A REVIEW OF STUDIES ON THE USAGE OF BLOG IN TEACHING AND LEARNING

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ABSTRACT

The popularity of studies on the usage of blog in teaching and learning is undeniable. There are numerous studies on the usage of blog in teaching and learning which demonstrate the increased interest on blogging research among researcher. Conversely, there has been a significant decline of interest on the usage of blog in teaching and learning since there is still lack of research that incorporated an appropriate learning activities and the strategies. Nevertheless, the combination of these two elements would enhance student performance on blogging in science and math as well as assist students to understand highly this conceptual subject. However, researchers face some challenges in integrating appropriate blogging activities into an educational setting (Halvorsen,2012). Additionally, some argue that learning theories are often to broad to be implemented on blogging (Nikleia et al.,2013). Therefore, this conceptual paper provides a review on the usage of blog in teaching and learning, especially on those that integrated with learning activities and strategies.

1.0   INTRODUCTION

Blog provides a platform for students to do reflections on their understanding towards learning. Studies on the usage of blog in teaching and learning are becoming popular due to the potential of blog in enhancing student performance. Therefore, there is a need to analyze the existing research findings on the use of blog in education. This paper will review few studies on the usage of blog in teaching and learning. It emphasizes that the usage of blog in teaching and learning is critical. Hence, teachers and students should place themselves in a position from which they are able to provide and share the knowledge and ideas to support the effort on the usage of blog in teaching and learning.

　　Why should blog have been used regularly in education specifically in teaching and learning? Does blog have its own attractions that can fulfill educators intend on sharing their desirable knowledge to others? The review on selected of 55 article journals will reveal the secret of blog and blogging. A blog can be traced as the place that we can share any knowledge to be spread out to others (Anderson et al., 2013). Further, it is a social networking medium that comes with a real high impact to the users. Hence, in using blogs, the writer can add in or fill up the most recent issues, knowledge, information and laws to the public that reads his or her blogs (Nikleia et al., 2013).

　　Blog is a most simple Web 2.0 application that can be easily accessed with less obstacles and it is suitable for all ages of users. Although, some blog needs permission for user to read all the articles written by the blogger, there are many other blogs that are free and more informative. With more selections of blogs, students face challenges in selecting and assessing the accuracy and validity the content of the blog. Therefore, teachers should teach students skill in reviewing the blog contents. Furthermore, the purpose of the teacher is to ensure those educational blogs published must be enforced with the proper path with the right guidance of an instructor in fostering the best teaching practice

outside the classroom for the students (Farmer et al.,2008).

2.0 RESEARCH BACKGROUND AND PROBLEM STATEMENT

Blog is a medium that can be browsed by everyone in getting the information either it is a fiction or non-fiction material. Through this research, we are going to review studies on the usage of blog in teaching and learning. The blog is a well-known medium in education in sharing the knowledge among students and teachers. Moreover, blogging can be deemed to be an important medium for effective learning if appropriate activities and learning theory of blog in teaching and learning are used. The popular usage of blog in teaching and learning nowadays has prompted the demand for delivery structures and pedagogical patterns that most appropriate. Most of the instructors receive a singular opportunity to foster an interaction and collaboration among their students respectively by creating the learning communities (Blood, 2002).

Lately, blog have helped the establishment of online users and extensive online communities in educations, which originally it did as a personal journaling tool. Hence, the teachers will use most appropriate ways in blogging such as discussion boards in guided discussions, technological tasks in exchanging the ideas, limited in-class conversations and observations of students' behaviors in educational blogging (Shiang and Hsua, 2008). However, utilizing blog in education require in depth understanding of learning theory structure and learning concept by teachers. Besides that, blog that being utilized with multiple multimedia elements such as audio, video, pictorial and animation will help students to entertain their learning process effectively.

3.0   RESEARCH OBJECTIVES

This study embarks on the following objectives:

     i.   to identify the number of study area and level of respondent involved in research on the usage of blog in teaching and learning.

     ii.   to identify the activities that have been applied in research on the usage of blog in teaching and learning.

     iii.   to identify the dominant learning theory that have been focused by most research on the usage of blog in teaching and learning.

