

Effect of Social Media Instructional Model on Students' Academic Achievement

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Abstract

The purpose of this study was to examine the effectiveness of social media strategy model in teaching students. A total of 95 students were purposely sampled for the study. It comprises of 42 boys and 53 girls. The survey questionnaires were distributed to the students. The test consists of 20 items. A quasi-experimental design was used with social media as an instruction model for experimental group and traditional lecture method for control group. It was a unique experiment, as the chosen subject has been taught through lecture or book method. To gain sound result the students were divided in two groups, experimental and control through a systematic procedure. The one group went through interventions; a post test was administered to see the difference between two groups. The results indicate that teaching students using social media strategy has positive effect on students' academic achievement. There was a significant difference in achievement scores of pretest ($M= 10.45$, $SD= 2.89$) and post-test ($M=12.79$, $SD=3.201$), $t(83) = -3.31$, $p=.001$.

Key Words: Pretest, Posttest, social media, Cognitive skills, Analytical skills, Application skills

Introduction

In this ICT world, social media can be used as an alternative means of communication by teachers to teach their students in disseminating information. Information can be retrieved from any place at any time and it is growing at exponential rate. ICT can support teaching and learning process by providing access to different sources of information beyond what is taught by teachers. It provides tools for online communication and collaboration. It can break the monotony of traditional pedagogy and provide a variety to teaching and learning (iSherig, 2014).

Our students who are digital native come to school with very different experiences than that of the digital immigrants. Schools now need to adapt to the current needs of students and identify new and engaging learning. Assessments, likewise, have not kept pace with new modes of working, and must change along with teaching methods, tools, and materials (Horizon Report, 2009).

Social media has become an effective tool to connect people. It has become a powerful forum for learners and educators to work collaboratively. According to iSherig (2014) it provides better teaching and learning environment, it creates greater collaboration among educators and learners, and guides learners to reach towards desirable learning outcomes. It becomes exciting and easier for them to learn using technology. Conventional classroom practice, preparation of lesson plan and student work burdens the teachers.

Since the traditional method of classroom practice was not effective in students performing better in academics, this research is the direct response to the Principal of the school about the low performance of grade Ten students of Sonamgang Middle Secondary School. The result of this study may help us to understand how to better support students in achieving academic result and provide better ideas for the teachers and students to use the social media platform for effective teaching and learning.

Statement of the problem

This study examined the effectiveness of using social media approach to enhance the performance of the students. Students require support with better teaching strategy to enhance their performance. Students are becoming more obsess with the social media due to advancement of technologies, therefore we can always take advantage of this and use this platform as a teaching tool.

Research Objective

The main objective of the study is to determine the effectiveness of social media teaching strategy to improve performance of students.

Research Question

- 1.What is the effectiveness of using social media as a teaching strategy on students' academic achievement?
- 2.Is there a significant difference on the effect of social media teaching technique on students' achievement according to the two groups of respondents?

Literature Review

In this rapidly advancing technology era teaching has become a challenging job for the teachers. Our students who are digital native come to school with very different experiences than that of the digital immigrants. Approximately 70% of teenagers are active users of social media (Lenhart, Purcell, Smith, & Zickuhr, 2010). According to Ali (2007) it is impossible to stop students from using mobile during the course of learning and therefore teachers need to adopt new techniques and methodologies to balance this and overcome issues raised due to the use of mobile applications.

Ramamurthy and Rao (2015) findings revealed that smartphone use boosted learners' critical thinking, creative thinking, and communication and collaboration skills. In fact, learners gain great satisfaction in the learning process through smartphones. It leads one towards a self-reliant lifelong learner.

Schools now need to explore better approaches to address the current needs of students. Traditional method of assessing students doesn't help our students to learn better and must change as per the need of the learners (Horizon Report, 2009). Bhutanese school system does not allow mobile use in school. It is one of the biggest debates as to whether these devices affect the academic performance of students or not.

A number of researchers have conducted a research on effectiveness of using technology for academic performance. According to a study Jeffrey et al. (2015) it was found that the students who are

constantly using mobile phones for learning had perform very well as compared to those students who abstain from using it. Another study conducted by Ali (2007) on a same area supported that there is a strong relationship between the use of mobile technology and student's behavior. The use of mobile applications and technology affects students' behavior, academic performance and teaching strategies.

Several studies have also been conducted to find the relationship between academic performance, educational objectives and the use of social media platform for learning. According Kirschner and Karpinski (2010), learners who spent additional time on Facebook usually have lower GPA compared to others. It was also found that using Facebook for collecting and sharing information was positively predictive of the outcome variables, while using Facebook for socializing was negatively predictive (Junco, 2012).

Methodology

Research Design

A quasi-experimental design was used with social media as an instruction model for experimental group and traditional lecture method for control group. The systematic description of the design is described in Figure 1.

