Effect of Multiple Intelligence Approach on Senior Secondary II Students' Academic Achievement in Reading Comprehension in Abia State

[1]**Jude Uzodinma Ofoegbu, Ph.D**
ofoegbujudeu@gmail.com

[1]**Bernard Diwa Otu**, **Ph.D**
bernardotu@unical.edu.ng
https://orcid.org/0000-0001-6072-9619

Joy Anthony Ukam, Ph.D
ukamjoy7@gmail.com
Department of Social Science Education
University of Calabar, Calabar

Omini Ettah Ettah
Department of Educational Management
University of Calabar, Calabar

[1]**Margaret Emmanuel Oyo-Ita**
megoyoita@gmail.com
[1]*Department of Educational Foundations*
University of Calabar, Calabar

Abstract

This study investigated the effect of multiple intelligence approach (MIA) teaching method on senior secondary school students' academic achievement in reading comprehension. The study adopted a quasi-experimental design. Specifically, a pretest posttest non-equivalent control group design was used. Two research questions were posed and one hypothesis was formulated to guide the study. The sample was made up of 89 students. The instrument for this study was a 25 item multiple-choice reading comprehension achievement test. Mean and standard deviation were used to answer the two research questions while ANCOVA was used to test the hypothesis at $p < 0.05$. The result revealed that students taught using MIA had a higher academic achievement gain score than those taught using lecture method. Based on the findings, some recommendations were made which include that English language teachers should be trained on how best to develop and use MIA strategy so as to achieve their objectives of enhancing students' academic achievement in reading comprehension.
Keywords: multiple, intelligence, approach, academic, achievement

Introduction

The act of reading occurs within a particular socio-cultural and emotional context. Reading comprehension is a deliberate, active, interactive process that occurs before, during and after a person reads a particular piece of writing. Individual learner/reader will bring different skills and experiences to these interactions. These include language skills, cognitive resources and word knowledge. It also includes other variables like the readers' cultural background, their previous motivation, their view of themselves as readers, the purpose of reading the text, the cultural value placed on reading and the reading environments the reader experiences. These variables may determine comprehension in reading. Reading comprehension can be seen as the process through which the acknowledged words are transmuted into a meaningful understandable idea (Eke, 2018). It is a highly collaborative process that takes place between a reader and a text.

Reading without comprehension is simply reading without making correlated meaningful meaning out of the read text. Though individuals read for different reasons, the main aim of reading is to have an understanding of what the writer conveys in order to make use of that information in gathering facts, learning new skills or for pleasure. This is why reading comprehension is so important. Without reading comprehension, the reader cannot infer the correct information from a text nor use such information for effective functioning and enjoyment of the richness of life, be it in academics, professional, social life and so on (Eke, 2018).

Reading comprehension is considered as fundamental for successful academic endeavour, as students need to read and comprehend in any subject in order to excel. Yet, in Nigeria many scholars observed that this aspect of language learning is highly neglected and may have been one of the major reasons for students' poor academic achievement in secondary schools (Eke, 2018). According to West African Examination Council (2020) statistics of result performance for May/June West African Senior School Certificate Examination (WASSCE) for Nigeria, the percentage of number of students that have five credit passes and above including English Language and Mathematics from the year 2017 to 2020 were 37.6%, 36.57%, 31.00%, 37.58 for 2017, 2018, 2019 and 2020 respectively and the situation has not changed even at present. This shows consistent poor students' performance (WAEC Chief Examiners' report, 2017, 2018, 2019, & 2020).

