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EFFECT OF BLENDED LEARNING STRATEGY ON STUDENTS' ACADEMIC ACHIEVEMENT IN ENGLISH LANGUAGE IN PUBLIC SENIOR SECONDARY SCHOOLS IN EBONYI STATE

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Abstract

This study examined effect of blended learning strategy on students' academic achievement in English Language in public senior secondary schools in Ebonyi State. The study adopted quasi-experimental design, specifically non-equivalent control group design or pretest post-test control group design. The population of the study was 19,688 senior secondary two (SSII) students of Ebonyi state while the sample size was 85 senior secondary two (SSII) students of two intact classes drawn from two co-educational public secondary schools using purposive technique. Each of the two intact classes of the respective schools was assigned to experimental and control groups. The experimental group was taught using blended learning while the control group was taught with lecture method. Data were collected using English Language Achievement Test (ELAT). The Pretest was conducted for both the experiment (treatment) and control groups. The experimental group, received treatments using blended learning while the control group was taught using traditional lecture method. Findings showed that: students taught English Language using Blended learning had significantly higher mean achievement score than students taught using lecture method; there was no significant difference in the mean achievement scores of male and

female students taught English Language using blended learning; and gender and instructional strategies had no significant interaction effect on the mean achievement scores of students taught English Language.

Keywords: blended learning,lecture method, academic achievement, English Language, gender

Introduction

English language is a second language which was bequeathed to Nigerians by the erstwhile colonial masters – the British. Educational development in Nigeria, beginning from colonial era till date is intertwined with English; it serves as the official language and language of instruction in most levels of education (Usman, 2017). When the British government took over the running of the schools in Nigeria, they harmonized the subjects taught in the different missionary schools. They also came up with a policy that made English language a core subject as well as the language of instruction in the 1882 and 1887 education ordinances (Njoku and Izuagba in Njoku, 2017)

Since then, English language remains the pivot of education in Nigeria. It is the language of instruction from upper primary education through secondary, to tertiary education in Nigeria. Not only is English language a compulsory subject in secondary education, a credit pass in it is a compulsory condition for securing admission into Nigerian tertiary institutions. Competence in English is seen as an index of academic excellence. Thus, it is a yardstick for measuring learners' academic performance. More so, before any student can graduate from the tertiary institutions in Nigeria, they must pass the course "Use of English" (Njoku, 2017). This makes it imperative for students to study and sit for English language Examinations internally, at the end of every term and externally, at the end of their final year in secondary schools. The tests given to students on the English language by examination bodies like the West African Examination Council (WAEC) and the National Examination Council of Nigeria (NECO) focus on grammar (lexis and structure), essay writing, reading comprehension and summary and oral English.

Over the years, the teaching and learning of English in schools has been done using traditional instructional strategy. Traditional instructional strategy is basically the teaching and learning process that depends on live lectures and does not involve the use of information communication technology tools in the learning process. This teaching strategy involves a teacher standing before

the learners and teaching them on a particular topic. After that, the students are given home works that are meant to evaluate them on how well they have understood the topic taught. In this teaching technique, students are assumed to have little knowledge of the topic while the teacher is seen as the custodian of the knowledge or content delivered; hence, he explains everything in the class. According to Alswat (2016), the major challenge experienced with the use of this method of teaching English Languages is that it is teacher-centered; teaching and learning from the beginning to the end revolves around the activities of the teacher while learners listen passively with little or no opportunity to express their view, skill and interest. As a result, the students are poorly engaged, lack interest and above all, have poor achievement in English language.

However, with the advent of technology, teaching strategy has witnessed a paradigm shift (Johnson, 2023). Now, teaching and learning is conducted via Information and Communications Technologies (ICT). This makes it possible for students to actively participate in the knowledge acquisition process rather than being passive listeners. Teachers play the role of counselors, coaches or facilitators to direct and guide students in this leaning process. Consequently, the teacher-centered approach has given way to the student-centered approach which requires students to take responsibility for their own learning, actively participate in learning processes, control their own learning processes and create the environment where they play a central role (Didem & Selçuk, 2018). Among these innovative instructional strategies is blended learning.