4.0   RESEARCH METHODOLOGY

The reviewed of studies on the usage of blog in teaching and learning have been retrieved as the title and keywords stated. The research paper that were published, original and empirical papers, as well as papers containing the implementation of constructivism learning theory in science and mathematics for secondary school students. The studies have reviewed on the published paper since the year 2004 until the end of 2012, as stated in the Table 5.1 were selected in this study. This method also may exist any limitation due to limited years and relevant meta-analyses. The procedure of this meta-analysis is based on the previous review by (Kempton et al., 2008). The terms of Learning through blog, Blogging in teaching and learning, Learning theory in science and math through blogging, Active learning in blogging, Blogging in education, Blogging in the classroom, Weblogs, Blogging on establishing communities, Creating blogs in writing course, Using blogs as students teachers assessments and e-portfolio and most of the terms were used via databases such as JITE, AJET, SAGE Journal, EBSCOHOST, IEEEXplore Digital Library, Web of Science

ScienceDirect and ProQuest.

5.0   FINDINGS

As results of the reviewed that have been done, findings of studies on the usage of blog in teaching and learning have been retrieved as follow.

5.1   *Number of research concentrated on blogging*

Studies related to the number of research concentrated on blogging stated in the Table 5.1. It shows there are an increasing number of studies from 2004 to 2012 on the usage of blog in teaching and learning respectively. Moreover, the awareness on using blog has been absorbed positively to making meaning of effective method in teaching and learning. The increasing number of research is an important information for the researchers, who intent to focus on research of blog in teaching and learning. A different number of researches between the years 2004 to 2012 shows that the finding has been retrieved to fill the gaps and refine the studies on the usage of blog in teaching and learning.

Year	Number of research concentrated on blogging
2004	1
2005	1
2006	1
2007	5
2008	8
2009	5
2010	12
2011	7
2012	15
TOTAL	55

Table 5.1: Number of research concentrated on blogging

5.2   Level of respondents and Study Area on the usage of blog in teaching and learning

Table 5.2 shows the level of respondents in studies reviewed. The less number of respondents due to this study goes to the secondary schools students. Based on the literature that has been done, there are only 7 studies involving secondary school students. The number of undergraduate student involved in research conducted was the highest among the other level of respondents. Based on positive results showed from the previous studies, it proves a positive contribution of research held on the undergraduate students. To balance the harmonic of this study, it is good to conduct a research of blog usage in teaching and learning among secondary school students. This will give a chance for them to experience the use of blog in teaching and learning.

Level of respondents	Frequencies of article journals
Postgraduates	10
Undergraduates	34
Secondary School	7
Public	8
Trainee	8
Total	55

Table 5.2 : Category of respondents

As many researchers have pointed out, the link between the studies areas on blogging could be strengthen because a specific allocation of studies areas that can be used for research incorporated. Table 5.3 shows the results of study area research conducted previously. Study area for science and technology has 23 researches, which is the highest number among the rest. Social science and arts has 18 research goes on it while 14 researches is going to language study area. These differences will be the appropriate reason on how to get the most catchy and valuable study in the future.

Study Area	Frequencies of article journals

Social Science and Arts	**18**
Science and Technology	**23**
Language	**14**
Total	**55**

Table 5.3 : Study Area on blogging

5.3 Learning Activities applied on blogging the usage of blog in teaching and learning

Based on the previous literature review, the activities listed in the table 5.4 showed that the activities for instructions and reflection has the top activities applied on blogging. This attribute refers to ensuring knowledge that students gained understanding in learning are appropriate with the usage of blog in teaching and learning. Practice and discussion referred to 19 research conducted reflects as a good activities on blogging preferable by the researcher. Moreover, it proves that both activities presented a positive stimulus to access student performance on blogging.