The situation is that even among the senior secondary school students, there is high level of poor literacy, yet the basis of literacy is reading comprehension (Okoh & Offorma, 2021). This may have resulted in poor performance of students in West African School Certificate Examination (WASCE). The Federal and some State Governments have been providing funds for continuous teacher education and provisions of instructional materials for schools with the sole aim of improving the quality of education, but the results of the past WASSCE have indicated that these

governmental efforts are not yielding the expected dividend. The observed poor performance of students may be attributed to a number of factors, one of which is the use of poor and ineffective lecture method in teaching. Confirming the interrelationship between methods used in teaching and students' academic achievement in reading comprehension, Maisamari and Suleiman (2018) stressed that traditional method of teaching tend to make learners passive readers and not being able to take charge of their reading comprehension. This may lead to low academic achievement on the part of the learners.

Also, studies have indicated that teachers in secondary schools predominately use lecture method in lesson delivery (Eke, 2018). Lecture method allows a great deal of information to be passed on. It is advantageous in handling large classes. In spite of this advantage, the lecture method does not capture individual preferred learning styles, neither does it stimulate students' innovativeness, critical thinking, inquiry and scientific attitudes. It encourages students to memorize facts which are often easily forgotten. In addition, in lecture method, teaching is always emphasized rather than learning for mastery. It uses mechanical learning process where the teacher is the custodian of knowledge and information giver.

In the light of the general poor performance of students in English language in public examinations such as Senior Secondary Certificate Examination, it could be that appropriate teaching strategies that will make students proficient with the skills for reading comprehension have not yet been fully adopted in teaching in secondary school. This could perhaps be one of the reasons for students' poor academic achievement as success in examination is determined by the extent the student could interpret meaning from the subjects. There is thus an agitation for a paradigm shift where learning is emphasized according to learner's individual cognitive, psychological and physical peculiarities, and this has given birth to multiple intelligence approach to learning.

Gardner (1983) propounded the theory of Multiple Intelligences Approach to teaching and learning (MIA). According to Gardner, the human mind is made up of relatively separate faculties. These faculties have only loose and non-predictable relations with one another. Gardner asserts that intelligence is much more than intelligent quotient (IQ). Thus he argued that a high IQ, in the absence of productivity, is not intelligence. Some individuals who were labelled as having low IQ based on the traditional definition of intelligence as equating to high IQ were able to show that they were actually gifted (Ali et al., 2013). Gardner (1983) described intelligence as the ability to solve problem or create valued product. It is a bio-psychological potential to process information that can be activated in a cultural setting to solve problem or create products that are of value in a culture. Gardner's definition of intelligence is broad and is based on multiple

perspectives. Multiple Intelligence is a framework that helps teachers design instruction and provide varied learning experiences tailored for each learner. In other words, it helps teachers to foster students' preferences to improve their performance. It challenges students to understand the world around them and create connections between their lives and their interests (Al-Nakhbi & Barza, 2016; Yalmanci & Gozum, 2013). Gardner (1999) identified nine criteria for qualifying intelligence as a multiple entity. They include:

1. The Verbal-Linguistic Intelligence. This is the ability to understand words and how they are combined to produce useful language, sounds, meaning, and rhythms of words. This is important for writers, poets and journalists.

2. Logical-Mathematical Intelligence. The ability to see pattern and order and relationship in seemingly unrelated events in the world and to engage in logical chain of reasoning. It is the type of intelligence that is required in science, business and medicine.

Hasanah, (2013), asserted that Gardner believed that a major problem in schools, as they are organized and operated, is that they tend to restrict much of their curriculum and teaching to the linguistic and logical-mathematical dimensions of intelligence. Learning in these areas is especially esteemed and is considered by many to be of a higher order and is usually emphasized in assessing the outcomes of schooling. There are, however, seven other intelligences that are widely recognized in the society. These Gardner argues, are valid ways of learning and thinking (Hasanah, 2013). These other seven intelligences include: Musical Intelligence, Spatial Intelligence, Bodily-Kinesthetic, Interpersonal Intelligence, Intrapersonal Intelligence, Naturalistic Intelligence and Existential Intelligence.

3. Musical Intelligence. This he described as the ability to discern sounds, meaning, rhythms, symbol and other qualities of musical symbolism and integrate them into intellectual activity such as reasoning. Musicians, composers, singers and rap artists come to mind when the verbal- linguistic intelligence is considered.

