved August 6, 2008, from <http://www.commoncraft.com/socialmedia>

Mason, R., & Rennie, F. (2007). Using Web 2.0 for learning in the community. *The Internet and higher education*, 10(3), 196-203.

McAuliffe, M., Hargreaves, D., Winter, A., & Chadwick, G. (2008). Does pedagogy still rule? In *Proceedings of the 2008 AAEE Conference*, December 7-10, 2008. Yeppoon, Queensland. Retrieved from: http://www.engineersmedia.com.au/journals/aaee/pdf/AJEE_15_1_McAuliffe%20F2.pdf.

Pettenati, M. C., & Cigognini, M. E. (2007). Social networking theories and tools to support connectivist learning activities. *International Journal of Web-Based Learning and Teaching Technologies (IJWLTT)*, 2(3), 42-60.

Rambe, P. 2012. *Exploring impact of using social networking sites on academic relations and student learning in university setting*. Ph.D. thesis, University of Cape Town.

Siemens, G. (2008). *Learning and knowing in networks: Changing roles for lecturers and designers*. Retrieved May 15, 2013 from <http://itforum.coe.uga.edu/Paper105/Siemens.pdf>.

Strydom, J. F., M. Mentz and G. Kuh. 2010. Enhancing success in higher Education by measuring student engagement in South Africa. *Acta Academica*, 42(1), 259–278.

Summers, J. J., & Svinicki, M. D. (2007). Investigating classroom community in higher education. *Learning and Individual Differences*, 17(1), 55-67.

Svendsen, L. P., & Mondahl, M. S. (2011). Tools for teaching the digital natives. *Tidsskriftet Læring og Medier (LOM)*. 4(7/8).

Schultz-Jones, B. (2009) Examining information behaviour through social networks: An interdisciplinary review. *Journal of Documentation*, 65, 592 – 631.

Williams, R., Karousou, R. & Mackness, J. (2011). Emergent learning and learning ecologies in Web 2.0. *IRRODL*, 12 (3). Retrieved January 28, 2015 from: <http://www.irrodl.org/index.php/irrodl/article/view/883>

Yin (2009). (4th edition). *Case study research: design and methods*. Thousand Oaks, CA: SAGE Publications.