The current use and effectiveness of Weblogs as e-learning tools in higher education

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Abstract. This paper attempts to explore the current use and effectiveness of Weblog services in higher education. The views of the learners in this study toward utilizing Weblogs within their learning environment were mixed. Their views can be divided in two groups; the first group of students were of the opinion that utilizing Weblogs with their learning environment did not provide the interest they were expecting. The second group of learners had an uncertain opinion as to whether Weblogs have the potential to improve their learning experiences but they were quite satisfied with their use as a tool in higher education.

Keywords: Education, e-learning, read/write web, blog and pilot study

1. Introduction

The use of Weblogs has been advocated for many reasons. These include their use to improve and support social and individual learning experiences (Lin, W, et al. 2006), to encourage structured thinking and revision (Ocker & Yaverbaum, 2001), to transform meaningful knowledge from learned information, to share information between learners and explore the potential of Weblogs in order to gain more understanding and promote learning environments within classrooms (Huffier, 2005). To date, much research favours the use of Weblogs for a variety of purposes (Kim, 2008).

2. The purpose of the study

This paper attempts to explore the current use and effectiveness of Weblog services in higher education. Its main purpose is to refine the questionnaires and the interviews so that a researcher will gain the appropriate experience and avoid error prior to commencing the empirical study (Top, 2011)

3. Read write web: Weblogs in higher education

Read/write web technology has become an attractive application for many universities and researchers. It represents a significant evolution in the field of information technology, particularly in higher education (Top, 2011). It has gained the keen attention of a spectrum of suitors such as, universities, researchers, organizations and businesses (Schiano & Nardi, 2004) In addition, e-learning via web technology has the advantage of enabling learners and academics to improve their skills and communicate with each other. This presents a chance to innovate the learning system (Weller, et al. 2005). Recent research has reported that Weblogs possess high potential and are powerful as new phenomena of e-learning applications, especially in higher education (Lin, et al. 2006; Kim, 2008; Schiano & Nardi, 2004; Andersen. 2007). Weblog is a system accessed via the Internet. It has slightly different features from any other application. Comments can be simply posted by a visitor or registered user (Lin, W, et al. 2006). These positive features enable many different professional and non-professional disciplines to adapt to using blogs within the learning environment. Weblogs have increased their pedagogical power more than other tools in recent years (Ibid; Andersen, 2007).

4. Web-Based Instruction

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Web based-instruction offers many advantages for the learning process. The definition of Web-Based Instruction (WBI) is:

> *"Methods are often categories as e-learning or the use of Internet technology to enhance knowledge and performance, e-learning has been identified as valuable tool for teaching and learning."* (Kleinpell, et al. 2011)

The components of WBI include eight subdivisions: content development, a multimedia component, internet tools, a computer and storage device, a connection to services provided, an authoring programme, a browser and other applications that could enrich the WBI's learning environment. In addition, some of these components are compatible with the new web 2.0 application, for example, emails (your account in any web services), web pages, audio-videos (YouTube), web databases (e.g. Google scholar or Wiki), discussion applications (e.g. weblog, forums) and video conferencing (e.g. broadcast) etc.

This study focussed on Web-centric courses. The learners attempted to secure an advantage by using blog services during their course via face-to-face contact. WBI has potential to enhance educational planning if the requirements of the proposed plan are carefully considered. Moreover, the component and the methods of WBI could make the learning environment rich, valuable and improvable in an education environment (Khan, 1997).

5. Pilot study plan

This paper describes the findings of a pilot study into the use of Weblog services to assess its suitability as an application for learning and teaching in Higher Education. The paper discusses the details of the pilot study that was completed by the researcher in the School of Technology, De Montfort University researching for a Saudi's Masters Degree. The pilot study enabled the researcher to obtain data that was meaningful and comprehensible, which made analysis easier (Cohen, et al. 2011). The pilot study was designed to test the strategies proposed by the research and gather data from the learners, which allowed potential problems to become identified. In addition, the study enabled the researcher and participants to become familiar with research procedures that focussed upon action and not solely on the data. This adequately prepared the researcher to conduct the research by becoming familiar with the relevant methods, instrumentation, data collection and analysis. This allowed the researcher to acquire knowledge of the validity and reliability of the instruments thus facilitating analysis, uncover any barriers in advance and help to design the research procedure.

A pilot study was completed during the second semester 2009-2010. All the participants [28 learners] were from Saudi Arabia studying a subject entitled: COMP5262 - Research, Ethics and Professionalism in Computing. The duration of the course was 14 weeks. The pilot study was designed to collect data from 6-10 students. The pilot study's sampling had no rules of number (Cohen, et al. 2011).

