UTILIZING PEER ASSESSMENT STRATEGY WITH FEEDBACK AND REMEDIATION TO IMPROVE STUDENTS WITH SPECIAL NEEDS' ACADEMIC PERFORMANCE IN ALGEBRA

[1]Sharon M. Abaver - Asula, [2]Jerry Ebere Omenka and [3]Solomon Ogebe Aligba

1,2&3 Department of Science and Mathematics Education, Benue State University, Makurdi, Nigeria.

sharonjude85@gmail.com, ejerryomenka@gmail.com and aligbasolomonogebe@yahoo.com

Abstract

This study investigated utilizing peer assessment strategy with feedback and remediation to improve students with special needs' academic performance in algebra in Benue State, Nigeria. The study was guided by two research questions, while two hypotheses were tested. Quasi-experimental research design, specifically the pre-test and post-test non-equivalent research design, was adopted for the study. The population of this study comprised 77 upper-basic one students with special needs (SSN) in the six special needs secondary schools in Benue State in the 2023/2024 academic session. A sample size of 37 (23 males and 14 females) SSNs in upper-basic one in two intact classes in Benue State, were selected from the population using a multi-stage sampling procedure. The instrument used for the study was Word Problems Performance Test (WPPT), with a reliability coefficient of 0.97 obtained using KuderRichardson-20 Formula. Data collected were analyzed using mean and standard deviation to answer the research questions and Analysis of Covariance (ANCOVA) to test the null hypotheses at the 0.05 level of significance. Findings revealed a significant difference between the mean academic performance scores of students with special needs taught algebra using PASFR and those taught using CAS ($F_{(1, 34)} = 24.827$, $p = 0.00 < 0.05$). Also, there is no significant difference in mean academic performance scores between male and female students with special needs taught algebra when PASFR is used ($F_{(1, 29)} = 2.354$; $p = 0.136 > 0.05$). Based on the findings, it was concluded that the use of feedback and remediation in peer assessment strategy enhances SSN academic performance in algebra compared to CAS. The study recommended, among others, that Mathematics curriculum planners and authors of Mathematics textbooks should be encouraged to incorporate peer assessment strategy with feedback and remediation into Mathematics curricula and textbooks in order to enhance the academic performance of students with special needs.

***Key Words**: peer assessment strategy, feedback, remediation, academic performance, algebra, special needs students.*

Introduction

Students with special needs include students with physical challenges such as the deaf or hearing-impaired, dumb or speech impaired, blind or visually impaired, and the crippled. Special needs education is tailored towards the Individualised Educational Programme (IEP) and can be classified into

three categories, namely: physical and sensory impairments, at-risk children and youth, and gifted and talented children and youth (Aligba & Nyihemba, 2022). Special education is required for these children, one that will focus on each student's special need to enable the individual to gain knowledge for self-reliance, self-development, and the development of the society in which he is part. According to the Federal Republic of Nigeria (2014), education is an inclusive experience with equal opportunities given to every child with or without special needs for self-development and for the development of society at large.

Students with special needs can become self-sufficient, innovative, and great leaders if given the opportunity to obtain knowledge by their parents and guardians. This study was centered on students who were deaf and dumb. Students with special needs who master and retain the knowledge of arithmetic operations and skills in algebra could apply these skills successfully to solve daily real-life problems. The major themes in Mathematics are algebra, number theory, geometry, statistics, probability, and calculus (Abaver & Imoko, 2023).

Algebra is one of the mathematics areas that deal with daily life problems such as budgeting and purchasing of goods and services. For example, an algebraic word problem can present itself thus: a man uses ten naira to purchase a book for five naira; how much is he left with? The knowledge of algebraic word problems is essential for every student, both those with special needs and those without special needs, in order to equip all students with the knowledge of such problem-solving skills. The hardest part of solving word problems is translating from words to an equation; first the unknown quantity needs to be identified in the problem, and then the need to determine the value for which you need to solve, which is the variable. Poor performance of secondary school students in algebraic word problems could be expressed in students' weaknesses in interpretation and application of basic arithmetic operations in solving mathematical problems. Unsom (2021) asserts that word problem solving continues to be a challenge for both students and teachers, since it entails the ability to interpret problems correctly before computation of answers.