4. Spatial Intelligence. The ability to find one's way around in an environment and judge relationships between objects in space. This is the type of intelligence that enables people to imagine, picture or visualize accurately and abstractly. This type of intelligence is important for architects, carpenters, artists, sculptors, photographers and navigators.

5. Bodily-Kinesthetic. This is the capacity to move with precision. It is the ability to control ones' body movements and to handle objects skillfully. It is useful for dancers, athletes and surgeons.

6. Interpersonal Intelligence. This refers to the ability to understand and communicate with others. It is the capacity to detect and respond to moods, motivations and desires of others appropriately. This ability permits a skilled adult to read the intentions and desires (even when these are hidden) of many other individuals and potentially, to act upon this knowledge; for example, by influencing a group of desperate individuals to behave along desired lines.

7. Intrapersonal Intelligence. This is the capacity to understand one's self and

being in tune with one's inner feelings, values, beliefs and thinking process. It is used in teaching, acting and politics. More recently, Gardner (1999) proposed two additional intelligences; naturalistic and the existential intelligences;

8. Naturalistic Intelligence. The intelligence that distinguishes species, the capacity to recognize and categorize plants, animals and other objects in nature. It is used in hunting fishing, farming, gardening and cooking.

9. Existential Intelligence. This is the sensitivity and the ability to handle deep questions about human existence.

High intelligence in one area is not necessarily accompanied by high intelligence in any of the other areas. A person may be extremely gifted in art (a spatial ability), precision of movement (bodily-kinesthetic), social relations (inter personal), but still do not have high IQ. The various intelligences also develop at different rates. For example, logical-mathematical ability tends to develop earlier and to decline more quickly in late fifty than interpersonal ability (Douglaset al., 2008). Learners who were not very strong on the things traditional school valued were able to make significant contributions to the world (Ali et al., 2013). The MI theory has shown that the usual logical, linguistic classroom do neglect a lot of human abilities since students who may not excel in the conventional academic measures may excel in some other aspects; this forms the basis of the Multiple intelligence teaching approach (MITA) which is derived from the MI theory.

The advocates of the MI theory therefore urge teachers to have a rethinking on how they approach their lesson delivery. Since learners learn in different ways, teachers should also teach in different ways to accommodate each learner's learning style preference. According to Armstrong (2003), scientific studies have challenged long held assumptions about intelligence. Armstrong (2003) went on to state some of the findings of these scientific researches which include that:

•   Intelligence is not fixed at birth as was previously taught; in the past it was believed that intelligence is set at birth by heredity and can be measured through intelligence tests. Today it is known that intelligent tests do not take cognizance of many environmental and cultural factors that affect the development of an individuals' capabilities.

•   Intelligence can be improved, unlike previous belief that nothing can be done about one's intelligence; it is now known that intelligence can be improved and strengthened at any age and at almost any ability level. The more one practices, the better one becomes (Armstrong, 2003).

The students in English language reading comprehension classes differ in personality and intelligence. Thus, the teacher must be aware of these differences by using teaching methods that are appropriate to the students' dominant patterns of intelligence (Al-Zoubi & Al-Adawi, 2019). Anaduaka (2011) posited that multiple intelligence teaching

16

approach enables lessons to be presented through a variety of ways using pictures/drawings, music, cooperative learning, fieldtrips, activities, role playing, games and much more so that each child has the opportunity to learn in ways harmonious with his/her God-given talents. Teachers, through keen observation of learners' activities, should figure out the type of intelligence a learner is more gifted with and go on to determine ways of incorporating teaching strategies that applies to the learner's preferred learning styles. This will help to arouse and sustain learner's interest and also help to enhance their academic achievement.