Learning Activities	Frequencies of article journals
Demonstrate and Listening	**10**
Practice and Discussion	**19**
Experience and Observing	**10**
Inquiring and Interview	**10**
Instruction and Reflection	**26**
Total	**55**

Table 5.4 : Learning Activities applied on blogging

5.4 The dominant learning theory used on blogging the usage of blog in teaching and learning

Applying learning theories and strategies in developing any application of learning instruction is necessary. Table 5.5 shows that constructivist learning theory researches are 27. Almost half of learning theory on blogging used constructivist in developing a

proper structure of learning principles. In this study, the dominant learning theory of instruction is merged as framework for the study. However, the process of merging the dominant learning theory and its principles is an issue that is yet to be solved to enhance learning performance among the students.

Theory	Frequencies of article journals
Behaviorist	9
Constructivist	27
Cooperative	9
Cognitive	10
Total	55

Table 5.5 : Learning Theory

6.0   DISCUSSION

Blog in education has been used for many years and its benefits had been documented by the researchers effectively (Savas, 2013). According to Huffaker (2005) cited in Savas (2013), blogs could be utilized to encourage reading and writing, to showcase the work of students, and exchange ideas among students, teachers or school administrators. Moreover, in education, blogs can also be used to enhance the fluency in writing in both, local and foreign languages (Savas, 2011). Blogs are also the most appropriate medium in educating student-teacher learning because of its simplicity of use and incorporation of various resources such as multimedia, socialization and individualizations (Huang, 2013).   There are many advantages of using blogs in education in delivering formal and non-formal learning contents (Huang, 2011; Lin & Kao, 2010).

The role of educational blogs should be managed in a systematic manner to optimize the efficiency in delivering information to students. Blogging can be a more interesting medium in education if it is emerged within the accessibility of social applications on the internet and its consistency to modern learning theories (Fessakis, 2013). According to Han and Bhattacharya (2001) cited in Fessakis (2013), there are several

views that constitutes learning through blogging in education including its environment, authenticity of the theme design, a balance mixture of constraining, discussion, collaboration, inquiry and self-reflection. Blogging will allow students-teachers interactions and collaboration to take place by fostering activities that are designed effectively with regards to the subject matter (Fessakis et. al., 2008).

Wickersham and Chamber (2006) cited in Huang *et al.* (2013) concluded that learning is best facilitated in contexts that include hands-on, experiential opportunities and high degrees of student participation, interaction with peers and student-teacher communication. Internet-based communication technologies allow educators to produce these kinds of learning settings. These settings are more focused on informal learning environments where students will socialize with their colleagues in learning a certain concept. Blogs are an additional tool now that is being used to facilitate online learning, as they allow students to develop, publish and organize knowledge in their own place. The purpose of blogs is to hive away and record information, share, and save observations (Blood, 2002). Besides that, blogs can also encourage the communion of ideas and collaborations. In addition, blogs support the implementation of in social constructivism in teaching and learning. Blogs create a sense of interactivity that leads to social structure of meaning where students can communicate with other students, teachers and professionals in the community.

Web blogs can also provide students with access to many different types of information resources that help them realize the culture of others. Moreover, blogs are a networked writing program where it furnishes a unique program of collaborative authorship. Students can write for real audiences who respond instantly and who take part in the collective writing activities. In the social constructivism environment, educators create a learning context in which students can get absorbed in interesting activities that encourage and facilitate reading. The educator does not have to be there, but he or she needs to watch students' exploration and

discovery of knowledge. On the other hand, the educator needs to lead and help students as they approach problems, encourage them to go in groups to conceive around issues and questions, and most importantly is to support them with encouragement and advice as they tackle problems, adventures and challenges.

As for educators, blogging can be utilized to make student work public, to promote student reflection, to capture accumulated knowledge, and to create space for feedback from a bigger community (Ferdig & Trammell, 2004). In order to interpret and reflect the concept in blogs, students have to use proper metacognitive strategies. Metacognitive is thinking about thinking (Flavell, 1978), therefore metacognitive strategies are more focused on thinking strategies of thinking where it can activate one's thinking and lead to improved learning performance in general (Anderson, 2013).