This then could pose challenges to students as it requires them to read and comprehend the problem. According to Kofi (2020), poor performance in algebra by students is caused by negative attitude, motivation and lesson presentation by Mathematics teachers. Other factors contributing to learners' poor performance in Mathematics are learner-related such as ill-discipline, language barriers, students' attitudes as well as a lack of pedagogical content knowledge, skills and professionalism (Mabena, Mokgosi & Ramapela, 2021).

Academic performance is peculiar to every student. It can be seen as students' learning outcomes in a particular field of study when assessments in the form of tests and examinations are given to the students and marks are assigned to their achievement. Many students with special needs face difficulty in solving word problems. Poor performance in algebra is an issue of great concern. It could be a function of the inability to comprehend mathematical concepts. Numerous factors have been reported as causes of poor academic performance in algebra, one of which is the inability to interpret the word problems.

There is a need for students to have a clear understanding of how to solve algebraic

word problems, thereby enhancing higher academic performance in internal and external examinations such as BECE, since most of the questions are on algebra. The Benue State Basic Education Certification Examinations (BECE) result has reported poor performance in Mathematics in the junior secondary examinations from 2017 to 2022, wherein algebra is the area that features more in the examination. Education stakeholders, especially Mathematics teachers, are concerned about the trend of poor performance at the upper basic level internal and external examinations. The West African Examinations Council's (2022) Chief Examiners' Report on algebraic word problems suggested that candidates should be advised to read carefully and understand the demands of the questions before attempting to answer them. As students struggle with algebraic word problems from the upper basic classes, this could affect them in solving algebraic word problems efficiently in the higher secondary school examinations. Literature review of the academic performance in algebra of students with special needs in Benue State has also shown that the students perform poorly in solving topics such as algebraic word problems.

Good performance in algebra may signify an understanding of arithmetic operations and a good interpretation of word problems as a foundation for mathematical calculations. The failure in solving word problems could be caused by a lack of emphasis by teachers on understanding the language of Mathematics used in the sentences (Adu, Assuah & Asiedu-Addo, 2015). Researchers have identified several factors responsible for this ugly situation; however, the most prominent factor is the use of conventional assessment strategies to teach, learn, and assess Mathematics. Prominent among these factors are the teachers' poor use of teaching strategies (Clearinghouse, 2015). Ellala and Alslaq's (2017) opine that learner-centered strategies enhance improvement of academic performance in students. Hence, the need for activity-based and cooperative learning strategies such as the peer assessment strategy with feedback and remediation, which is particularly valuable in team-based learning, where two or more students can assess each other's work as well as learn from each other. Ugorji and King-Agboto's (2023) opined that the use of peer assessment strategy could improve the academic performance of students. According to Ajogbeje and Alonge (2012), improvement in performance can be enhanced by feedback and remediation. Double, McGrane and Hopfenbeck (2020) posit that the effectiveness of peer assessment in a wide range provides support in the academic performance of students. Okeke, Oguguo and Ene (2023) also opine that students exposed to peer assessment techniques performed better than those exposed to teacher assessment techniques.

In a world where Mathematics knowledge is preferred by boys over girls, it becomes more difficult for the disabled girl child to be accorded the right to proper formal education relating to Mathematics learning. It could be perceived that since algebra deals with reasoning, the female students may lack mathematical reasoning ability compared to male students. When boys and men outperform girls and women in solving mathematical problems, it is seen that the problems are difficult and complex. The use of

a peer assessment strategy with feedback and remediation could improve the academic performance in algebra for both the female and male SSN. Pina, Martella, Chacon-Moscoso, Saracostti and Fenollar-Cortes (2021) assert that males and females can both have good performance in Mathematics. Also, Ibrahim (2022) asserts that the peer assessment strategy enhances the academic achievement in Mathematics of both male and female students.

According to Papama, Makeleni and Masha (2022), when strategies that require cooperation and interaction of students among themselves are employed, both males and females improve their Mathematics achievement. However, such research evidence is scarce on SSN in the study area particularly in algebra. This study therefore sought to determine if utilizing PASFR could improve SSN academic performance in algebra.

Statement of the Problem

Mathematics is very important in every individual's life as regards problem solving. The academic performance in Mathematics concepts of students has been a cause for worry due to low grades in internal and external examinations. Research into the learning processes in peer assessment is scarce both in theory and in practice, thereby making it difficult to evaluate and pinpoint its value as a tool in assessment. Basic Education Certification Examinations (BECE) results have reported poor performance in Mathematics in the junior secondary schools in Benue State from 2017 to 2022, which are the results of 2017–2018, 2018–2019, 2019–2020, 2020–2021, and 2021–2022. The results clearly showed that through the years, it has become almost impossible to have excellent performance from secondary school students. Moreover, poor performance in word problems could be traced to the conventional assessment strategy used by teachers to assess mathematical knowledge. Conventional assessment strategies are teacher-centered and do not provide opportunities for collaborative learning.