There are several studies indicating that the Multiple Intelligence Theory constitutes a significant difference in the academic achievement of students (Obimalume, 2021; Samuel & Abba, 2020). In the studies that investigated the effect of multiple intelligence theory on students' achievement in Biology, Obimalume (2021) revealed that MIA facilitates students' understanding and provides lasting learning retention than traditional method of teaching. In the study conducted by Samuel and Abba (2020), they tried to identify the effects of multiple intelligence theory and gender on students' achievement in genetics. The result revealed that teaching methods based on multiple intelligence theory positively affect students' achievement and that female students' achievement in genetic is better than their male counterparts when Multiple Intelligence Learning Strategies (MILS) is used in lesson delivery. According to Samuel and Abba (2020), there was a significant difference in favour of the MIA experimental group between the achievement levels, recall levels and cognitive process skills of the students in the classroom where the multiple intelligence theory based activities were applied, and the students in the classroom where the traditional method was applied. Based on this, the teacher is expected to use varieties of different teaching strategies and skills so as to carry every student along irrespective of the student's preferred learning styles. Though, there are lots of research works on the effect of multiple intelligence on students' academic achievement, none investigated its effect on students' reading comprehension.

It is based on this that the researchers investigate effect of multiple intelligence teaching approach on senior secondary II students' academic achievement in Reading comprehension. In adopting multiple intelligence learning approach in senior secondary II students' academic achievement in reading comprehension, other observed factors that can influence the students' participation in the teaching/learning procedure such as academic achievement and gender need to be addressed. Academic performance of a person is how such a person fares in his school work and how he/she fared after evaluating his/her learning outcome (Ofoegbu et al., 2020). The concept of achievement has several references. It usually denotes activity, mastery and competing against some standard of excellence (Eke et al., 2019). Academic achievement represents performance outcomes that indicate the extent in which a person has accomplished specific goals that were the focus of activities in instructional environments, specifically in school, college, and university. It could also be seen as the amount of

knowledge/mastery derived from learning (Eke et al., 2019).

Gender in relation to achievement has been an issue of interest and concern to researchers in education. Gender, according to Amedu (2015), is socially learned patterns of behaviour that reflects emotional expression of attitudes that distinguished males from females. There are varying opinions on whether males or females achieve better than the other. Okeke (2008) refers to gender as the socially, culturally constructed characteristics and roles which are ascribed to males and females in any society. There are divergent views based on research findings on the nature and existence of differences between males and females. According to Njoku et al. (2020), World Health Organization (2020) stated that gender is a critical determinant of mental health and mental illnesses. One common issue has been the extent to which male and female academic achievement in English language differs as a result of teaching methods used in language classroom instructional delivery.

Bilesanmi-Awoderu (2002) carried out a study on cognitive styles and gender as predictors of students' achievement in summary writing in selected secondary schools in Ibadan, Nigeria. Ofoegbu et al. (2020) found that gender differences have serious implications for students' achievement in summary writing in English. This conclusion was earlier reported by Okereke (2016) who investigated gender issue in students' academic achievement in English language in Kano and found out that females performed better than their male counterparts in English language. More so, Attah and Itah (2017) investigated gender as a predictor of academic achievement in English among SS11 students in Calabar metropolis; their finding was that gender has no influence on students' academic achievement in English language.

These show that the issue of gender in achievement has not been resolved. Hence, the need for this study which attempts to investigate the effect of Multi intelligence approach on SS2 students' academic achievement in reading comprehension, and gender is one of the variables that was explored.

Purpose of the study
The purpose of the study was to determine the effects of multiple intelligence approach and lecture methods of teaching on Senior Secondary II students' academic achievement in reading comprehension in Abia State. Specifically, the study sought to:
   1. Find out the differential effect of MIA and Lecture teaching methods on senior secondary II students' achievement in reading comprehension.
   2. Find out the effect of gender on the mean achievement scores of senior secondary school II students taught reading comprehension using the MIA teaching method and Lecture method

Research questions

The following research questions guided the study:

1. What is the differential effect of MIA and Lecture teaching strategies on senior secondary II school students' achievement in reading comprehension?

