PRE-SERVICE TEACHERS' ATTITUDE TOWARDS THE USE OF MOBILE BLOGS AUGMENTED LEARNING STRATEGIES IN NORTHWESTERN NIGERIA

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Abstract

The study investigated the pre-service teachers' attitude towards the use of mobile blogs augmented learning strategies in Northwestern Nigeria. One research question and one corresponding hypothesis were formulated and tested in the study. The study adopted a quasi-experimental design and the population of the study comprised 350 woodwork students subdivided into 224 male students and 126 female students in the six Federal and State Government owned Colleges of Education in the seven North-Western states. The sample was 144 males and 42 females NCE III Woodwork students making a grand total of 186. A questionnaire on Mobile Blog Attitude as Learning Tool (MBALT) was used for data collection. MBALT was pilot-tested and a reliability index of 0.82 was obtained. The stated research question was answered using mean and standard deviation while the hypothesis was tested using a One-Way Analysis of Variance (ANOVA). The study finding showed that there was a significant difference in the mean rating of pre-service teachers' attitudes toward Vblog, Ablog and Tblog in favour of Vblog and Tblog. It was recommended, among others, that the lecturers of machine woodwork should encourage their pre-service teachers to exploit mobile blog sites related to their courses and share ideas with fellow students via commenting on the blog content. Colleges of education offering machine woodwork as a course should be embedded in their Learning Management System (LMS) Mobile blog where lecturers can upload content and students can share ideas with fellow students using the blog.

Keywords: Mobile blog, attitude, woodwork, pre-service teachers

Introduction

Blogs are basically personal web pages in the form of logs. Although the formats of blogs are like each other, they include different and various topics such as politics, technology, daily events, culture, entertainment, hobbies and interests (Rivens, 2010). The term "blog", is derived from the word Weblog, refers to a log in virtual environment. Blogs are personal pages where the sent messages are listed from top to down in reverse chronological order, and they are frequently updated and usually focused on a specific topic. The name of the writer and the date of the entry are usually indicated at the end of each entry in blogs. Any Internet user may read a blog and add own comment (Li, Boda, Smith, & Moore, 2013). Commenting on a published message requires the permission of the sender of the message. The most important dynamics of the blog culture include commenting on the published messages as well as the viewing and replying of the comments, so that feedback-based communication is provided between the senders and receivers of the messages. Interaction is the key for the popularity of blogs.

According to Ally (2009) the term mobile blog is used to refer to a web log where entries are posted by a mobile device. In similar fashion, the term mobile blogging is used to refer to action of sending an entry a weblog by mobile

device. With regards to moblog usages, the findings lead us to a better understanding of the factors that could promote the use of moblogs for learning.

In promoting context-sensitive learning, educators could consider implementing mobile bogs in learning environments where learners can exploit the full potential of context-aware information. For example, in teaching novice researchers about complex science experiments (Li, Boda, Smith, & Moore, 2013), context-aware information was gained from the lab environment (i.e. temperature) as well as learner feedback (to the learning device), where temperature was utilized as a safety mechanism determining whether the equipment used was safe or not, and learner feedback was used to determine the next learning activity. In addition, ubiquitous learning strategies and models such as "cooperative data collecting and problem solving" via moblogs or "online tests based on real-world observations" could be integrated to promote context-sensitive learning (Hajizadeh, 2011).

In collaborative learning, moblogs could be used to facilitate asynchronous online group discussions. Huang *et al.* (2009) reported that moblogs seem to remove social anxiety aspects can be beneficial for learners who have high levels of diffidence and possess low self-esteem. However, this scenario may intrigue such learners to collaborate, the scenario must be dealt with carefully as it may cause other anxieties to surface, such as keeping up with the pace of posting of other mobloggers or the pressure of attracting larger number of readers.

Moblogs were reported to allow for instantaneous feedback on learning, this technology could be utilized as a problem-solving hub where the discussion is not only confined to peers and instructors in their classroom nucleus, but to a larger audience such as faculty or university level. This would allow for insights and perspectives from diverse span of contributors and may assist students in obtaining alternative solutions to a given problem. In addition, moblogs were also suggested to assist students to study in their own time and pace. Researchers could use this advantage in removing the time barrier that exists in classroom lectures, as learners could use moblogs to learn in their own pace and time (Onasanya, 2017).