Blended learning (BL) is a term that is derived from the words “blend” and “learning,” BL is an educational model that combines various learning strategies (Tope, 2022). It is the use of traditional classroom teaching methods together with the use of online learning for the same students studying the same content in the same course. It is a “thoughtful fusion of face-to-face and online learning experiences” (Garrison & Vaughan in Krushna, 2024). Blended learning is an instructional approach that combines online digital media with traditional classroom methods (Graham & Dziuban, 2018). It requires the physical presence of both teacher and student, with some elements of student control over time, place, path, or pace.

Blended learning approach, as used in this study involves the classroom teacher first teaching the students a particular concept and guiding them to immediately check it up online, watch videos or tutorials on the concept. Secondly, students will on the teacher’s guidance, visit databases and websites that contain more information on what they are being taught. The students will be guided

by the teacher to view or watch animations, simulations and illustrative tutorial via the internet on what has been taught. In the third stage, the teacher interacts with the students over what they are learning both in the classroom and via the internet asking them questions on what they need further clarifications. After the questions and clarification, the teacher explains the next content of the lesson using the same strategy as explained above.

Academic achievement refers to outcomes which indicate the extent to which a student has achieved their learning goals. Academic achievement is the extent to which a student or institution has achieved either short or long term educational goals (Schneider & Preckel, 2017). The achievement may be measured through students' grade point average, whereas for institutions, achievement may be measured through graduation rates. Student's academic achievement is largely determined by individual factors such as the student's cognitive abilities as well as self–discipline. These students comprise both male and female gender.

Gender refers to the differentiation in role between men and women which is different from sex but construed by society through socialization (Onyeonoru, 2017). Ajaero (2023) notes that gender is a socially or culturally constructed characteristics, roles, functions and qualities which different societies ascribe to males and females varying from one history to another. Many of these students (irrespective of gender) in various secondary schools have hitherto performed poorly under the traditional lecture method, students achievement have not been encouraging (Overmyer, 2023). Adesulu (2024), laments the critical state of students' performance in English language in external examinations – West African Examination Council (WAEC) and National Examination Council (NECO).

Recent statistics released by the two examination bodies show that the standard of teaching and learning in schools have continued to wane at an alarming rate (Iyekekpolor, 2023). The poor performance of students in WAEC and NECO exams in recent times, has resulted in an average failure rate of 72 per cent, 74 per cent, 74 per cent and 75 per cent in 2018, 2019,2020 and 2021 respectively. Similarly, the May/June SSCE 2020/2021 examination results show that only 451,187 candidates of 1,351,557 who sat for the exam obtained credit in English Language while 560,974 obtained credit in Mathematics (Iyekekpolor, 2023). While NECO 2020 reveals that a total of 1,143,169 candidates registered for the examination, 1,132,357 actually sat for the examination. A breakdown of the results shows that only 244,456 candidates passed English

Language at credit level while 279,974 passed Mathematics. The Registrar and Chief Executive of NECO, Professor Promise Okpala, who exonerates the examination bodies of the mass failure, blames it on the quality of teaching in schools, saying that unless there is improvement in teaching and learning in schools, there is little the examination bodies could do to salvage the already bad situation(Iyekekpolor, 2023). All these have existed under the traditional teaching approach adopted by teachers in our institution of learning.

Moreover, the situation in Ebonyi State is not different where the performance of students in Senior Secondary Schools examination has remained an issue of concern to all stakeholders. The report by Education Resource Centre's of the state in Eucharia (2024) on the survey of the performance of candidates in English language in the state over the years revealed a discernible decline. This perennial decline has remained a source of concern to educators. The trend of performance of students in English language for the past five consecutive years (2019 – 2022) ranges between 25% and 35% (Eucharia, 2024). This ugly scenario seemingly suggests that the conventional lecture method of teaching and learning is inadequate; hence, it indicates the imperativeness of adopting the innovative instructional strategy to address the observed academic anomaly. It is against this background that this study investigates effect of blended learning strategy on students' academic achievement in English Language in public senior secondary schools in Ebonyi State.