Literature accessed by the researcher has shown few studies in Benue State on peer assessment of students and fewer on students with special needs performance in Mathematics concepts. Due to insufficient research on students with special needs education in Mathematics, this study sought to answer the question: What then is the effect of utilizing peer assessment strategy with feedback and remediation to improve students with special needs' academic performance in algebra in Benue State?

Research Questions

The following research questions guided the study:

1. What is the difference in the mean academic performance scores among students with special needs taught algebra using peer assessment strategy with feedback and remediation and the conventional assessment strategy?
2. What is the difference in mean academic performance scores between male and female students with special needs when a peer assessment strategy with feedback and remediation is used in algebra?

Hypotheses

The following null hypotheses were tested for the study:

1. There is no significant difference between the mean academic performance scores of students with special needs taught algebra using the peer assessment strategy with feedback and remediation, and those

taught using the conventional assessment strategy.

2. There is no significant difference in mean academic performance scores between male and female students with special needs when a peer assessment strategy with feedback and remediation is used in algebra.

Research Method

The researchers adopted non-equivalent pre- and post-test control group known as a quasi-experimental research design. The design was appropriate because schools did not allow their schedules to be disrupted or classes reorganised during the course of the study. Hence, intact classes in those schools were used. Emaikwu (2015) supports the use of non-equivalent control group design, which identifies the cause of effects. The study design was used to establish the effects of PASFR on the academic performance of SSN in algebra. The choice of the quasi-experimental design enabled the researcher to collect pretest and posttest data, from which the results can be used for SSN.

The population of this study comprised 77 upper-basic SSNs in the six special education secondary schools in Benue State in the 2023–2024 academic session. A sample size of 37 (23 males and 14 females) in upper-basic one students with special needs in two intact classes in Benue State was selected from the population using multi-stage sampling procedure.

The instrument used for the study was Word Problems Performance Test (WPPT). It was made up of 20 multiple-choice questions with answer options lettered A-D. These questions cover algebraic word problem concepts based on the content of algebra for upper-basic ones. Word Problems Performance Test (WPPT) was adapted by the researchers from the New General Mathematics course textbook (NERC, 2013), consisting of word questions covering algebraic topics in upper-basic one Mathematics curriculum. Some questions were formulated by the researchers. Kuder-Richardson 20 formula was used because the test items had varying difficulty levels and differ in their challenges involving understanding, interpretation, and problem solving. Kuder-Richardson: 20 formula yielded a reliability coefficient of 0.97. The instrument was considered reliable for the purpose of this study, as according to Emaikwu (2015), an instrument with a reliability coefficient of 0.50 and above is reliable.

Data collection covered six weeks of a term. In the first week, WPPT was administered as pre-test. Treatment began in the second week and lasted for 120 minutes per week for four weeks, giving a total of 480 minutes used in undertaking the instructional programme in each of the selected schools. Revision of previous lessons was carried out in the sixth week, WPPT was reshuffled and re-administered as posttest.

The collected data collected were analyzed using mean and standard deviation to answer the research questions. Analysis of Covariance (ANCOVA) to test the null hypotheses at 0.05 level of significance. The choice of ANCOVA was due to the fact that the study employed a quasi-experimental

design, which involves comparing the means of intact classes.

Research Question 1

What is the difference in the mean academic performance scores among students with special needs taught algebra using peer assessment strategy with feedback and remediation and the conventional assessment strategy?

Table 1: Mean and Standard Deviation on Academic Performance Scores of Students with Special Needs Taught Algebra Using Peer Assessment Strategy with Feedback and Remediation and Conventional Assessment Strategy

Group	N	Pre-WPPT Mean	SD	Post-WPPT Mean	SD	Mean Gain
PASFR	32	30.59	12.86	62.50	15.08	31.91
CAS	5	47.00	7.58	49.00	16.36	2.00
Mean/SD Difference		**16.41**	**5.28**	**13.50**	**1.28**	**29.91**