Attitude is the way we think, act, and feel (Yang, 2011). Attitude encompasses ones' actions, feelings and moods that can be controlled; therefore, attitudes can be controlled to achieve a great success in woodwork among pre-service teachers. Gambari and Yusuf (2013) defined attitude as an aggregate measure for attractiveness or repulsiveness of the subject and the belief that the subject is relevant or irrelevant. Also, Abimbade (2011) defined attitude as an outward and visible postures of human believes that determines what everyone will see, hear, think and do. Researchers have consistently reported the fact that students in technology rich environment experience positive and improved effects on their attitude and achievements in all major subject areas. Li, Boda, Smith & Moore (2013) suggested that the attitude of pupils is likely to play a significant role in any satisfactory explanation of variable level of performance. Shaibu (2008) confirmed this in their study of attitude and achievement that there is a positive correlation between attitude towards learning science and academic achievement in science among the students. Hence, it is necessary for teachers to assist students to acquire and retain information for a longer time by using methods that bring about teaching effectiveness, increase in students' positive attitude, improved academic achievements and retention irrespective of their gender.
Empirical research on the attitude of pre-service teachers towards mobile blogs are very scarce especially in developing nations like Nigeria. Studies of this nature determining the pre-service teachers' attitude towards mobile blogs augmented learning have been conflicting and inconclusive. Therefore, this study examines pre-service teachers' attitude towards mobile blogs augmented learning in Northwestern Nigeria.

Statement of the Problem

There is a need for paradigm shift from traditional method of teaching to mobile blogs augmented learning that could match students' learning preference and ensure contents retention. It is also important that the method used could foster positive attitude of students towards technology, for the country to have competent graduates that can demonstrate mastery of contents in the field of work, and in the industries or as teachers that will pass the contents to others. Social media is one of several engagements that impede students from being able to focus and pay attention to their studies which has been resulting to institutions turning out graduate teachers that are qualified paper wise but not competent in content delivery. To address this problem, educators can device means of channeling these social media positively with educational contents in order to become learning tools.

The unsatisfactory achievement, retention and poor attitude towards woodwork technology have been blamed on several factors such as over dependence on lecture method of teaching and students' addiction to social media (Akanbi & Nwike, 2009).

Blog as one of the most widely used Web 2.0 technology and social media for pleasure could also be considered as a platform for teaching and learning especially for science and technology education. Blog is a new concept, so there are relatively few formal evaluations of its educational value now. Many researchers are speculating optimistically about the potential effects of blog on the quality of educational experience and outcomes, but some are still cautious on the effects that types of blogs that may enhance students' achievement and retention especially on woodwork technology. Based on the, it is therefore necessary to carry out a study on pre-service teachers' attitude towards mobile blogs augmented instruction in Northwestern Nigeria.

Research Questions

The following research question was raised to guide the study:

(i) What is the attitude of pre-service teachers towards using Vblog, Ablog and Tblog mobile blogs augmented strategies learning?

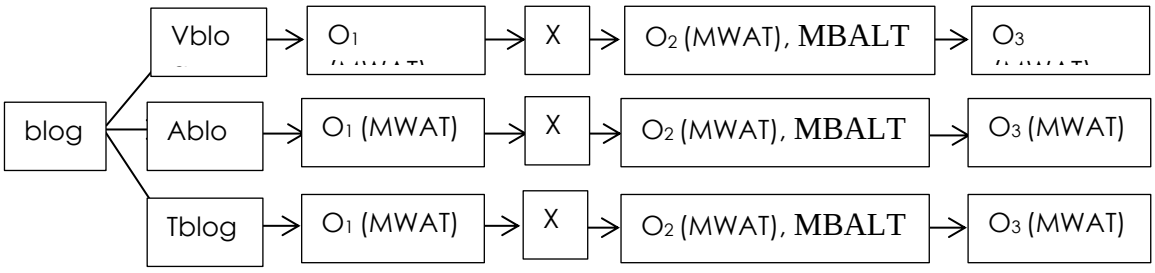
Research Hypothesis

The research hypothesis was formulated and tested at 0.05 alpha level:

HO_1: There is no significant difference in the attitude of preservice teachers toward mobile Vblog, Ablog and Tblog augmented learning strategies.

Methodology

The study employed a quasi-experimental design of the pretest-posttest, non-equivalent, non-randomized comparison groups design. The study has three treatment groups; each group received different types of mobile blog augmented learning. This design is suitable for intact groups as it does not disrupt the existing learning setting (Creswell, 2009) and it also reduces the reactive effects of the experimental procedure and, therefore, improves the external validity of the design. Quasi experimental is sensitive to internal validity problems due to interaction between such factors as selection and maturation, selection and history, and selection and pretesting, which will be statistically controlled (Dike & Tim, 2010). The design layout is as shown in Figure 1.



