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RE-ENVISIONING GENDER EQUITY IN STUDENTS' ACHIEVEMENT IN ENGLISH VOCABULARY USING BINGO GAMES STRATEGY

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Abstract

The study examined the influence of gender on academic achievement of Upper Basic II students taught English vocabulary with Bingo games strategy in Okura District of Dekina Local Government Area of Kogi State. The study adopted a pretest- post-test quasi experimental research design. One research question and two null-hypotheses guided the study. The population of the study was 732 Upper Basic II students drawn from 11 public schools in Okura District. Using Krejcie and Morgan's table of sampling, a sample size of 248 students (128 males and 120 females) was used for the study. Data was generated through English Vocabulary Development Achievement Test (EVDAT). The instrument for data collection was subjected to both face and content validation. For the face validity, the instrument was validated by two experts in the field of Language Education, Department of Arts Education, and one expert from Measurement and Evaluation, Department of Educational Foundation, all from Prince Abubakar Audu University, Anyigba, Kogi state. The content validity was ensured through the use of a table of specification. A reliability index of 0.75 was realized using Kuder Richardson formula 20 (KR20). Mean and standard deviation were used to answer the research questions while analysis of covariance (ANCOVA) was used to test the hypotheses at 0.05 alpha level of significance. The finding of the study revealed that the female students achieved higher than their male counterparts. However, the test of hypotheses show that statistically, gender is not a significant factor influencing students' achievement when taught English vocabulary using Bingo games instructional technique. Based on this finding, the study recommends, among others, that both male and female students should be properly guided by the teachers of English in terms of helping them to develop high interest and promote their academic achievement in English vocabulary.

Keywords: English, Gender, Academic achievement, Vocabulary, Bingo game

Introduction

Vocabulary among other aspects is foundational for learning English because it forms the foundation for listening, speaking, reading and writing skills (Gaynor, 2014). In line with this assertion, Fithriani (2021) argues that vocabulary serves as the foundation of the four language skills. A language learner's mystery of the vocabulary could be said to have a significant impact on the ability of the individual to acquire the language. Also, vocabulary is paramount for English as second language (ESL) students since it serves as a foundational piece for understanding language (Al-hinnawi, 2012). This is to say that vocabulary is crucial for students of ESL as this would enable them to express themselves vocally, write constructively in English and comprehend other components of the language.

However, both students and teachers face a lot of challenges during vocabulary classes. These challenges could be as a result of different factors, ranging from the background of the students, time allotted for the class, materials available for the teaching as well as the learning environment. Simply put, students, teachers, materials, teaching methods and techniques, and evaluation are the essential components for language teaching and learning. Most of the learners firmly believe that teaching and learning of new words help to develop their four skills - listening, speaking, reading, and writing, and it is an important factor which affects the learners' achievement also. Attitudes towards learning new words always depend on learners' teaching and learning environment, desire for learning, and motivation among others (Ayesha, et al, 2016). Games could help in motivating students towards active participation in learning.

Bingo is a popular game of chance that typically involves matching numbers on a card to those called out by a facilitator. In the context of education, Bingo has been adapted as an engaging and interactive teaching tool. Instead of numbers, educators use content-specific items, such as words, images, or questions, to align with their teaching goals. Consequently, in teaching English vocabulary, the Bingo game involves cards filled with vocabulary words instead of numbers. The

facilitator (teacher) calls out definitions, synonyms, antonyms, or uses the words in sentences. Students must match the clues to the correct words on their cards (Rahmasari, 2021).

Usually, games are used for set induction or to keep the students busy when there are some times left at the end of a lesson. However, games should be seen as being more than marginal activities used to make up odd moments when the teacher and the students have nothing too serious to do. Games should be at the heart of language teaching and should be used at all the stages of the lesson, provided that they are suitable and carefully chosen. Games could also be used for revision exercises, helping learners to recall information in a stress free and entertaining way. It is agreed that even if games could result to noise and entertain students, they are still worth paying attention to and implementing in the classroom. This is because they motivate learners, promote communicative competence and generate fluency and of course have a significant role in improving a second language acquisition. It is because of the importance inherent in the use of games that this study adopted the use of Bingo as a teaching technique using gender as a moderating variable to see whether it would be effective in the teaching of vocabulary.