According to Pressley *et al.* (1987) cited in Huang *et al.* (2009), metacognitive strategies are potentially conscious and controllable. Usually, in learning, students will not think about their thinking when performing certain tasks. They will automatically employ their metacognitive strategies to the learning problem, study the problem, and react towards any circumstances while working out the trouble. All the same, when asking to explain and reflect on how they worked out the trouble and what processes they had gone through, they can commonly describe their metacognitive process and strategies slowly. These students can be categorized as those who have developed their knowledge and understanding in their awareness, and they can supervise their own learning progress easily.

The learning theory and strategies should be studied among other students who are not able to crack their thinking awareness yet. According to O'Malley *et al.* (1985) cited in Regina (2010), learners without the understanding, thinking and knowledge of awareness have no direction or ability to monitor their progress and future learning directions. However, apprentices who have developed their thinking awareness are likely to become more

independent in their own learning. Using blogs in learning requires learners to be independent in their own learning is supported by Ellison and Wu (2008) whom suggested that blogging gives learners more responsibility for their own learning.

The use of blog among students nowadays is widespread. Based on a study done by Nurul Izzah and Zaidatun (2009), it was found that university students' perceptions towards the usage of blogs in learning activities are positive. Students frequently wrote and shared information in blogs when they aware that their reflections and posts will be evaluated by their lecturers. Results from a study by Farmer *et al.* (2008) showed blogging to be an enabling learning tool in higher education. Stiller and Philleo (2003), explored the use of blogs in the pre-service education and marked that the depth and breadth of students reflectivity were positively affected through blogging.

There is an immerse number of reviews and analysis of processes and strategies through blogging. The discussion on processes linked to effective blogging activities, and dominant learning theory through blogging have been revealed generally by researchers. Therefore, for upcoming future studies towards effective learning process and strategies through blogging should explore these issues at a deeper level:

i. The number of secondary school as student respondents was the least in this research. Hence, a larger sample of them in the future research will give a positive contribution in secondary education effectively.

ii. Most of the researchers applied instructions, reflections, practice and discussion. They did not randomize the activities listed creatively. Hence, add on activities must be considered to be used in upcoming research.

iii. The present study argues that the constructivist learning theory is most suitable in explaining educational blogging, and does not give much consideration to student behavior and cooperative learning. It seeks to find the most effective learning process and strategies through blogging.

iv.   Referring to the table 5.3, science and technology is a wide field that requires in depth exploration to support the needs of secondary students' profiles as respondents, therefore, multiple add on activities that make up a blog medium should be assessed together with the suitability of the learning theory.

7.0   CONCLUSION

Blogging in the educational setting among colleagues, teachers and other bloggers can provide a salient reading to advance students professional skills and giving an extraordinary resource in achieving their higher order thinking skills at the top level (Lina Lee, 2010). This implication of blog practice in learning mode will engage students in critical thinking with their degree of reading freedom; hence, it provides them with questions, replying points of thoughts and creating a great forum of discussion respectively (Regina D. Royer, 2010). Besides that, the statement of problems and objectives of the research, have to be explained clearly. More research on effective pedagogy through blogging is needed to educate students to modify their perceptions and motivation in the most proper way.

     The aim of this present study is to develop pedagogy through blogging (Pedablogy) that enhance learning among secondary school students. This is important in this dissertation as the main point is to develop learning activities based on reflections and discussions, and to identify reflections and discussions based on the performances of self. Hence, students' perceptions and motivation can be evaluated through blogging. In all, this concept paper is aimed to review studies investigating the usage of blogs in teaching and learning. Most importantly, this study has identified and discussed the potential activities and the dominant learning theory that will enhance students' performances in blogging. The proposed activities and dominant learning theory can be used to

implement blogging in teaching and learning. However, further studies are needed to prove the effectiveness of these activities and dominant learning theory.

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