EFFECT OF BLENDED LERARNING STRATEGY ON STUDENS' ATITTUDE CHANGE TO LEARNING GEOGRAPHY AND ACADEMIC PERFORMANCE IN SECONDARY SCHOOL IN DUTSIN-MA EDUCATIONAL QUALITY ASSURANCE ZONE

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Abstract

This study was designed and conducted to investigate the effect of blended learning strategy on students' attitude change to learning Geography and academic performance in secondary school. The study employed a quasi-experimental design adopting pre-test and post-test control group. The sample for this study comprised of three hundred and sixty five SSII Geography Students. The study was conducted in two public schools in Dutsin-Ma Quality Educational Zone. The schools were selected using purposive sampling technique, one of which was randomly assigned as experimental group while the other one was randomly assigned as control group. The instruments used were Geography Achievement Test (GAT) and Attitude to Learning Geography Questionnaire (ALGQ) with the reliability of 0.724 and internal consistency of 0.751 respectively. The research questions were answered using mean and standard deviation while the hypotheses were tested at ($P<0.05$) using Analysis of Covariance (ANCOVA) The result revealed that the computer-based instructional strategy is superior to the teacher-centered method in enhancing both academic performance and attitude to learning geography among the students. Based on the findings of this research, the following conclusions were drawn: Blended Learning strategy enhances the student's academic performance among senior secondary school students under study and Blended Learning strategy improves attitude to learning of geography among senior secondary school students under study. Based on the findings of this study, the following recommendations were made: teachers of senior secondary schools should expose geography students to Blended Learning so as to promote their academic performance and Blended Learning should be incorporated in the curriculum of teacher training institutions to enhance attitude to learning geography.

Keywords: Blended learning strategy, Attitude change to learning, Academic performance and Geography

Introduction

Geography as a school subject is one of the most important subjects in senior secondary school education and it is relevant for students in their pursue of tertiary education cannot be over emphasizes. Geography equips with the understanding of its environment, because geography teaches man how to interact with his physical environment, so it therefore helps students to appreciate their environment better and the usefulness of the abundant resources in their environment. However, teaching of Geography as science or social science subject in senior secondary schools is confronted with some problems which include poor academic performance of students in Geography which has been documented by many researchers. This has also been corroborated by high failure in public examinations in the country such as the West African Examinations Council (WAEC) and National Examinations Council (NECO). Studies have shown decline in students' performance in geography

and this has been attributed to the fact that strategies used in our classrooms are not very effective (Adewumi, 2008). Students 'academic performance is being used as one of the predictors of overall quality of education system.

However, student's low performance in geography is caused by many factors such as internal and external factors from the students (Carbone, Hurst & Gunstone, 2009). The internal factors may be the attitude, motivation, interest, knowledge, skills, hope, assumption, and goals (Carbone, et al, 2009). The instructional strategies employed by the teachers are essential in the implementation of the curriculum contents. A strategy is a predetermine way or manner used by teacher to promote learning among students. The difficulties experienced by some science teachers in putting their lessons across to learners could be traceable to the fact that they are not properly informed of recent development and equipment, nor equipped with relevant skills of new methods that showcase best practices (Olorundare, 2011). Shifting and going beyond the conventional teaching approaches according to Nnaka (2006) implies adopting the innovative technological approaches such as computer based learning, guided discovery method, cooperative instructional strategy, problem solving method, among others to teaching and learning situation.