Key: O_1-Pretesting; **X_1**-Treatment; **O_2**-Posttesting; **O_3**-Retention test

Figure 1: Research Design Layout

The independent variable considered in this study is mobile blog Augmented learning at three levels: Video (Vblog), Audio (Ablog) and Textual (Tblog). The three groups were subjected to the pretest, posttest and retention test using mobile Vblog, Ablog and Tblog augmented learning. Experimental group one was subjected to Vblog treatment, Experimental group two was also subjected to Ablog treatment while experimental group three was exposed to Tblog augmented learning. The dependent variable of the study is students' attitude toward mobile blog as learning tool.

The population for the study comprised all the 395 woodwork pre-service teachers (224 males and 126 females) from the six Federal and State government owned Colleges of Education in the seven North-Western states (Kaduna, Kano, Katsina, Zamfara, Sokoto, Kebbi, and Jigawa states) (National Commission for Colleges of Education). The seven

schools were grouped into two clusters (A and B) based on their location, having Kaduna, Jigawa and Kano states in cluster A, and Katsina, Zamfara, Kebbi and Sokoto states in Cluster B.

Two stages of sampling procedures were employed in this study. First, the study adopted purposive sample technique in selecting three colleges of education that met the following criterion: (i) Colleges that have Technical Education Department with option in woodwork in any of the combined courses and (ii) Colleges that have mixed population of male and female pre-service teachers. Based on these criterion, Kaduna State College of Education, Gidan Waya, Kafanchan, Isa Kaita College of Education, Dutsin-Ma, and Shehu Shagari
College of Education, Sokoto were selected for the study.

Second, simple random technique was used to assign the selected colleges of education into Experimental Group One, Two, and Three respectively. From each experimental group, intact class comprising of male and female pre-service teachers in NCE II were used for the study. One hundred and eighty-six pre-service teachers (144 males and 42 females) made the sample size for the study. Sixty-seven pre-service teachers (51 males and 16 females) were from Kaduna State College of Education, Gidan Waya Kafanchan, 65 NCE II pre-service teachers (49 males and 16 females) were from Isa Kaita College of Education, Dutsin-Ma, while 54 pre-service teachers (44 males and 10 females) were from Shehu Shagari College of Education, Sokoto.
Mobile Blog Attitude Questionnaire (MBAQ) was developed by the researcher. It contained two sections, A and B. Section A was designed to elicit response on pre-service teachers' bio data such as Registration Number, Name of Institution, Gender, Medium of Instruction (Type of Blog). Section B consisted of 34-item statements using 4 points Likert Scale of Strongly Agree (SA = 4), Agree (A = 3), Disagree (D = 2) and Strongly Disagree
(SD = 1).

The Mobile Blog Attitude Questionnaire (MBAQ) were validated by four Technical Education Lecturers from College of Education Gidan Waya and Isa Kaita College of Education, Dutsanma who were not below rank of Senior Lecturer. They conducted content and face validation of each of the instrument. Their suggestions were dully used to affect the corrections pointed out. The validators pointed out some typographical errors on the instruments.

Field trial validation of the three treatments (Vblog, Ablog, and Tblog) was administered on 30 NCE II woodwork pre-service teachers from Federal College of Education, (Technical), Bichi. This college is part of the population for the study but not part of the sample for the study. Field trial validation questionnaire was administered on pre-service teachers to receive the feedback on the treatments and to produce the final copy of the blogs. They use the blogs (Vblog, Ablog and Tblog respectively) followed the contents of machine woodwork and make their observations by responding to the field trial validation questionnaire. Majority of the pre-service teachers agreed to the fact that the blogs were interactive and easy to use. They also agreed that the contents were well organized and clear enough for easy understanding.

Mobile Blog Attitude Questionnaire (MBAQ) was administered to the students to respond to and to check ambiguous words in other to ascertain the reliability of the instrument. It was administered once on the same set pre-service teachers. It was retrieved immediately after they completed the filling. The reliability of MBAQ was established using Cronbach Alpha using the data obtained from pilot study. Reliability index of 0.82 was obtained, the instrument was considered reliable.

The researcher visited colleges of education that were sampled along with research assistants to seek permission from the Technical Education Departmental Heads and lecturers in charge of woodwork. The lecturers were briefed on the objectives and were trained on modalities of the study for one week. Arrangements was made with them on how and when they will assist in the research. The year II Woodwork pre-service teachers in the Colleges of Education were given Research Identification Number (RIN). Mobile blog was used to augment lectures for eight weeks. The lesson in the class were made available for students on the dedicated blog for each group. In the blog, the students were expected to read, listen, or watch the content of the blogs and therefore make general comments and comment on fellow student's comments. After which the MBAQ was administered to ascertain the attitude towards the use of the mobile blog.
The study used descriptive and inferential statistics.

