Discussion Forums and Weblogs: A Means to Fostering Learning

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Abstract

> *Learning management systems can play an important role in fostering rich teaching and learning experiences for students and instructors in Open and Distance Learning (ODL) institutions. The levels of sophistication of these platforms vary from one institution to another. Decisions regarding the use of the applications available on the learning management systems ought to be linked to their possible pedagogical benefits. In this regard, this study collected data from lecturers offering online courses in an ODL institution in order to explore their views regarding which applications available in their learning management systems stimulated constructivist and observational learning amongst their students. Using Baviskar, Hartle& Whitney's (2009:543-544) guidelines for constructivist learning and Bandura's (2001:265-299) observational learning, I employed a phenomenological approach to explore the lived experiences of lecturers regarding online applications for constructivist and observational learning. The findings revealed that Discussion forums and Weblogs proved the most suitable online applications for fostering learning in ODL institutions.*

Keywords: *Learning management systems; constructivism; observational learning*

1. Introductory Background

One of the primary tenets of higher education is the production of knowledge which advances understanding of the natural and social worlds (Sadat 2009). In this regard, higher education institutions ought to stimulate learning that results in the production of knowledge. Bandura's (2001:265-299) observational learning based on social cognitive theory, as well as constructivism (Baviskar, Hartle& Whitney 2009) serve as learning theories that actively stimulate the production of knowledge. Learning management systems hosting a variety of online applications, currently serve as a means through which learning can be facilitated, particularly in Open and Distance Learning (ODL) institutions around the world. In spite of the pedagogical possibilities offered by learning management systems, their uptake by lecturers for pedagogical purposes remains low. One of the major reasons for the low uptake may be attributed to lack of knowledge regarding the potential pedagogical benefits these platforms may offer. In this regard, there is insufficient knowledge amongst instructors regarding the pedagogical benefits of online learning applications (Christie & Garrote Jurado 2009). The possible pedagogical benefits of online applications remain largely under-utilized with the accessing of content off the web as being mistaken for online learning in Africa (Unwin (2008) in Unwin, Kleessen, Hollow, Williams, Oloo, Alwala, Mutimucuio, Eduardo&Muianga 2010). It is against this backdrop the research reported on in this article takes place.

Research has addressed the gains of constructivist methods in enhancement of learning outcomes (Akar & Yildirim 2009), and other studies have alluded to the positive role feedback plays in constructivist online learning (Espasa & Meneses 2010). These studies have contributed to a deeper understanding of constructivism and how to foster constructivist learning in online learning environments. As an extension of these studies, this article reports on research that departs from theoretical constructs that view constructivism and observational learning as comprising multiple criteria and makes recommendations for learning using appropriate online applications.

The research was carried out at the University of South Africa (UNISA), which is an ODL institution based in South Africa. The primary purpose of the research was to explore the lived experiences of lecturers regarding the use of online applications found on learning management systems that best stimulate learning. Using Bandura's observational learning and constructivism as the theoretical grounding, I explored the lived experiences of lecturers who use learning management systems for the facilitation of teaching and learning.

In the following sections of this article, I present an overview of the use and applications in learning management

systems with specific reference to discussion forums and Weblogs (blogs) as applications that may foster learning, before I explain the theoretical frameworks that guided this research. I also present the research methodology utilized for this research as well as the findings from the research. I conclude the article by presenting recommendations based on my findings on the applications found in learning management systems that best contribute to constructivism and observational learning.

2. The Use and Applications in Learning Management Systems in Open and Distance Learning Environments

The management and facilitation of learning, particularly in ODL institutions is highly reliant on the interface between the student, the lecturers, the institutions, and students and their peers, facilitated by technology. Learning management systems host various online applications, and vary in terms of their sophistication and they allow for adaption to meet required needs.

Learning management systems are online platforms used for the distribution of information and for communication between the participants of a course (Valsamidis, Kontogiannis, Kazanidis, Theodosiou&Karakos 2012). In addition, learning management systems have applications that allow for their pedagogical use. The applications allow for information sharing, access control and communication tools in addition to administrative uses. The three top learning management systems used by educational institutions are those supported by Moodle, Edmodo and Blackboard (Edudemic2013), others include Desire2Learn, eCollege and Sakai. Some of the applications found in learning management systems includes Weblogs (blogs), discussion forums and wikis. The purpose of the research study was to explore the pedagogical benefits of online applications found in learning management systems with a view of making recommendations regarding the use of the applications in order to foster learning. In the following section, I explain the theoretical framework that was used to guide the research.