Gender is an important variable in educational research as it can influence how students learn, participate, and perform in different academic activities. In the context of studying the effect of Bingo games on junior secondary school students' achievement in English vocabulary, exploring gender relevance offers insights into whether male and female students respond differently to the method and whether the teaching strategy has a differential impact on their vocabulary acquisition. Understanding these tendencies can help assess whether Bingo's game dynamics equally benefit both genders or if one gender has a distinct advantage in this technique. Gender is a significant factor in assessing the impact of Bingo games on vocabulary acquisition among junior secondary school students. By analyzing gender differences in participation, learning styles, and outcomes, the research could contribute to the development of more effective, equitable

teaching strategies. This would ensure that both male and female students benefit equally from the educational advantages of game-based learning in vocabulary development.

Studies have proven that students have low motivation in learning English because they view English as a difficult subject and this is also the case in Okura district of Dekina Local Government Area of Kogi State. Some of the challenges faced by the students are caused by factors related to the students and the technique used in teaching and learning process and students react differently to different method of teaching. Therefore, the aim of this study was to investigate the influence of gender on academic achievement of Upper Basic II students taught English vocabulary with Bingo games instructional technique in Okura district of Dekina Local Government Area of Kogi State. One research question and two hypotheses guided the study. These are:

Research Question

What is the influence of gender on Upper Basic II students` academic achievement when taught vocabulary with Bingo games?

Hypotheses

Ho_1: There is no significant difference in the academic achievement of Upper Basic II male and female students taught English vocabulary with Bingo games.

Ho_2: There is no significant interaction effect of method and gender on the academic achievement of Upper Basic II students taught English vocabulary with Bingo game.

Methods

The study adopted a pretest- post-test quasi experimental research design. One research question and two null-hypotheses guided the study. The population of the study was 732 Upper

Basic II students drawn from 11 public schools in Okura District. Using Krejcie and Morgan (1970)'s table of sampling, a sample size of 248 students (128 males and 120 females) were used for the study. Data was generated through English Vocabulary Development Achievement Test (EVDAT). The instrument for data collection was subjected to both face and content validity. The face validation was carried by presenting the instrument to two experts in the field of Language Education, Department of Arts Education, and one expert from Measurement and Evaluation, Department of Educational Foundation, Prince Abubakar Audu University, Anyigba, Kogi state. Their suggestions and corrections were used to modify the instrument. The content validity was ensured through the use of table of specification. A reliability index of 0.75 was realized using Kuder Richardson formula 20 (KR20). Mean and standard deviation were used to answer the research questions while analysis of covariance (ANCOVA) was used to test the hypotheses at 0.05 alpha level of significance.

Results

Research Question

What is the influence of gender on Upper Basic II students` academic achievement when taught vocabulary with Bingo games?

Table 1: **Mean and Standard Deviation of Pretest and Posttest Scores of Male and Female Students' Academic Achievement when Taught Vocabulary with Bingo Games**

Variable		Pretest		Posttest		Mean gain
Gender	N	$\bar{x}$	SD	$\bar{x}$	SD	
Male	128	47.39	7.76	62.48	9.74	15.09
Female	120	47.04	8.55	63.99	9.55	16.95

Results on Table 1 showed the pretest and posttest mean and standard deviations of male and female students taught English Vocabulary using Bingo games instructional technique. Result showed that the male students had a pretest means score of 47.39 with a standard deviation of 7.76 and a posttest mean score of 62.48 with a standard deviation of 9.74. The difference between the

pretest and posttest mean score for the male students was 15.09. Result also showed that the female students taught English vocabulary using Bingo games instructional technique had a pretest mean of 47.04 with a standard deviation of 8.55 and a posttest mean of 63.99 with a standard deviation of 9.55. The difference between the pretest and posttest mean score for female students was 16.95. However, for both male and female students, the posttest mean scores were greater than the pretest mean scores with the female students having the higher mean gain. This result showed that Bingo games instructional technique had effect on male and female students in favor of female students with higher mean gain.

Hypotheses 1

H_{01}: There is no significant difference in the academic achievement of Upper Basic II male and female students taught English vocabulary with Bingo games.

Table 2: Analysis of Covariance (ANCOVA) of Male and Female Upper Basic II Students Taught English Vocabulary with Bingo Games

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared	Dec.
Corrected Model	134.759[a]	2	67.380	.912	.406	0.53	
Intercept	6863.610	1	6863.610	92.880	.000	0.33	
Pretest Score	133.496	1	133.496	1.806	.183	0.43	
Gender	.114	1	.114	.002	.969	0.28	NS
Error	5690.128	243	73.898				
Total	366689.000	248					
Corrected Total	5824.888	247					