Table 1 indicates that students taught algebra using a peer assessment strategy with feedback and remediation and conventional assessment strategy had a mean academic performance score of 30.59 and 47.00 with standard deviations of 12.86 and 7.58 in pre-WPPT, respectively, and a mean academic performance score of 62.50 and 49.00 with standard deviations of 15.08 and 16.36 in post-WPPT, respectively. The students taught algebra using the PASFR strategy had a mean gain of 31.91, while those taught algebra using CAS had a mean gain of 2.00. The mean gain difference of 29.91 is in favor of special needs students taught algebra using the PASFR strategy. This indicates that students taught algebra using the PASFR strategy gained higher academic performance compared to those taught algebra using CAS. Furthermore, the SD differences of 5.28 and 1.28 at the pre- and post-WPPT indicate high academic performance variation between the control group, while the students in the experimental group showed similar academic performance in solving word problems in algebra.

Research Question 2

What is the difference in the mean academic performance scores in algebra between male and female students with special needs when a peer assessment strategy with feedback and remediation is used?

Table 2: Mean and Standard Deviation of Academic Performance Scores of Male and Female Students with Special Needs Taught Algebra Using Peer Assessment Strategy with Feedback and Remediation

Group	Gender	N	Pre-WPPT Mean	Pre-WPPT SD	Post-WPPT Mean	Post-WPPT SD	Mean Gain
PASFR	Male	18	31.67	12.72	65.83	13.96	34.16
	Female	14	29.21	13.39	58.21	15.89	29.00
	Mean Difference		**2.46**	**0.67**	**7.62**	**1.93**	**5.16**

Table 2 reveals that the male students' with special needs who were taught algebra using PASFR had a mean academic performance score of 31.67 with a standard deviation of 12.72, while the female students with special needs had a mean academic performance score of 29.21 with a standard deviation of 13.39 in the pre-WPPT, respectively. Also, the post-WPPT mean academic performance score for male students was 65.83 with a standard deviation of 13.96, while the mean academic performance score for female students was 58.21 with a standard deviation of 15.89.

The summary data in the table further revealed that male SSN had a mean gain of 34.16 while female SSN had a mean gain of 29.00. The mean gain difference of 5.16 is in favor of the male SSN. This indicates that the use of PASFR as an interactive strategy has a greater impact on the academic performance in algebra of male SSN compared to their counterparts by way of being able to use feedback and remediation to improve on their strengths and weaknesses in solving word problems in algebra.

Furthermore, within the male SSN, the SD at the pre-WPPT and post-WPPT was 12.72 and 13.69, respectively, indicating that the male had homogeneous academic performance scores at the pre-WPPT. Within the female SSN, the SD at the pre-WPPT and post-WPPT was 13.39 and 15.89, respectively, indicating high variability. The differences between males and females at the pre-WPPT were 2.46 and 0.67, respectively, and at the post-WPPT, they were 7.62 and 1.93, respectively. This suggests that there is a high variability in academic performance at the post-WPPT among the PASFR group, especially in the female SSN in solving word problems in algebra compared to the male SSN.

Hypothesis 1

There is no significant difference between the mean academic performance scores of students with special needs taught algebra using the peer assessment strategy with feedback and remediation and those taught using the conventional assessment strategy.

Table 3: Summary of ANCOVA Results of Post-WPPT Academic Performance Test Mean Scores in Word Problems in Algebra of SSN Taught Using PASFR and CAS

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	5055.553[a]	2	2527.777	22.308	.000	.568
Intercept	1318.584	1	1318.584	11.637	.002	.255
WPPT_PRE	4267.445	1	4267.445	37.662	.000	.526
Group	2813.174	1	2813.174	24.827	.000	.422
Error	3852.555	34	113.310			
Total	145125.000	37				
Corrected Total	8908.108	36				

Table 3 indicates that $F_{(1\ 34)} = 24.827$, $p = 0.00 < 0.05$. This signifies that the probability level is less than the specified alpha-level of 0.05. Consequently, the null hypothesis is rejected. This implies that PASFR enhances SSN's academic performance in algebra. This signaled that the PASFR strategy enhances higher academic performance of students with special needs when used in teaching word problems in algebra as compared to the CAS regularly used by Mathematics teachers at the secondary school level.The partial Eta squared value of 0.278 obtained for the strategy signified that only 27.8% of academic performance scores can be attributed to PASFR in assessing SSN in upper basic-one algebra.

Hypothesis 2

There is no significant difference in mean academic performance scores in algebra between male and female students with special needs when a peer assessment strategy with feedback and remediation is used.