Research Questions

The following research questions guided the study

1. What is the mean achievement scores of students taught English Language using blended learning and lecture method?
2. What is the mean achievement scores of male and female students taught English Language using blended learning?
3. What is the interaction effect of gender and instructional strategies on the mean achievement scores of students?

Hypotheses

The following null hypotheses were tested at 0.05 level of significance

$H0_1$: There is no significant difference in the mean achievement scores of students taught English Language using lecture method.

$H0_2$: There is no significant difference in the mean achievement scores of male and female students taught English Language using blended learning.

H03: There is no significant interaction effect of gender and instructional strategies on the mean achievement scores of students.

Methodology

The study adopted quasi-experimental design, specifically nonequivalent control group design or specifically pretest post-test control group design. The population of the study was 19,688 senior secondary two (SSII) students of Ebonyi state while the sample size was 85 senior secondary two (SSII) students of two intact classes drawn from two co-educational public secondary schools using purposive technique. The two intact classes of the respective schools were assigned to the two groups (one experimental group with 44students and one control group with 41). The experimental group was taught using blended learning, while the control group was taught with lecture method. Data were collected using English Language Achievement Test (ELAT). The instrument was validated by three experts and two experienced senior secondary school English Language teachers. The English Language Achievement Test (ELAT) was further subjected to content validation using item analysis for the determination of item difficulty, distractor and discrimination indices of the item after trial testing on 200 senior secondary (SSII) students in another area that is not part of the area of this study. The reliability of the instruments was determined using Kuder Richardson 20 (K-R 20) which yielded the coefficient index of .86. Data were collected by administering the test to the students through the help of the two trained teachers. The Pretest was conducted for both the experiment (treatment) and control groups. The experimental group, received treatments using blended learning while the control group was taught using traditional lecture method. These teachers taught their respective groups for four weeks during normal school period using their English Language school Timetable for the classes. The

extraneous variables which would have hindered the outcome of the study were effectively and efficiently controlled. Data collected from the pretest and post test were analyzed with Mean to answer the research questions. The standard deviation was used to determine the proximity of their responses while the hypotheses were tested using analysis of covariance (ANCOVA) at 0.05 level of significance.

Results

Research Question 1

What is the mean achievement scores of students taught English Language using lecture method?

The result of the data analysis was presented in Tables 1:

Table 1: Mean and Standard Deviation of Achievement Scores of Students Taught English Language using lecture method

	Pretest			Posttest		
Methods	**N**	$\bar{x}$	**SD**	$\bar{x}$	**SD**	**Mean Gain Scores**
Blended Learning	44	39.25	7.41	60.14	15.81	20.89
Lecture Method	41	37.29	11.15	45.21	25.31	7.92

$\bar{x}$ = mean score, SD = Standard Deviation

The result in Table 1 shows that the experimental group taught English Language using blended learning had the pretest mean score of 39.25 with a standard deviation of 7.41 and a posttest means score of 60.14 and a standard deviation of 15.81. Students in the control group taught English Language using lecture method obtained a pretest mean score of 37.29 with the standard deviation of 11.15 and a posttest mean score of 45.21 with the standard deviation of 25.31. The table also shows that students in the experimental group taught English Language using blended learning had the mean gain score of 20.89 which is higher than that obtained by those in the control group which was 7.92. The resulted in table 1 indicates that the students in the two groups benefited from the instructional strategies but those taught English Language using blended learning benefited more than those taught with the lecture method.

Research Question 2

What is the mean achievement scores of male and female students taught English Language using blended learning?