2. What is the effect of gender on the mean achievement scores of senior secondary school students in reading comprehension when taught using the MIA teaching strategy and lecture method?

Hypothesis

To guide the study, this hypothesis was formulated and tested at 0.05 level of significance:

Ho1: There is no significant difference in the mean achievement scores of senior secondary school students taught reading comprehension using the MIA and Lecture methods.

Methodology

This study adopted pre-test, post-test, control group experimental design with a 2 x 2 factorial matrix to determine the effects of multiple intelligence approach and lecture method on students' academic achievement in reading comprehension. The experimental group adopted multiple intelligence approach to teaching and learning while the control group used the lecture method for teaching. The population of the study comprised all the senior secondary school II (SS2) English Language students in all the Government owned co-educational Secondary schools in Abia State in the 2022/2023 academic session numbering 7,889 students (3,287 male and 4602 female students) (Abia State Secondary Education Management Board, 2023).

The SS II Students of Ibeku High School was purposively sampled. Ibeku High School is one of the coeducational public secondary schools in Umuahia Educational Zone. The sample of the study consists of 89 students comprising 46 students assigned to the experimental groups and 43 students assigned to the control group from the same school. One class for experimental group has 21 males and 25 females (MIA) while the other class for control group has 19 males and 24 females. The instrument used was the Reading Comprehension Achievement Test (RCAT) which consisted of 25 multiple-choice questions. The Pre-test Post-test achievements test items were based on the unit topics that consist of reading comprehension in English language that were taught to the students. The aspect of reading comprehension in English language include the following topics: reading for main gist (extracting the main points from a given passage), reading to answer questions from a given passage, reading for details, reading for implied meaning, and reading for critical evaluation.

The face and content validity were established for the Reading Comprehension Achievement Test (RCAT). To ensure the face validity of the Reading Comprehension

Achievement Tests (RCAT), they were presented to four specialists in Measurement and Evaluation and English language from Michael Okpara University of Agriculture, and an expert in Curriculum Studies from Alvan Ikoku Federal College of Education. The content validity of the Reading Comprehension Achievement Tests (RCAT) Forms I and II were ensured through the use of the test blue prints and item analysis. Thereafter, the test items generated were sent to experts in Curriculum Studies from Alvan Ikoku Federal College of Education, two experts in Measurement and Evaluation and two experts in English Language from Michael Okpara University of Agriculture, Umudike for comments and suggestions.

The researchers in collaboration with some senior secondary II English Language teachers developed the 25 items multiple-choice achievement test that was based on the topics to be taught on reading comprehension. Ten questions out of the 25 multiple choice questions items were of low-level cognitive domain while the other 15 questions were based on high level cognitive domain. The 25 items questions covered application, analysis, synthesis and evaluation levels; which are of the high-level cognitive skills.

The reliability of the Reading Comprehension Achievement Test (RCAT) was 0.85. The instrument was subjected to trial testing. The Reading Comprehension Achievement Test (RCAT) instrument was administered to 30 students who were not sampled for the study. The scores obtained from the trial testing were subjected to Kuder-Richardson (KR-20) formula to determine the internal consistency of the Reading Comprehension Achievement Test. The Kuder-Richardson (KR-20) was appropriate for determining the reliability of the Reading Comprehension Achievement Test because the instrument required only one correct answer in every case. This decision rule was applied for testing of hypothesis: If p-value is less than 0.05, the null hypotheses was rejected; but if p-value is greater than 0.05, the null hypothesis was retained.

Presentation of results

Research question one: What is the differential effect of MIA and lecture teaching strategies on students' achievement in reading comprehension?