Results

Research Question One: What is the attitude of pre-service teachers towards using Vblog, Ablog and Tblog mobile blogs augmented learning?
In answering research question one, pre-service teachers' responses to the questionnaire items were rated and the scores obtain from the 34 items were analysed as shown in Table 1.

Table 1: Difference in the Mean Rating of Pre-Service Teachers' Attitude toward Mobile Blog when Taught Using Vblog, Ablog and those Taught Using Tblog

Groups	N	Mean	Std. Deviation	Mean Rating	Remark
VBlog	64	109.06	10.608	3.21	Agreed
ABlog	65	103.98	11.298	3.03	Agreed
TBlog	50	111.14	12.480	3.27	Agreed
Total	**179**	**107.80**	**11.731**	**3.17**	**Agreed**

Table 1 shows the mean rating of the pre-service teachers' attitude toward mobile blog as learning tool. Table 1 revealed that pre-service teachers in Vblog group have mean score of 109.06 (3.21), pre-service teachers in Ablog group have mean score of 103.06 (3.03), while the preservice teachers in Tblog group has a mean score of 109.06 (3.21). This shows that there is different in the attitude of preservice teachers exposed to different type of mobile blogs in favour of the Tblog.

Testing of Hypothesis
HO_1: There is no significant difference in the attitude of preservice teachers toward mobile Vblog, Ablog and Tblog augmented learning.

In testing hypothesis one, the mean scores of preservice teachers' attitude toward Vblog, Ablog and Tblog augmented learning were analysed using One-way ANOVA as shown in Table 2.

Table 2: One-Way ANOVA shows significant different between the mean rating of preservice teacher's attitude toward mobile blog as learning tool

Source of Variation	Sum of Squares	df	Mean Square	F	p-value	Decision
Between Groups	1606.005	2	803.003	6.174	.003	Rejected
Within Groups	22890.755	176	130.061			
Total	**24496.760**	**178**				

Table 2 shows ANOVA results of the mean rating of preservice teachers' attitude Vblog, Ablog and Tblog augmented learning. From the table, F = 6.174, df = 2; p = 0.003. This indicated that there is significant difference between the mean rating of preservice teachers' attitude toward Vblog, Ablog and Tblog augmented learning. Hence, hypothesis one is rejected. This shows that attitude of preservice teachers toward mobile blog differed. However, Sheffe post-hoc analysis was conducted to identify the direction of the difference among the treatment groups as shown in table 3.

Table 3: Scheffe Post Hoc Results of Pre-service Teachers Attitude Towards Vblog, Ablog and Tblog

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
VBlog	ABlog	5.078*	2.008	.043	.12	10.04
	TBlog	-2.078	2.153	.628	-7.39	3.24
ABlog	VBlog	-5.078*	2.008	.043	-10.04	-.12
	TBlog	-7.155*	2.145	.005	-12.45	-1.86
TBlog	VBlog	2.078	2.153	.628	-3.24	7.39
	ABlog	7.155*	2.145	.005	1.86	12.45

*. The mean difference is significant at the 0.05 level.

From the Scheffe post-hoc analysis of the pre-service teachers' attitude towards Vblog, Ablog and Tblog augmented learning. The table revealed that there was statistically significant difference between Vblog and Ablog with upper bound 10.04 in favour of Vblog. However, there was no significance difference between Vblog and Tblog with Upper bound of 3.24. Similarly, there was significance difference between Tblog and Ablog with Upper Bound of 12.45 in favour of Tblog.

Conclusion

The study exploits educational opportunities in mobile blogs by exploiting the attitude of pre-service teachers towards mobile blog as learning. Based on the findings of the study the, the study concludes that pre-service teachers found text blog to be more interacting, interesting, and involving than video blog and audio blog respectively.

Discussion

The finding of the study showed that there was significant difference in the mean rating of pre-service teachers' attitude toward Vblog, Ablog and Tblog in favour of Vblong and Tblog. In line with present findings Shana and Abulibadeh (2015) reported that student response to using blogs in the course has been overwhelmingly positive. Ocak, Gökçearslan and Gazi (2014) also reported that students found social contributions of the blogs such as sharing information and interacting with peers. Garciaa, Moizerb, Wilkinsc and Haddoudb (2019) found that students do perceive higher degrees of learning from using blogs.

Recommendations

Based on the outcomes of the study, the following recommendations are advanced for the improvement of preservice teacher education programme in machine woodwork:

(i) the lecturers of machine woodwork should encourage their pre-service teachers to exploit mobile blog sites related to their courses and share ideas with fellow students via commenting on the blog content. Doing this will improve their knowledge of machine woodwork.

(ii) colleges of education offering machine woodwork as a course should imbedded in their Learning Management System (LMS) Mobile blog where lecturer can upload contents and students can share idea with fellow students using the blog.

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