5.1.1. Methods of data collection

Qualitative methods were used in order to collect data from the learners to pre-test the strategies and the instruments that had been proposed. Moreover,

> *"Qualitative data is an umbrella term that covers a variety of styles of social research, drawing on variety of disciplines, such as, sociology, social anthropology and social psychology"* (Denscombe, 2007. p38).

The researcher collected the data via questionnaires and interviews to measure the differences before and after the students had used the Weblog tools.

5.1.2. The strategies used

The strategy that was proposed to collect the data used three main procedures. First, there is a **tool for collecting the data,** which is the pre/post-test questionnaire. These questionnaires were given to learners before and after the course. The purpose for the questionnaire is to harvest learner's opinion about the variable that could influence the implementation of blog services with the learning process. The questionnaire included factors that were based on nine aspects: social, convenience and capability, information and content, interactive, motivation and disciple, transferability, assist and enhancing learning and interest (Marshall& Rossman, 2010l; Williams& Jacobs, 2004). The **second tool was concerned with observation**, which aimed to analyse learner interactions when they engaged with the blog. The main goal here was to match the outcome of the interview to that of the questionnaire in order to cover the interactions

and the attitudes of the learners regarding Weblog usage. Moreover, the observation included, the way the learners posted and made comments, their interactions with each other and their instructor, the actions that would occur during their use of the Weblog's tools and the resources or any use of the Internet content employed by learners in their post and comment. **The third tool is concerned with the interview.** The aims of the interview are to promote the outcome [data], to understand in depth participants' perspectives and, to *"Understand individual perspectives; to probe for clarity; to deepen understanding; to generate rich, descriptive data."* (Marshall& Rossman, 2010. p73).

5.1.3.   Conclusion and result

5.1.4.   The result of the questionnaire

The questionnaire included nine criteria and concepts. These criteria were derived from the literature review of the study and some other ones (see section 4). The literature concluded that utilizing Internet tools often actively stirred and affected them.

Convenience: All learners agreed that Weblog activities allow them to participate at a convenient time and place if the module is neither theoretical nor practical. A few students strongly agreed with the above and one student added, *"You could choose the appropriate time and appropriate place."* One student said, *"Yes, I agree in terms that you have a long time to study and practice what on the blackboard via Weblog activities. Also it gives much constructive material that can help you to improve your understanding of the module, which should be given at the beginning of the course."*

Content: Most students strongly agreed that Weblog activities provide sufficient information related to the subject of the course. The following statement explains one main reason for this, *"When activities are provided with references, which open new visions to the learner. Another other reason is that rich content could surf the internet instantly when you need to get extra information related to the content."* One student said, *"Using Weblog facilities will make one closer to any internet services and that will make you jump to any other website to find what answers are required."* Other ideas that agreed but not in all modules' section -syllabus- that will form the base for what types of information will be needed.

Interactivity: Few students believed that Weblog activities gave opportunities to interact with other learners. Several views were expressed. These include interaction and activity through the Weblog environment "*should to be more interaction*" if there is no feedback from lecturers. This means that students believe that although Weblog gives opportunities to interact with each other it did not occur in a meaningful way. Moreover, their views in some contexts agree since interactivity with Weblog's actions is static – solid/not emotional- not as when you meet your instructor or classmate. Weblog activity, however, enables students and instructor to prepare thoroughly any contribution is advanced. One student who did not agree with the above said, "*It is not stimulating to participate.*"

Discipline and motivation: Learners' responses could be divided into two parts. Firstly, half the students agreed that Weblog activities required learners to be self-motivated and disciplined because that would form the basis of the methods of design. The second opinion was contrary to the first. A student stated, "*Relatively not flexible (rigid) unlike in the class there is always a way to interact.*"

Transferability: All learners agreed that Weblog activities disseminate information with a valuable, fast and easy approach for several reasons. Weblog activities allow information to be shared, provide efficient and fast connectivity with others, obtain many contributions about the title from all learners; it confers the ability to review posts and exchange information. On the other hand one is not always presented with valuable information.

Enhance learning: Learners responses were mixed. Some agreed that Weblog activities benefit learning and raise achievement since the application has the ability to search for any information and content related to a particular subject. Others gave a qualified opinion by agreeing to some extent that the system conferred advantages but that would depend on people believing that Weblog activities enhance learning. Others could see another vision, namely, that Weblog activities destroy learning and achievement. In addition, it appeared that cultural influences affected learners' opinions. Few learners had no clear opinion after experiencing the course.