Table 1: Pre-test and posttest mean score and standard deviation scores of students in Reading comprehension achievement test due to exposure to MIA and Lecture Method

Teaching Method	Number of Students	Types of Test				Achievement Mean Gains
		Pre-test		**Post test**		
		$\bar{x}$	**S.D**	$\bar{x}$	**S.D**	
MIA Method	46	17.08	4.33	38.17	6.31	21.09
Lecture Method	43	17.96	4.22	26.64	4.27	8.68

The results presented on table 1 indicated that students taught using MIA had a mean achievement score of 17.08 and a standard deviation of 4.33 in pre-test and a mean of 38.17 and a standard deviation of 6.31 in the post-test with a pre-test post-test gain of 21.09. The data also showed that students taught using the Lecture method had a mean score of 17.96 and a standard derivation of 4.27 in the pre-test and a mean score of 26.64 and a standard deviation of 4.22 in the post test, making a pre-test posttest gain to be 8.05. The findings reveal that students taught English language reading comprehension with MIA teaching strategy had a higher mean achievement gain score than those taught with Lecture method of teaching.

Research question two: What is the effect of gender on the mean achievement scores of senior secondary school students in reading comprehension when taught using the MIA teaching strategy and lecture method?

Table 2: Pre-test and post –test mean achievement score and standard deviation scores of students in reading comprehension achievement test due to teaching methods and gender

Teaching method	Types of test	Gender							
		Male				**Female**			
		n	$\bar{x}$	S.D	Gain	n	$\bar{x}$	SD	Gain
MIA	Pretest	21	17.02	5.97		25	17.73	4.50	
	Post-test	21	38.76	6.52	21.74	25	39.08	6.55	21.35
Lecture method	Pretest	19	16.53	4.05		24	17.05	4.55	
	Post-test	19	25.97	4.83	9.44	24	26.08	4.73	9.03

The results presented on the table 2 indicated that the male students in the MIA experimental group had a mean score of 17.02 and a standard deviation of 5.97 in the pre-test; while in the post-test, the males scored a mean score of 38.76 and a standard deviation of 6.52, with achievement gain score of 21.74. The results also show that the female students in the MIA experimental group had a mean score of 17.73 and a standard deviation of 4.50 in the pre-test of MIA experimental group which is higher than that of male students in the pre-test of MIA experimental group, while the female students also had a mean score of 39.08 and a standard deviation of 6.55 in the post-test of the experimental group with achievement mean score of 21.35 which is less than that of the male students in the post-test score of the MIA experimental group.

The results presented on table 2 also indicated that male students had a mean score of 16.53 and a standard deviation of 4.25 in the pre-test of the control group which was lower than the pre-test of the experimental group, while in the post-test, the male students had a mean score of 25.95 and a standard deviation of 4.03, with mean achievement gain of 9.44 which was lower than the experimental group. The results also show that the female students had a mean score of 17.73 and a standard deviation of 4.50 in the pre-test of the control group which is higher than that of the male students score in the pre-test of the control group, while the female students had a mean score of 26.08 and a standard deviation of 4.73, with mean achievement gain of 9.03 which is higher than that of the male students in the post-test of the control group. This finding shows that sex has no effect on academic achievement of male and female students taught English language Reading comprehension with MIA and Lecture method.

Ho1: There is no significant difference between the mean achievement scores of the senior secondary students taught using MIA and the lecture method.

Table 3: Analysis of covariance (ANCOVA) for Reading Comprehension Achievement Test mean achievement scores of students when taught using MIA and lecture method

Sources of Variation	Type II sum of square	Df.	Mean sum of square	F.	Significance
Correlated model	4775.340[a]	2	2387.670	114.824	.000
Intercept	2236.533	1	2236.533	107.556	.000
Pre-test	699.828.541	1	699.828	33.655	.000
Teaching method	3214.526	1	3214.528	154.588	.000
Error	1601.174	77	20.794		
Total	79521.000	80			
Corrected total	6376.488				

a. R square = .749 (adjusted R squared = 0.742)

The results on table 3 show that the teaching methods (MIA and Lecture method) is a significant factor in the mean achievement scores of the students in the Reading Comprehension Achievement Test. This is because the p-value of 0.00 is less than 0.05. This indicates that the null hypotheses which state that there is no significant difference between the mean achievement scores of students in Reading Comprehension Achievement Test when taught using the MIA and lecture method is rejected. Thus, this implies that there is a significant difference between the mean achievement scores of students in Reading Comprehension Achievement Test when taught using the MIA and Lecture method.