3. Theoretical Framework

Constructivism is a philosophy that offers an appreciation of many ways of knowing and understanding the world (Gulati 2008). It does so by accounting for the individual experiences and social relationships of all involved in the learning experience (Lorachelle&Bednarz 1998 in Gulati 2008). In this regard, constructivism serves as a suitable learning paradigm for higher education institutions. Baviskar, Hartle and Whitney (2009) identify four criteria for effective constructivist learning. The first criterion is that of elicitation of prior knowledge by the learner. This criterion works from the premise that all new knowledge acquired by a student is done so in relation to prior knowledge which the student possesses. The second criterion for constructivist learning is the creation of cognitive dissonance. The student recognises the discrepancy between his existing knowledge and new knowledge and thus seeks to eliminate the discrepancy by either adopting or rejecting the new knowledge. The third criterion for constructivist learning is the application of knowledge with feedback. The student is able to check the validity of his constructs and define the interconnectedness of new knowledge to a variety of contexts. The fourth and final criterion of constructivism as defined by Baviskar, Hartle and Whitney (2009) is that of reflection. The student in this regard is able to reflect on his learning by carrying out reflexive exercises. This can be achieved by the student taking part in assessment that encourages him to reflect on his learning, or through meta-cognitive exercises that allow his to become aware of his effective learning strategies and how to use them (Schunk& Zimmermann 1994; Winne 1995 in Loyens, Rikers& Schmidt 2007).

In addition to constructivism, I utilized observational learning, as defined by Bandura (2001), as further grounding for my research. The functions of observational learning are based on Bandura's (2001) social cognitive theory. Observational learning posits that learning occurs through observing the behaviour of other people. The first function of observational learning is the attentional process which allows the student to determine what he selectively observes in the profusion on information he is exposed to. The second function is the retention function process. In this instant the learner actively transforms the information he has observed and restructures it into rules and conceptions for memory. The third function of observational learning is the production process. This involves the learner translating the conceptions in his memory into appropriate courses of action. The final process in the functions of observational learning is the motivational process. The motivational processes act as incentives for individuals to perform what they have learnt. Motivational processes can be driven by either be external, vicarious or self-incentives.

4. Research Methodology

The methodology I employed in carrying out this research was phenomenology. Phenomenology is a variant of the qualitative approach and advocates the study of direct human experience and which sees behaviour as determined by phenomena of experience and not the external, objective and physically described reality (English & English 1958 in Cohen, Manion& Morrison 2005).

The research question for this research study was "*Which online applications lead to constructivist and observational learning in ODL learning environments*?"

4.1 Sampling

In order to explore the lived experiences of lecturers regarding online applications, constructivist learning and observational learning, the sample of participants was based on lecturers engaged on online learning courses at UNISA. The sampling method used was purposive sampling where the participants shared the experience of teaching in an online environment (Langdridge 2007). I used snowball sampling as a means of identifying information rick sources (Terre Blanche, Durrheim& Painter 2011). The total number sample number was 6 on achieving data saturation. For purposes of this article, I refer to the sample as *Participant 1-6*.

4.2 Data collection

For the purpose of gathering data I utilized online semi-structured interviews. I used email as a tool for conducting online semi-structured interviews in order to collect data, thus allowing the participant to articulate as much detail about the experience as possible (Langdridge 2007). In this case there was rupture between the participant and myself as the researcher. The email allowed participants in the research to write their own lived experiences with regard to online media blends, constructivist learning and observational learning using their own descriptive terms and reflect on their writing prior to submitting their comments online. My choice of online interviews was informed by the benefits it affords the research. In particular, online interviews allow for geographically dispersed participants to take part in my research (as noted by Madge &O'Connor sa). The participants were also able to express themselves as the interview did not take the form of a face to face focus group where the most vocal or overbearing participant stood the chance of taking over the discussion. In order to overcome possible fears of their comments being freely available on the public internet domain, as was the case in the study conducted by Sharma (2010), I secured the question and responses through the use of a name and password.

Prior to data collection, I issued the participants with an informed consent form accompanied by the request for a response within 5 days via email (Mann & Stewart 2000). During this time, I personally disclosed myself by giving the participants my brief oral biography thus creating a personal relationship (Curasi 2001). This was followed up by a telephone call to the participants 3 days later. The purpose of the telephone call was to remind possible participants of the email and request them to sign the consent form if they consented to participating in the research. On receiving the signed consent forms from the participants, I then sent each of them the password in order to allow them to participate confidentially in the research, and a brief online orientation guide to assist them with submitting their accounts.

The interview question sent to the lecturers was as follows:

May you please give me a written account from your experiences regarding which online applications contribute most to teaching, and how they contribute to your teaching?

I used probes related to constructivism and the functions of observational learning where necessary throughout the interview process. I also carried out on-going member checking to ensure that I had a clear perspective regarding the experiences of the participants. On concluding the interview process, as is consistent with snow-ball sampling, I requested the participant to give me names of possible information rich sources. This process continued until I had achieved data saturation.