Interest: Learners expressed diverse opinions about utilizing Weblog's activities in terms of raising their level of interest in the subject. One learner who expressed a qualified agreement said, *"Yes, it is"* but I have

no reason to explain why? Another student said, "*I am neutral about this point, I believe it depends on the course itself, whether it is interesting or not.*"

These comments mean for these learners their interest in a subject is not necessarily raised by the prospect of using Weblog's facilities. One student explained that his interest is especially promoted by engaging with Weblog after reading others' opinions and generating and posting comments. For others, their interest is raised because no books or "handout" need to be looked at. This requires learners to spend extended hours on the Internet websites. On other hand, some learners state that Weblog activities [particularly related to this module] are prescribed with little allowance for any flexibility. Furthermore, interaction is formal and limited and, therefore, there is no desire to use the system again.

Time: Most students spend more time using Weblog's activities for academic learning. This is due to two reasons. First, students have to involve themselves in all the activities required by any of the online modules. Second, in Weblog activities learners have to follow many related links or tasks, whereas in the classroom they just concentrate on the lesson and receive what they require or deem beneficial. Many learners claimed that they were able to save time by using Weblog's activities but in different ways because economies of time depended upon the complexity of the subject and the titles.

5.1.5. The result of the interviews

Before the course commenced the learners believed that all the factors mentioned (see section 4) would enjoy a high positive relationship with course tasks. We can list their opinions of their experiences and thoughts in several points:

- Some tasks need to have more than Internet actions. There needs to be more interaction with instructors as the tasks on Weblog were not clearly stated.
- Sometimes, saving time and learner interest was absent.
- This was contrary to what they hoped.
- Sometimes, the interaction was not as they expected, especially between learners and lecturers which raised dissatisfaction with communication via Weblog's activities.

As a result, they felt that Weblog's comment tool was not worthwhile using. One learner said, "*The reasons that we did not (prefer) this way is; we all come from one learning background, which all of us used to contact directly with lecturers. What is more, needing for emphasis on some tasks would make us feel more comfortable hearing it directly from the teachers.*"

5.1.6. A Lecturer's opinion

As an instructor, he started this course with the hope that all his communications with learners for the modules would be via Weblog. He said, however, "*I ended up receiving a large number of emails as well as having one to one sessions with some of the online learners who come daily to ask about things on their online tasks, which were time consuming and inconvenient*".

Communication between learners and lecturer, therefore, did not work as anticipated and lowered the potential benefits and the value of the system. The next figure describes the problem in more detail (see Table 1):

Table 1: Lecturer's opinion before and after using Weblog's in the module with learners

Concept	Perception before using the Weblog	Perception after using the Weblog
Convenience	Very convenient	Convenient if comprehensive guidelines for both learners and instructors are used to establish a framework with enough explanation of what are expected from all tasks.
Content	It would be the same of the face-to-face mode (I was naive).	It appears that I need to add more things to the contents, i.e. include materials that I normally deliver on the face- to-face mode, such as, lecture notes and discuss questions that are normally asked by learners.
Interactivity	High and online	It became mostly face-to-face but occasionally by emails.
Discipline and motivation	Higher than face-to-face	Varies and depends on the student's personality more than the contents of the module and the Weblog delivery.
Transferability	No comment	No comment
Enhance learning	No comment	No comment
Interest	High	Not at all

5.1.7. Lessons learned, conclusion

A number of points can be derived from this experiment. We can investigate the lessons learned in two ways. Firstly, conduct a pilot study to pre-test the instrument, which will be supportive and enable one to

have a clear vision in order to avoid errors in the final project. Moreover, all information should be recorded even if the researcher feels that it will not be needed or it does not relate to the criteria of his research. This is because so much information will emerge with time with some not appearing until the end of the experiment.

Secondly, the cultural background of student had a significant impact on their opinion regarding the acceptance of the blog, in other words, they were not sure if the processing of posting and commenting would be fully acceptable instead of face-to-face communication with their lecturers. All the learners had no experience in using any of the Internet's facilities, such as, blog services before embarking upon this course. This makes the researcher believe that the above factors could be the main reasons why acceptance and the capability to use these Internet facilities require an effort on the part of the student. Learners claim the most second important factor that affected their ability to blog was the Interactive activities. The activities by which information was shared did not meet student expectations. They thought that it should be better or at least as they anticipated. It could be that the learners already knew the comments and posts, which made it similar to homework practices where everyone knows what to write. Most importantly, an integrated blog with structured modules will probably make the system less effective and beneficial, because of the nature of web 2.0, which is based on user participation. With structured modules; learners will miss the opportunity to participate freely. In addition, all the actions for the learner will reflect the rules and the assignments of the modules.

6. Acknowledgements

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