Although technology provides a wide variety of educational solutions and serves effective learning, many doubt the beliefs towards its practicality in the educational environment. They think it forms a distraction and needs a lot of skill to master. Blended learning on other hand allows learners to visualize, listen, feel, and interact with the learning topics. It moves them from theory into practice. They can gain deeper understanding for all the theories that they taught. They can learn according to their rapidity, which creates the opportunity for more individualized education (Fakhir 2015). Those who learn faster can expand their learning and learn extra things that are not included in the school syllabus. However, the slow learners can easily revise their notes and give response to their teachers to overcome challenges they face (Bailey and Martin, 2013). According to Jackson, (2014) Educators should take strong and reliable steps towards applying technology in their classes and learning environments as it forms the link between the students' inner world and the outside world. However it has been observed by the researcher that most of secondary schools in Dutsin-Ma Zone have well equipped computer laboratories with network connections, and also students on their sides most of them have smart phones know how to browse but using the experience for social media only. However it has been observed by the researcher that most of secondary schools in Dutsin-Ma Zone have well equipped computer laboratories with network connections, and also students on their sides most of them have smart phones know how to browse but using the experience for social media only. If the teachers can use that opportunity in teaching and learning situation this may make learning sound, easier and enhance student's academic performance and attitude. According to Ahmed, Ahmad & Abdelzahir, (2018) the best learning environment has emerged with the combination of the strongest aspect of web- based learning and traditional learning.

Based on these the researcher sought to investigate the Effect of Blended Learning Strategy on students' attitude to learning Geography and academic performance in senior secondary school in Dutsin-Ma educational quality assurance zone.

Objectives of the Study

Based on the above background of the study and statement of problem, this study seeks to accomplish the following objectives:

1. To determine the effect of Blended Learning strategy on geography student's academic performance in senior secondary school in Dutsin-Ma educational zone.
2. To find out the effect of Blended Learning strategy on geography student's attitude in senior secondary school in Dutsin-Ma educational zone.

Research Hypotheses

To guide the research, the following null hypotheses are formulated:

Ho_1: There is no significant difference between the mean academic performance score of geography students taught using Blended Learning and those that taught using conventional teaching method.

Ho_2: There is no significant difference between the student's attitude change geography students taught using Blended Learning and those that taught using conventional teaching.

Methodology

The design for this study was a quasi-experimental design, adopting pre-test and post-test control group. The population of the study comprises one thousand, four hundred and ninety three (1493) SS2 Geography students in public co-educational Senior Secondary Schools in Dutsin–Ma Educational Zone. This is made up of 957 males and 536 females with an average age of 17 years. Two (2) co-educational schools were selected using purposive sampling techniques out of the eleven (11) co-educational schools in Dutsin-Ma Educational Zone. Both of the schools have computer laboratories with internet access. The schools selected were G.S.S.S Karofi and G.S.S.S Birchi. G.S.S.S Birchi was assigned as experimental sample while G.S.S.S Karofi was assigned as the control sample, in each of SSII there two arm A & B. In SSII A of GSSS Birchi there are 64 students comprises 33 males and 31 female. In SSII A of GSSS Karofi there are 71 students comprises 41 males and 29 female. In both schools there are 135 students in SSII; hence intact SSII A classes were used. The instruments used were: Geography Achievement Test (GAT) and Attitude to Learning Geography Questionnaire (ALGQ). Both the instruments were validated by two experts from Science education department and one from department of educational foundation both in Federal university Dutsin-Ma.

A pilot test was conducted to establish the reliability of the instruments on a group of twenty (20) SS 2 students of Government Pilot Secondary School Safana which is outside the sample of the study. The reliability was established using test-retest method, the reliability index was obtained Pearson Product Moment Correlation (PPMC) of GAT was 0.72 and internal consistency of ALGQ was 0.751 respectively which indicates a high reliability index of both. This indicates that the instruments GAT and ALGQ are reliable.

The collected data was analyzed using descriptive statistics in terms of mean and standard deviation to answer the two (2) research questions. While t-test independent sample (inferential statistics) was used to test all the two (2) hypotheses formulated for the study at 0.05 level of significance. The Statistical Package for Social Science (SPSS) version 23 was used to process the data.

Results

The result of the study was presented for both pre-test and post-test scores in the experimental and control group and that of male and female students of experimental group which were subjected to descriptive statistics and inferential statistics in form of Means, Standard and t-test independent sample in order to answer the research to test the hypotheses.

Hypothesis One

Ho_1: There is no significant difference between the mean academic performance score of geography students taught using Blended Learning and those that taught using conventional teaching method.