The result of the data analysis was presented in Tables 2:

Table2: Mean and Standard Deviation of Achievement Scores of Male and Female Students Taught English Language using blended learning

	Pretest			Posttest		
Gender	**N**	$\bar{x}$	**SD**	$\bar{x}$	**SD**	**Mean Gain Scores**
Male	23	39.16	12.09	56.33	14.21	17.17
Female	21	35.08	17.06	54.19	13.17	19.11
Difference						**1.94**

The result in table 2 shows that male students taught English Language using blended learning had a pretest mean score of 39.16 with a standard deviation of 12.09 and a posttest mean achievement score of 56.33 with the standard deviation of 14.21 while the female students obtained the pretest mean score of 35.08 with the standard deviation of 17.06 and a post mean score of 54.19 with a standard deviation of 13.17. The table also reveals that a mean gain achievement score of 19.11 obtained by the female students is greater than the mean gain achievement score of 17.17 obtained by the male students. This result indicated that the blended learning instructional strategy had effect on both male and female achievement scores but favoured the female students with a slight mean gain of 1.94.

Research Question 3

What is the interaction effect of gender and instructional strategies on the mean achievement scores of students?

The result of the data analysis was presented in Tables 3:

Table 3: Interaction Effect of Gender and Instructional Strategies on the Mean Achievement Scores of Students

		Pretest			Posttest		
Groups	**Gender**	**N**	$\bar{x}$	**SD**	$\bar{x}$	**SD**	**Mean Gain Score**

Blended Learning							
	Male	23	39.16	12.09	56.33	14.21	17.17
	Female	21	35.08	17.06	54.19	13.17	19.11
	Differences						**1.94**
Lecture Method	Male	19	32.24	08.18	41.13	11.07	8.89
	Female	22	29.27	10.11	38.21	14.17	8.94
	Differences						**0.05**

The result in Table 3 shows that the mean gain achievement scores of 17.17 and 19.11 obtained by male and female students respectively, taught English Language using blended learning were higher than the mean gain achievement scores of 8.89 and 8.94 obtained by male and female students respectively who were taught English Language using lecture method. The table further reveals that male and female students taught with English Language had the pretest mean score of 39.16 and 35.08 respectively; the male and female students in the control group had the pretest mean achievement score of 32.24 and 29.27 respectively. The male and female students taught with English Language with blended learning had the posttest score of 56.33 and 54.19 respectively while male and female students taught with lecture method obtained the post mean scores of 41.13 and 38.21 respectively. In all, the result indicates that both male and female students in the experimental group (i.e, taught English Language with blended learning) performed better than the male and female students in the control group (i.e, taught with lecture method).

Test of Hypotheses

H01: There is no significant difference in the mean achievement scores of students taught English Language using blended learning and those taught lecture method.

The result of the data analysis was presented in Tables 4:

Table 4: Summary of the Analysis of Covariance (ANCOVA) of the Difference in the mean Achievement scores of students taught English Language using blended learning and Lecture Method.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	6446.727[a]	2	3223.363	49.176	.000
Intercept	2650.303	1	2650.303	40.433	.000
PRETEST	2478.676	1	2478.676	37.815	.000
METHODS	3475.806	1	3475.806	53.028	.000
Error	5374.873	82	65.547		

Total	197992.000	85
Corrected Total	11821.600	84

The result in Table 4 shows a probability value of 0.000 which is less than the 0.05 level of significance. Since the P-value was less than the 0.05 level of significance, the null hypothesis was rejected and conclusion made was that there was significant difference in the mean achievement scores of students taught English Language using blended learning and lecture method.

$H0_2$: There is no significant difference in the mean achievement scores of male and female students taught English Language using blended learning.

The result of the data analysis was presented in Tables 5:

Table5: Mean and Standard Deviation of Achievement Scores of Male and Female Students Taught

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	2073.960[a]	2	1036.980	24.851	.300
Intercept	658.028	1	658.028	15.770	.070
PRETEST	2010.315	1	2010.315	48.177	.100
GENDER	129.466	1	129.466	3.103	.086
Error	1710.836	41	41.728		
Total	73945.000	44			
Corrected Total	3784.795	43			

The result in table 5 shows a probability value of .086 which is greater than the .05 level of significance. Since the P-value is greater than the .005 level of significance, the null hypothesis was upheld. This means that there is no significant difference in the mean achievement scores of students taught English Language using blended learning.

$H0_4$: There is no significant interaction effect of gender and instructional strategies on the mean achievement scores of students.