4.3 Rigour in the research process

In order to ensure rigour in the phenomenological study, I employed various techniques. Firstly, I carried out reflexive exercises by noting my own subjective position and I made use of a reflexive tool in order to acknowledge and reflect

about the ways in which my interview questions and methods and my own subjective position may impact on the knowledge produced in the research study. Secondly, I used member checking throughout the interview process. Though the data were in textual format, I member-checked in cases where more than one meaning could be assigned to the text (McMillan & Schumacher 2010). I verified the accuracy of my interpretation of the participants' written accounts both during and after the interviews were conducted. In addition I enhanced the accuracy of my analysis through peer debriefing where I identified a peer to ask questions from their perspective regarding the study.

5. Research Findings in Relation to Constructivist Learning

The research findings in relation to the criteria for constructivist learning show that discussion forums are the most popular means of eliciting prior knowledge. The eliciting of prior knowledge is the first criterion for constructivist learning (Baviskar, Hartle& Whitney 2009: 543-544):

> "Another positive is that I can easily go back to earlier contributions on the forum and refer my students to these earlier contributions and postings." (Participant 3)

> "When using the discussion forum, I am able to refer to prior postings made and I am also able to refer my students to these prior postings and references made in earlier postings. I have found this to be very helpful to the students learning and my teaching is made easier." (Participant 1)

The second criterion for constructivist learning according to Baviskar, Hartle& Whitney (2009: 543-544) is that of the achievement of cognitive dissonance The discussion forums also featured prominently as a means to achieving cognitive dissonance throughout the data:

> "In one discussion about violence in schools, one student posted that they condoned violence if it was in self defence against bullying. This led the discussion in an interesting and un-charted territory. This discussion was so intense and some of the students had changed their initial views by the end of the discussion." (Participant 2)

> "the (discussion) group helped them think see new ways of looking at the topics."(Participant 6).

The third criterion for constructivist learning is that of application and feedback. In this regard, this criterion was not identified in the data. However, the final criterion of reflection featured prominently throughout the raw data. The discussion forums and blogs were means through which reflection was achieved:

> "I have noticed that before i introduced blogging as part of my course, the students often submitted un-refined assignments. But now, the students are forced to think and research before they put up a blog posting. I know they are afraid of looking un-prepared." (Participant 2).

> "(I) am forced to think before I post anything on the discussion forum as some students have access to information and can see if I make a mistake'" (Participant 3).

6. Research Findings in Relation to Observational Learning

The first criterion for observational learning is attentional processes. The data revealed that discussion forums were suitable for attentional processes:

> "I always start the discussion with a provocative quotation...I believe this keeps the discussions forum exciting." (Participant 1)

The second criterion of observational learning is retention processes. This particular criterion was missing from the data. However, the third criterion of production processes, was facilitated by discussion forums:

> "The discussion forum that my students use....make them produce higher quality of assignments (than they previously did)." (Participant 3).

> "I began implementing discussion forums..the students are performing better." (Participant 6).

The data revealed that motivation processes, which is the final criterion for observational learning (Bandura 2001:265-299), was facilitated through the use of discussion forums and blogs:

> *"At the end of the semester, I created a blog and asked the students to reflect on their experiences and their learning during the course of the module and all were positive and motivated to continue with discussions using the forums and blogging." (Participant 5)*

7. Discussion and Conclusion

The sourced data indicated discussion forums were the best online application in the UNISA learning management system for the elicitation of prior knowledge, the achievement of cognitive dissonance and reflection as constructivist criteria. Blogs are useful for reflection and did not feature in other constructivist criteria. The constructivist criterion of application of learning and feedback did not appear to be facilitated by the use of discussion forums and blogs.

With regard to observational learning, discussion forums stimulate attentional processes and production processes. Discussion forums as well as blogs were useful in motivating the online student as well as the lecturers in ODL environments. Retention processes was not facilitated by the use of discussion forums and blogs.

Applications found in learning management systems have the potential to foster pedagogical benefits, particularly for students in ODL environments where technology serves as the medium through which learning occurs. However, learning management systems have not been used optimally partly as a result of limited knowledge regarding which online applications foster learning. The phenomenological study carried out at UNISA, explored the experiences of lecturers regarding online applications that facilitate constructivism and observational learning. The findings suggest that the use discussion forums and blogs serve as a means through which constructivist and observational learning can be enabled. The findings suggest the use of other online applications available in learning management systems, for the criterion of application using feedback in constructivist learning. In the case of observational learning, the criterion of retention may be facilitated through the use of online applications other than discussion forums and blogs. Further research focusing on additional applications found in learning management systems may needs to be carried out.

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