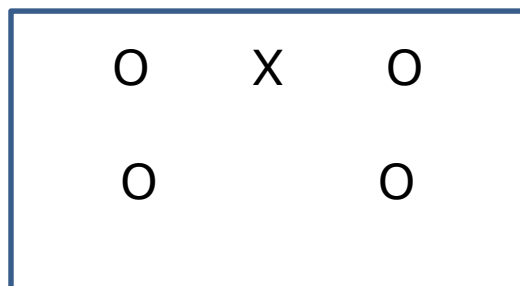
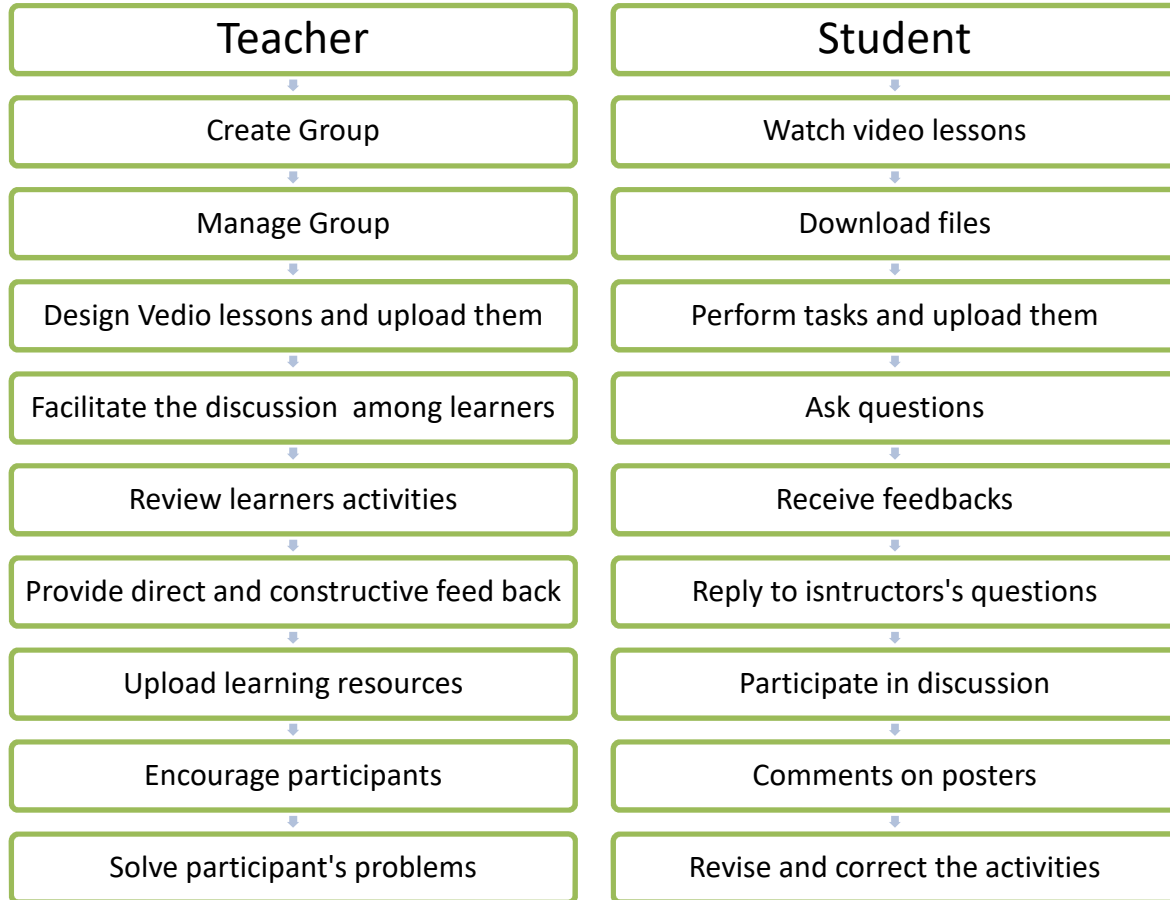


Figure 1. Pretest-posttest control group design

The study design consists of two groups: treatment group (30 students) and control group (65 students). After exposing the experimental group with treatment and control group without any interventions, the posttest was administered.

Procedures

The procedure for carrying out study is briefly explained below



Source: Enhancing Student Teachers' Teaching Skills through a Blended Learning Approach, Albhnsawy, A.A &Aliweh.A.M (2016)

Sample

This research was conducted to determine the effects of social media on student's academic achievement. Pretest and post-test control group design of experimental research was employed for this study. An experimental study design utilized in this study consisted of an experimental group and

a controlled group. The experimental group received treatment, while the control group received no treatment. The research respondents consisted of 95 students from grade Ten of Sonamgang Middle Secondary School, Phuentsholing Thromde. Students were divided into two groups based on accessibility to social media and availability of smart phones.