The result of the data analysis was presented in Tables 6:

Table 6: Summary of Analysis of Covariance (ANCOVA) of the Interaction Effect of Gender and Instructional Strategies on the Mean Achievement Scores of Students

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	4106.136[a]	4	1026.534	12.454	.100
Intercept	7116.319	1	7116.319	86.336	.000
Pretest	3209.685	1	3209.685	38.940	.400

Methods	116.160	1	116.160	1.409	.239
Gender	442.231	1	442.231	5.365	.023
Methods * Gender	.020	1	.020	.000	.912
Error	6594.052	80	82.426		
Total	412905.000	85			
Corrected Total	10700.188	84			

The result presented in Table 6 shows a probability value of 0.912 which is greater than the 0.05 level of significance. Since the P-value is greater than the .05 level of significance, the null hypothesis was upheld. This means that there was no significant interaction effect of gender and instructional strategies on the mean achievement scores of students.

Discussion of Findings

The findings of this study were discussed in line with the research questions and hypotheses that guided the study.

The finding of this study showed that students taught English Language using Blended learning had significantly higher mean achievement score than students taught using lecture method. The result in Table 1 revealed that students in the experimental group who were taught English Language using blended learning had the higher mean gain score than the students in the control taught with lecture method. Also, the result in Table 4 showed that there was significant difference in the mean achievement scores of students taught English Language using blended learning and lecture method. These results specifically indicated that blended learning had greater effect on students' achievement in English Language. The results proved the superiority of Blended Learning instructional strategy over the traditional lecture method. The better achievement secured by the students taught English Language using blended learning method may be attributed to the efficacy of blended learning. This finding is in line with Ezeanyika (2021) whose finding showed that there was significant difference between the mean academic scores of the students taught computer studies using blended learning instructional approach and those taught using conventional method in favour of blended learning. The result is also in line with Ugboja, (2022) who found that Blended learning had significant effect on students' academic achievement in Essay writing in Ayigba senior secondary schools.

The second finding of this study shows that there was no significant difference in the mean achievement scores of male and female students taught English Language using blended learning.

The result in Table 2 reveales that a mean gain achievement score obtained by the female students was slightly higher than the mean gain achievement score obtained by the male students.The test of hypothesis presented in Table 5 reveals that there was no significant difference in the mean achievement scores of students taught English Language using blended learning and lecture method using blended learning. This result suggests that blended learning provides relatively equal opportunities for both male and female students, hence closing gender gap among the students. This finding is consonance with the finding of Krushna (2024) which shows that there exists no significant difference between the boys' and girls' students of 9th class students in academic achievement using blended learning.

Similarly, the findings of this study show that gender and instructional strategies had no significant interaction effect on the mean achievement scores of students taught English Language. The result in Table 3 reveals that both male and female students in the experimental group performed better than the male and female students in the control group. Table 6 shows that there was no significant interaction effect of gender and instructional strategies on the mean achievement scores of students. This means that gender did not influence the finding of this study. The implication of this finding is that blended learning could be used to teach students in a mixed classroom without being adversely affected by either male or female. The finding agrees with Eze (2023) who in his study found among other things that there was no significant interaction effect of gender and instructional strategies on the mean achievement scores of students.

Conclusion

The conclusion drawn from the finding of this study are that: students taught English Language using blended learning performed better than students taught using lecture method. The difference in the mean achievement scores of male and female students taught English Language using blended learning was not significant. Finally, gender had no significant interaction effect with instructional strategies on the mean achievement scores of students taught English Language.

Recommendations

The following recommendations were made based on the findings and conclusion drawn there from:

1. Blended learning should be used always by English language teachers in teaching secondary schools students so as to address the problem of poor achievement in the subject.
2. Government and school owners should equip their schools with digital devices and reading materials for effective utilization and sustenance of blending learning instructional strategy in secondary schools.
3. Workshops, seminars, symposia, conferences and on the job training should be organized for the teachers by the government and school authorities to equip them with ICT skill for effective application of blended learning.

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