To test hypothesis one, the scores of experimentalhe control and groups for GAT were subjected to Analysis of Covariance (ANCOVA). The result is presented table 1 below:

Table 1: ANCOVA Analysis of the Post-Test Mean Scores for GATof the Experimental and Control Groups

Source	Type III Sum of Squares	Df	Mean Square	F	Sg.
Corrected Model	281.764[a]	2	140.882	139.257	.000
Intercept	239.994	1	239.994	237.226	.000
GATPre	.002	1	.002	.002	.961
GROUP	281.706	1	281.706	278.457	.000
Error	133.540	132	1.012		
Total	**33613.000**	**135**			
Corrected Total	**415.304**	**134**			

R Squared = .678 (Adjusted R Squared = .674)

Table 1 revealed that the F-value computed was 278.46; adjusted R Squared observed was 0.674 and the p-value of 0.000 was observed. Since the obtained p-value of 0.000 is less than the alpha value of 0.05, thus the study rejected the null hypothesis one (1) that says there is no significant difference between the mean academic performance score of geography students taught using Blended Learning and those that taught using conventional teaching method. The decision implies that, there is significant difference between the mean academic performance score of geography students taught using Blended Learning and those that taught using conventional teaching method in favor of experimental group. This indicated that treatment with Blended Learning has effect on students' academic performance in geography (F (1, 134) = 278.46, P = 0.00).

Hypothesis Two

Ho_2: There is no significant difference between the student's attitude change geography students taught using bended learning and those that taught using conventional teaching.

To test hypothesis two, the scores of experimentalhe control and groups for ALGQwere subjected to Analysis of Covariance (ANCOVA). The result is presented table 2 below:

Table 2: ANCOVA Analysis of the Post-Test Mean Scores for ALGQ of the Experimental and Control Groups

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Correced Model	4244.584[a]	2	2122.292	55.524	.000
Intercept	10408.263	1	10408.263	272.305	.000
ALGQPr	14.531	1	14.531	380	.539
GROUP	4228.991	1	4228.991	110.640	.000
Error	5045.416	132	38.223		
Total	**506150.000**	**135**			
Corrected Total	**9290.000**	**134**			

R Squared = .457 (Adjusted R Squared = .449)

Table 2 revealed that the F-value computed was 110.64; adjusted R Squared observed was 0.449 and the p-value of 0.000 was observed. Since the obtained p-value of 0.000 is less than the alpha value of 0.05, thus the study rejected the null hypothesis two (2) that says there is no significant difference between the student's attitude change geography students taught using bended learning and those that taught using conventional teaching. The decision implies that, there is significant difference between the student's attitude change geography students taught using bended learning and those that taught using conventional teaching in favor of experimental group. This indicated that treatment with Blended Learning has effect on students' attitude change geography (F (1, 134) = 110.64, P = 0.00).

Discussion of Finding

The finding in hypothesis one is in line with the finding of Yusoff et al., (2017) in their studies whose found that blended learning has significant positive effect on Students learning through blended environments are more successful at transferring their learning than students in traditional learning environments. The finding in hypothesis one is also supported by the finding of López-Pérez et al. (2011) reported that the more engaging the technological components of blended learning, the greater the student academic performance and classroom expectations.

The finding in hypothesis one is contrary with the finding of Parks, Oliver, & Carson, (2016) in their study who reported that, there is no significant difference between academic performance of student taught with blended and tradition method, they emphasized that students academic expectations for blended learning and traditional learning are the same. The finding in hypothesis two is in agreement with the finding of Jackson, (2014) who reported that blended learning in our classes and learning environments improved attitude toward learning.

Conclusion

Based on the findings of this research, the following conclusions were drawn:

1. Blended Learning strategy enhances the student's academic performance among senior secondary school students under study.
2. Blended Learning strategy improves attitude to learning of geography among senior secondary school students under study.

Recommendations

Based on the findings of this study, the following recommendations were made:

1. Teachers of senior secondary schools should expose geography students to Blended Learning so as to promote their academic performance.

2. Blended Learning should be incorporated in the curriculum of teacher training institutions to enhance attitude to learning geography.

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