Instruments

As there is no standardized test available for the subject of education at intermediate level so as to measure the academic achievement of the sample, instrument was designed by the researcher himself. Content of the instrument was validated with the assistance of expert teachers and examiners of the subject of education. The test consisted of 20 multiple – choice questions. There were four options provided for each question. Students were asked to select the right answer for each question. The tasks require students to apply cognitive skills, analytical skills and application skills. The pretest data was collected in the second week of September and post test data was collected in the first week of October. To be more specific, these tasks examined the following three skills:

1. Cognitive Skills (10 tasks)
2. Analytical Skills (5 tasks)
3. Application Skills (5 tasks)

Implementation

The researchers created a Facebook group account for 30 students to provide interventions. These are experimental group. Other control group was taught with normal classroom teaching without interventions. Members were oriented and informed about the features of Facebook account. Many of them are aware of the usage. Researchers faced less problems in training them. Every after lesson, teacher sends videos, share presentations, and other applications. Beside this, teacher asked question for the comments. Members are free to provide their perception and comments. Teacher summed up the comments and inform to the students next day. At the end of every session, the participants were asked to perform number of tasks which was required for them to apply the skills. After performing the tasks, the participants uploaded them on the Facebook group. The teacher reviewed the activities and comment on students' performance. Thus, the participants have to master the skills of uploading

and downloading electronic lectures, exercises, presentations, videos, and discussions. Students were engaged in online discussions and comments in the Facebook group. Teacher also provided voice record of the classroom teaching for student's reference. All the reading documents were saved and sent to students for additional reference. Other supplementary resources were provided as further support for the topic. Every next day, face to face teaching and interaction took place. This activity was designed to provide constructive feedback and to motivate students to pursue further. Intensive media literacy was given to the students who are sampled for the study. The tests were conducted after the class to avoid disturbances in instructional hours. In order to maintain the research confidentiality, participants were advised not to write their name or any identification number on the instrument. The researchers collected all the answer sheets (instruments) from the participants.

Ethical Consideration

The students were informed for the purpose of the study. Parents were also informed and sought necessary support for the smooth conduct of the study. The purpose of conducting study was informed to Principal and class teacher and necessary approval was sought from both principal and class teachers.

Results

The independent sample t-test was used to measure the mean scores difference between achievement scores of control and treatment groups on pretest. Table 1 shows that there is no significant difference between the two groups ($p=.504$). It means that both groups were on equal level of achievement before intervention.

Table 1. Independent Sample t-test for Pre-test of Students' Achievement

Group	N	Mean	Std. Deviation	df	t-value	p
Experimental group	29	10.45	2.89	91	0.671	0.504
Control group	64	9.95	3.47			

Table 2. Independent Sample T-Test for Post-Test of Students' Achievement

Group	N	Mean	Std. Deviation	df	t-value	Sig.
Experimental group	28	12.79	3.201	83	2.509	0.014
Control group	57	11.04	2.934			

* $p < 0.05$

Table 3. Paired Sample t-test for Pre-test and Post-test

	Mean difference	Std. Deviation	t	df	Sig. (2-tailed)
Pair 1 PreTest - PostTest	-8.141	23.55	-3.31	91	.001

* $p < 0.05$

A paired sample t-test was conducted to compare the effect of intervention on achievement scores of experimental group. The table shows that there was a significant difference in achievement scores of pretest ($M = 10.45$, $SD = 2.89$) and post-test ($M = 12.79$, $SD = 3.201$), $t(83) = -3.31$, $p = .001$.

Discussion

The study was carried out to explore the effect of social media on academic achievement in the subject of history. It was a unique experiment, as the chosen subject has been taught through lecture or book method. To gain sound results the students were divided in two groups, experimental and control through a systematic procedure. The one group went through interventions; a post test was administered to see the difference between two groups. The results indicate that teaching students using social media strategy has positive effect on students' academic achievement. These results are in consent with previous research studies like Nsizwana, Ige and Tshabalala (2017), similar results has been given by Khan, Kend and Robertson (2016) who revealed that effective use of social media predicts students' academic performance and it is significantly associated with students' grades.

The study carried by Al-rahmi, Zeki, Alias and Saged (2017) resulted a positive and significant relation among the social media users, collaborative learning and the students' satisfaction in the context of learning. The core ingredient of using social media is that students work in a group, trying to share their opinion, provides relevant comments and thus adding value to the learning.

Recommendation

These results suggest that teachers in the field of education should give a serious and favorable consideration to this approach. The following suggestions can be made on the basis of above results:

1. The results of our study have proved the effectiveness of social media as teaching and learning method. Therefore, the researchers felt the urgency of reviewing the usage of mobile by the students in the school by ministry of education and other related agencies like Dzongkhag/Thromde education sector.
2. This study was limited to Sonamgang Middle Secondary Schools and therefore additional research could be conducted on large sample to increase the generalizability of the findings to the subject of education.

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