Table 4: Summary of ANCOVA Results of Post-WPPT Academic Performance Test Mean Scores of Male and Female SSN Taught Word Problems Using PASFR

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	4095.823[a]	2	2047.911	20.104	.000	.581
Intercept	6144.329	1	6144.329	60.316	.000	.675
WPPT_PRE	3638.680	1	3638.680	35.719	.000	.552
Gender	239.811	1	239.811	2.354	.136	.075
Error	2954.177	29	101.868			
Total	132050.000	32				
Corrected Total	7050.000	31				

Table 4 indicates that $F_{(1,\ 29)} = 2.354$; $p = 0.136 > 0.05$. This indicates that the probability level is greater than the specified alpha-level of 0.05. Consequently, the null hypothesis is not rejected. This shows that PASFR has no effect on academic performance as relates to the gender of SSNs in algebra. The partial Eta square value of 0.075 was obtained for the strategies. This means that only 7.5% of academic

performance scores can be accounted for by gender in PASFR.

Discussion of Findings

Finding revealed a significant difference between the mean academic performance scores of students with special needs taught algebra using peer assessment strategy with feedback and remediation and those taught using conventional assessment strategy. The finding agrees with Ajogbeje and Alonge's (2012) finding that there is a significant effect of feedback and remediation on students' achievement in algebra. The finding is in line with Double, McGrane and Hopfenbeck's (2020) result, which indicated the effectiveness of peer assessment strategy in a wide range of contexts by providing support for peer assessment as a formative practice and the effectiveness of peer feedback on the academic performance of students.

This finding revealed that there is tangible evidence to show that the application of peer assessment practices enhanced performance in algebra. The finding agrees with Okeke, Oguguo, and Ene's (2023) results, which revealed that students exposed to peer assessment techniques performed better than those exposed to teacher assessment techniques, and Ugorji and King-Agboto's (2023) results, which revealed that peer assessment strategy has a significant relationship with academic performance. This means when peer assessment strategy with feedback and remediation were given to SSN, the students were able to realise their strengths and weaknesses, which enabled them to strategically study and improve their performance in algebra. Peer assessment enhanced inclusivity and the active participation of all students, including those with special needs.

The finding of the current study carried out on SSN correlates with Ellala and Alslaq's (2017) results which indicated that differences were in favour of the experimental group. The result agreeably verifies the effectiveness of cooperative learning in improving the achievement of students with learning difficulties in Mathematics concepts such as algebra. Students who are physically challenged, for example, the deaf and dumb, are likely to have difficulty with the interpretation and solving of word problems since not all their interpreters may be Mathematics teachers, hence the need for PASFR, which enables interaction of peers.

The finding is in line with Ibrahim's (2022) results, which revealed that there is no significant difference in the mean achievement scores of male and female students exposed to peer assessment strategies in Mathematic. The finding has some bearing on Pina, Martella, Chacon-Moscoso, Saracostti, and Fenollar-Cortes's (2021) study, which revealed that males and females show no significant difference in mathematical performance. The findings also align with Papama, Makeleni, and Masha's (2022) study, which showed that both males and females in the cooperative group improved their Mathematics achievement. The use of PASFR enables SSN to interact and participate in the process of learning and assessment.

Conclusion

The findings have shown that the use of peer assessment strategy with feedback and remediation can improve academic performance in algebra for students with special needs at the secondary school level in Benue State and in Nigeria. There is therefore a need to eliminate the use of conventional assessment strategy, which is a teacher-centered strategy in teaching, learning, and assessment of Mathematics concepts such as algebra, to enhance learner-centred learning. The effect of PASFR on the academic performance of SSN was shown not to depend on gender. This showed that both male and female special needs students are capable of collaborating in the classroom while learning word problems in algebra. Hence, a peer assessment strategy with feedback and remediation can be adopted for the teaching, learning, and assessment of algebra. This will provide a way of boosting academic performance in algebra for students with special needs.

Recommendations

Based on the findings of the present study, the researchers recommended that:

1. Workshops should be frequently organized frequently by educational bodies such as Mathematics Association of Nigeria (MAN) and the National Teachers Institute (NTI) to sensitise special needs Mathematics teachers on the use of peer assessment strategy with feedback and remediation to enable academic performance in algebra for students with special needs.
2. Mathematics curriculum planners and authors of Mathematics textbooks should be encouraged to incorporate peer assessment strategy with feedback and remediation into Mathematics curricula and textbooks accordingly. Illustrations should be carefully included in teachers' guides on how to provide support for the use of PASFR in the classroom to promote the academic performance of students with special needs in algebra, irrespective of their gender.