Discussion of the findings
Results of the present study revealed the effect of multiple intelligence approach on senior secondary school students' academic achievement in reading comprehension. The results presented on table 1 reveal that students taught English language reading comprehension with MIA had a higher mean achievement gain score than those taught with Lecture method of teaching. The finding of this study is in consonance with Obimalume, (2021) and Samuel and Abba (2020). The researchers observed that MIA was effective in enhancing students' academic achievement.

Also results on table 2 show that, statistically, sex has no effect on academic achievement of male and female students taught English language Reading comprehension with MIA and Lecture method. The finding is in consistent with Attah and Itah, (2017), who found that gender does not play significant roles on students' academic achievement when taught with MIA in classroom teaching delivery. The argument is based on the fact that Know-Work-Learn (KWL) teaches students to read actively by engaging previous knowledge, asking questions, and recalling important information in the text to enhance comprehension.

Also, the results on table 3 revealed that there was a significant difference in the academic achievement mean score of the students taught using MIA and those taught using Lecture methods. The result may be because in MIA, teachers are meant to teach in different ways as to accommodate each learner's learning style preference. This finding is in line with Anaduaka (2011) who posited that multiple intelligence teaching approach enables lessons to be presented through a variety of ways using pictures/drawings, music, cooperative learning, field trips, activities, role playing, games and much more, so that each child has the opportunity to learn in ways harmonious with his/her God-given talents.

Conclusion
This study was carried out to investigate the effect of MIA and lecture method of teaching on senior secondary school students' academic a-chievement in reading comprehension. The result of the study shows that students exposed to MIA had higher

mean academic achievement score gain than their peers exposed to lecture method of teaching. This is to say that MIA enhances students' academic achievement in reading comprehension better than lecture method of teaching.

Recommendations
Based on the findings of the study, the following were recommended by the researchers:

1. Teaching with MIA is different from that of ordinary traditional (Lecture) teaching. As a result of this, English language teachers should be trained on how best to develop and use MIA so as to achieve their objectives of enhancing academic achievement in reading comprehension.

2. Teaching of English language reading comprehension should be encouraged and emphasized among English language teachers. Teachers are to teach using methods such as MIA each time English language reading comprehension is to be taught.

3. Efforts should be made by curriculum experts to incorporate MIA into the teaching of English language reading comprehension. There should be a review in the current instructional procedure to accommodate MIA in senior secondary teaching syllabus. This is to increase interactivity and reduce the recurrent mass failure in English language in external examinations.

References

Ali, A., Soosan, L., & Hamze, A. (2013). The effect of teaching strategy based on multiple intelligences on students' academic achievement in Science course in Iran. *University Journal of Education Research*, 1(4), 281-284.

Al-Zoubi, S. M. & Al-Adawi, F. A. (2019). Effect of instructional activities based on multiple intelligence theory on academic achievement of Omani students with dyscalculia. *Journal of Education and Research*, 2(11), 215-224.

Armstrong, T. (2003). *The Multiple Intelligences of Reading and Writing: Making the Words Come Alive*. Alexandria, VA: Association for Supervision and Curriculum Development (2003).

Amedu, O. I. (2015). Effect of gender on the achievement of students in biology using the jigsaw method. *Journal of Education and Practice, 6*(17), 176-179.

Anaduaka, U. S. (2011). The multiple intelligence teaching method and mathematics teaching. *Journal of Research in National Development*, 9(1), 34-40.