Note: S = Significant, NS = Not Significant and η^2_p = partial eta squared

The result in Table 2 shows that with respect to the academic achievement mean scores of male and female Upper Basic II students taught English Vocabulary with Bingo games instructional technique, an F-ratio of 0.002 was obtained with associated probability value of 0.969. Since the associated probability value (0.969) was greater than 0.05 set as bench mark, the null hypothesis (H_{01}) which stated that there is no significant difference in the academic achievement of Upper Basic II male and female students taught English vocabulary with Bingo games was not rejected. Thus, inference drawn is that, male and female students taught English vocabulary with Bingo games instructional technique did not differ in their performance. This result showed that gender is not a significant factor affecting students' achievement when taught English vocabulary with Bingo games instructional technique. The result further showed the effect size ($\eta^2_p = 0.28$), which indicates that twenty eight percent (28%) variance in the mean academic performance of male and female students in Upper Basic II when exposed to Bingo games can be attributed to the use of conventional method.

Hypotheses 2

H_{02}: There is no significant interaction effect of method and gender on the academic achievement of Upper Basic II students taught English vocabulary with Bingo game.

Table 3: Analysis of Covariance (ANCOVA) of Interaction Effect of Method and Gender on the Academic Achievement of Upper Basic II Students Taught English vocabulary with Bingo Game

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	3267.007[a]	4	816.752	10.965	.000
Intercept	12690.753	1	12690.753	170.368	.000
Pretest Scores	477.324	1	477.324	6.408	.012

Gender	125.873	1	125.873	1.690	.196
Groups	2344.473	1	2344.473	31.474	.000
Gender * Groups	103.031	1	103.031	1.383	.241
Error	11545.987	239	74.490		
Total	653765.000	248			
1qzCorrected Total	14812.994	247			

Note: S = Significant, NS = Not Significant and η^2_p = partial eta squared

Table 3 shows that an F-ratio of 1.38 with associated probability value of 0.241 was obtained for interaction between gender and method of teaching English vocabulary. Since the associated probability (0.241) was greater than 0.05 level of significance, the null hypothesis (H_{02}) which stated that there is no significant interaction effect of method and gender on the academic achievement of Upper Basic II students taught English vocabulary with Bingo game was not rejected. Thus, the interaction effect of method of teaching and gender on students' mean academic achievement in English vocabulary was not statistically significant. Although, there was an improvement in male and female students' academic achievement in English vocabulary when taught using Bingo games instructional technique. Thus, inference drawn is that there was no statistically significant difference in the mean interaction effect of method of teaching and gender on students' academic achievement in English vocabulary at Upper Basic II.

Discussion of Findings

The result of this study showed that even though the females perform higher than the males, statistically, gender has no significant influence on students' achievement. This is in agreement with the findings of Hitosugi, et al. (2014); Calvo-Ferrer and Belda-Medina (2021) and Omachonu and Onoja (2024) who all differently reported that there in no difference in the achievement of males and females if exposed to the same learning condition. This finding however contradicts the

study conducted by Vahdat and Rasti (2013) which found that males were more successful in learning vocabulary through video games.

Males and females taught using Bingo games perform equally in this study because in addition to vocabulary acquisition, Bingo games have the potential to increase learner motivation and reduce anxiety. Motivation is a key aspect in learning, as in most aspects of life. Increase in motivation can lead to more personal initiatives by the learners, in this case by actively wanting to play more. The enthusiasm may spill over to the learners' life outside of school and result in them engaging in more learning-activities with or without the teacher, a benefit not derivable from the use of chalk-and-talk that is prevalent in the conventional lecture method.

Furthermore, the equal achievement of males and females in this study could be attributed to the fact that male and female students may have comparable cognitive abilities, learning styles, and motivation levels related to Bingo game in vocabulary learning. The absence of a main effect of gender suggests that both groups are equally capable of achieving high performance when given similar opportunities and resources. The Bingo game may have been equally engaging for both male and female students. Since the technique does not favour one gender over the other in terms of achievement, the interaction effect (Gender × Method) would not be significant, hence the finding of the study.

Conclusion

The finding of the study showed that gender is not a significant factor influencing students' achievement when taught English vocabulary with Bingo games instructional technique. The finding also showed that there was no statistically significant interaction effect of method of

teaching and gender on students' achievement in English vocabulary. The implication of the findings is that Bingo games instructional strategy enables a better achievement for both genders.

Recommendations

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

1. Both male and female students should be properly guided by the teachers of the English language in terms of helping them to develop high interest and promote their academic achievement in English vocabulary.

2. Since the females seem to perform higher than their male counterparts in English vocabulary, language teachers should pay more attention to the males in the teaching and learning of English vocabulary, thus, bridging any gender gap they may arise.

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