References

Abaver, S. M., & Imoko, B.I. (2023). Effect of portfolio-based learning strategy on secondary school students' performance in set theory in Makurdi Metropolis of Benue State, Nigeria. *Benue State University Journal of Education,* 23 (2), 107-114.

Aligba, S. O., & Nyihemba, T. (2022). Achieving inclusiveness in mathematics curriculum implementation in Nigeria. *ICSHER Journal*, 5 (2), 79-89.

Adu, E., Assuah, C. K., & Asiedu-Addo, S. K. (2015). Students' errors in solving linear equation word problems: a case study of a Ghanaian senior high school. *African Journal of Educational Studies in Mathematics and Science*, 11, 17-30.

Ajogbeje, O.J., & Alonge, M. F. (2012). Effect of feedback and remediation on students' achievement in junior secondary school Mathematics. *International Education Studies*, 5(5), 153-162.

Basic Education Certification Examinations BECE. (2017–2022). Makurdi: Examination reports in Mathematics.

Clearinghouse, W.W. (2015). Teaching strategies for improving algebra knowledge in middle and high school students. Retrieved February 12, 2023 from https://ies.ed.gov.

Double, K. S., McGrane, J. A., & Hopfenbeck, T. N. (2020). The impact of peer assessment on academic performance: A meta-analysis of control group studies. *Educational Psychology Review*, 32(2), 481-509.

Ellala, Z., & Alslaq, M. (2017). The impact of using a cooperative learning strategy on the Achievement of Students with Math Learning Disabilities. *American Journal of Educational Research,* 5(6), 612-619

Emaikwu, S. O. (2015). *Fundamentals of research methods and statistics.* Makurdi: Selfters Academic Press Limited.

Federal Republic of Nigeria. (2014). *National Policy on Education:* Federal Ministry of Education. Retrieved February 13, 2023 from https://www.scirp.org.

Ibrahim, B.M. (2022). Effect of peer assessment strategy on students' academic achievement. *Journal of Advanced Achievement*. Available at https://www.ijaar.org. Retrieved June 20th, 2023 from https://www.researchgate.net.

Kofi, J. A. (2020). Factors that affect students' performance in college algebra in some selected Colleges of Education in Ghana. *International Journal of Scientific and Research Publication, 10*(10), 145-151.

Mabena, N. Mokgosi, P. N., & Ramapela, S. S. (2021). Factors contributing to poor learner performance in Mathematics: A case of selected schools in Mpumalanga province, South Africa. *Problems of Education in the 21st Century*. 79 (3). 451-466.

NERDC (2013). Nigerian Research and Development Council. New General Mathematics Textbook 1.

Okeke, A. O., Oguguo, B. C. E., & Ene, C. U. (2023). The effect of self and peer assessment techniques on secondary school students' academic achievement in graph contents of Economics in Nnewi Education Zone. *International Journal of Studies in Education*, 19 (3), 59-68.

Papama, F., Makeleni, S., & Masha, R. (2022). The effects of gender and teaching strategies
on senior secondary school learners' academic achievement in the Buffalo City Metropolitan Municipality, South Africa. IOSR *Journal of Research & Method in Education* (IOSRJRME), 12(2), 49-56.

Pina, V., Martella, D., Chacón-Moscoso, S., Saracostti, M., & Fenollar-Cortés, J. (2021). Gender-based performance in mathematical facts and calculations in two elementary school samples from Chile and Spain: An Exploratory Study. Sec. *Quantitative Psychology and Measurement.* 12. Retrieved May 15, 2023, from https://doi.org/10.3389/fpsyg.2021.703580

Ugorji, C., & King-Agboto, F. (2023). Peer assessment and students' academic performance in Mathematics among

university students in Rivers State, Nigeria. *Journal of Theoretical and Empirical Studies in Education, 8(1).*

Unsom, J. C.P. (2021). Vocabulary and identification of information: difficulties and challenges in word problems solving. *International Journal of Scientific Research and Management IJSRM),* 9(8). 338-357.

West African Examinations Council (2022). WAEC Chief Examiners' Report for the West African Senior School Certificate Examination (WASCE) Mathematics, e-learning. Retrieved February 15, 2023 from http://www.weaconline.org.ng/e-learning/Mathematics