Al-Nakhbi, K., & Barza, L. (2016). The effectiveness of multiple intelligence strategy on sixth grade students' achievement and attitudes towards Science. Proceedings of the Australia-Middle East Conference on Business and Social Sciences. 677-691.

Bilesanmi-Awoderu, J. B. (2002). Concept mapping, students' locus of control, and gender as determinants of Nigerian high school students' achievement in Biology. *Ife Psychologia*, 10(2), 98-110.

Douglas, O., Burton, K. S. & Reese-Durham, N. R. (2008). The effects of the multiple intelligence teaching strategy on the academic achievement of eighth grade math students. *Journal of Instructional Psychology*, 35, 182-187.

Eke, O. E. (2018). Effect of Know-What-Learn (KWL) Instructional strategy on senior secondary school students' academic achievement. *International Journal of Young African Leadership Forum* (YALJOD), 3(2). Retrieved from https://yalf-africa.org/wp-%09content/uploads/2017/08/YALJOD-journal3.pdf

Eke, O. E., Ugonna, I. A., Ugonna, C. E. & Nwachukwu, L. C. (2019). Effect of Scaffolding instructional strategy on Senior Secondary students' Achievement and Motivation in reading comprehension. *Journal of Faculty of Education,* 19(1), 43-54.

Gardner, H. (1983). *Multiples Intelligences: The Theory in Practice*. New York: Basic Books.

Gardner, H. (1999). *Intelligence Reframed: Intelligences reframed*. New York: Basic Books.

Hasanah, N. (2013). Improving students' motivation in reading comprehension by using multiple intelligences strategies [Unpublished PhD Dissertation]. Universitas Negeri Semarang.

Maisamari, A. M. & Suleiman, M. L. (2018). Research and innovation in reading comprehension. In M. T. Joshua (Ed.), *Research and Innovation: Nigeria Academy of Education Year Book*. Nigeria: Bloann Educational publishers.

Njoku, J. N., Bekomson, A. N. & Ofoegbu, J. U. (2020). Influence of Gender and Age on Psychological Disorders among Undergraduates of University of Calabar, Cross River State, Nigeria. *European Journal of Scientific Research,* 156(3), 341 – 347 http://www.europeanofscientificresearch.com

Obimalume, N. V. (2021). Effect of multiple intelligence-based instructional approach on students' interest in secondary school biology. *Sapientia Foundation Journal of Education, Sciences and Gender Studies (SFJESGS), 3(2), 234 – 242.*

Ofoegbu, J. U., Amalu, M. N. & Uchegbu, H. (2020). Perceived Influence of Economic Recession and Psychological Adjustment on Students' learning among Undergraduate Students of University of Calabar. *Global Journal of Educational Research,* 19(1), 91-102.

Okeke, E. A (2008). Clarification and analysis of gender concepts. Focus on research, reproductive health education, and gender sensitive classrooms. *Journal of Science Teachers Association of Nigeria, 43(1) 81-96.*

Okereke, C., (2016). The Development Problems of adolescent and their Influence on Academic Performance. *Journal of Women in Academic, 1(2), 48-66.*

Okoh, C. & Offorma, G. C. (2021). Effect of mastery learning instructional strategy on achievement in English language reading: A case study of FCE (T), Omoku. *Nigerian Journal of Curriculum Studies,* 28(3), 20-31.

Samuel, I. R. & Abba, A. (2020). Effects of multiple intelligence learning strategies and gender on students' achievement in genetics in Katsina State, Nigeria. *International Journal of Innovative Social & Science Education Research, 8(4), 59-67.*

Yalmanci, S. G., & Gozum, A. I. C. (2013). The effects of multiple intelligence theory based teaching on students' achievement and retention of knowledge in Enzymes. *International Journal on New Trends in Education and their Implication*, 4(3), 27-36.

WAEC Chief Examiners' report (2017, 2018, 2019 & 2020). West African Examination Council, Lagos, Nigeria.