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EFFECT OF COMPUTER ASSISTED INSTRUCTIONAL STRATEGY ON STUDENTS' ACHIEVEMENT AND RETENTION IN ORAL ENGLISH IN GBOKO L.G.A, BENUE STATE, NIGERIA

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Abstract
The study investigated the effect of computer assisted instructional strategy on students' achievement and retention in Oral English in Gboko L.G.A, Benue State-Nigeria. The study adopted quasi-experimental, pre-test, post-test post post-test non-equivalent, non-randomised research design. The population of the study consisted of 3,360 SS2 students. Stratified random sampling was used to select the sample of 108 students drawn from 2 intact classes. Students' Achievement Test of Speech Sound (SATOSS) was used to collect data. The instrument was validated by three experts and was trial-tested using test-retest method. The reliability of SATOSS items was determined using Kuder-Richardson (KR-20) formula and the reliability coefficient of 0.89 was obtained. Mean and standard deviation were used to answer the three research questions while the three hypotheses were tested using ANCOVA at 0.05 level of significance. Findings of the study revealed that there was significant difference between the mean achievement scores of students taught Oral English using CAIS and Conventional Method in favour of those exposed to CAIS. Findings of the study also revealed that there was no significant effect between teaching strategies and gender on students' achievement. Findings of the study further revealed that there was no significant interaction effect of learning strategies and gender on students' retention. Based on the findings, it was recommended that teachers of English Language should develop and adopt computer assisted instructional strategy in teaching and learning of English language to improve students' achievement in the subject, also they should not be gender bias during instruction when using both strategies and workshops/seminars should be organized regularly by professional bodies in education on the use of ICT for classroom instruction.

Key Words: *Computer Assisted Instructional Strategy, Students' Achievement, Retention Oral English*

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Introduction

English language is designated as a second language (ESL) in Nigeria. It is the language of instruction, mass media and interaction among people of different ethnic groups (Ogbu, Muodumogu & Udu, 2021). According to Dzer and Nyitse (2025), English is a language of communication in Britain and was brought to Nigeria through British colonial activities. Since then, it has become a unifying language in multilingual and multicultural Nigerian society that has over 500 indigenous languages. Similarly, Nyitse and Dzer (2023) postulated that English language is the medium of instruction in schools. It is therefore not just a subject in the curriculum but an essential vehicle for learning other subjects. English language is a compulsory subject at the secondary and other levels of education. It has different skills such as listening, speaking, reading and writing which are taught across different levels of education. Other aspects of English that are taught are: grammar, vocabulary, comprehension and oral English. This study focuses on Oral English.

Oral English is an aspect of English that concerns itself with the speech sounds and their articulation. According to Omachonu (2018), Oral English is an aspect of English which has to do with speaking (production of speech sounds). Oral English is important to learners of the language (English) and they cannot do without it. Similarly, Dzer (2024) stated that the need for proficiency in spoken English informed the Federal Government of Nigeria's decision in the 1980s, to implement a new National Curriculum on the English Language in secondary schools, because English Language teaching as Oral English was previously non-existent in schools and was also made optional in the West African School Certificate. In addition, Tswanya (2015) affirmed that a common instruction for English Language teaching was based on learning grammatical exercises, essay writing, lists of vocabulary and comprehension. In view of this, the objectives of the English Language were based on the mastery of language structures, but not on communication or use. Consequently, students were exposed to the mechanics of the language, but not on usage. The provision of effective instruction in Oral English is particularly important for acquiring basic skills of the English Language, especially concerning usage. Because of this, all students studying the English Language in secondary schools in Nigeria must learn Oral English, along with other aspects of the language. In a similar vein, Wang and Tsai (2021) stated that the need to learn Oral English borders on enhancing effective communication skills because it is believed that students' abilities to express themselves clearly, coherently, and fluently in a speech depend on a good grasp of pronunciation, enunciation, stress placement, intonation and other idiosyncratic features of speech. This can only be achieved through effective and modern methods of teaching and learning of Oral English.

In view of the necessity of Oral English, there is need for teachers of the English Language to employ modern strategies to teach the aspect of the subject effectively. Several researches have proven computer assisted instructional strategy to be more effective in teaching Oral English. Ojiaku (2016); Ishaku, Nape and Abubakar (2022) stated that the introduction of ICT in education seems to have ushered in a new dimension into the pattern of teaching and learning and has paved the way for new achievements in the learning process. This development explains the need for the use of computer as part of the instructional material for curriculum development. This teaching strategy should capture the students' interest, make provision for individualized instruction, motivate the student; hence the use of Computer Assisted Instructional Strategy (CAIS) in this study is to see if students' achievement and retention in Oral English will be improved.

Computer Assisted Instructional Strategy (CAIS) is the use of computer to provide instruction directly to students in order to simulate teaching and learning process. CAIS is used in collaboration with the teacher. The teacher prepares a lesson according to some pedagogical specifications and has it saved in Compact Disc Read Only Memory (CD-ROM). According to

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Dzer (2024), Computer Assisted Instructional Strategy (CAIS) is an interactive strategy whereby a computer is used to present the instruction and also to monitor the learning that takes place. CAIS uses a combination of texts, graphics, sound and video in the learning process. Similarly, Salihu, Alaku and Kwoku (2022) stated that learning languages through the use of computer as instructional aid would enhance students' academic performances in accurate pronunciation and other aspects. In the same vein, Sulaiman, Hussain, Ud Din and Iqba (2022) postulated that CAIS is a program of instruction presented as computer software for instructional purposes. Similarly, Usman and Ahmadu (2021) maintained that computer in second language instruction can improve practices for students through experiential learning, motivate students to learn more, enhance students' achievement, increase authentic materials for study, encourage greater interaction between teachers and students, students and peers, emphasize individual needs. The authors further affirmed that using computers not only promotes positive social interactions, students' motivation and interest for learning, but also increase instructional efficiency and effectiveness of students. As a result, this study looks at the effect of Computer Assisted Instructional Strategy (CAIS) on students' achievement and retention in Oral English.

Many studies have shown the positive effects of using Computer Assisted Instruction (CAI) in teaching and learning process in general. Olubunmi and Adenubi (2015) conducted a study on effects of computer-assisted Oral English instructional programme on high school students in rural areas in Nigeria. The findings of the study revealed that experimental group taught with animation and digital video (CAOEIP) in rural areas performed better than those taught with the conventional method. Similarly, findings of Usman and Ahmadu (2021) also concurred that students taught with CAI performed significantly better as compared to when there were not exposed to CAI. Furthermore, the findings by Dzer, Hendah, Dooga and Maikudi (2021) revealed *that students who were taught Oral English using Computer Assisted Learning Techniques achieved better than when they were not exposed to CALT.* Also, Salihu et al (2022) conducted a research on the effect of simulation instructional package on English Language students' achievement and retention in senior secondary schools in Abuja Federal Capital Territory, Nigeria. Findings of the study revealed significant difference in the achievement of students taught English Language using simulation instructional package and conventional teaching method in favour of those taught with simulation package. Findings from a research conducted by Tyoor (2019) revealed that computer assisted instructional strategy and conventional method interacted with gender to produce low mean achievement scores with the female students achieving slightly higher than their male counterparts. Since interaction was not significant, the effect of computer assisted instructional strategy and conventional method would enable male and female students to achieve at par. This finding is in consonance with Ezeugwu, Unuorah, Uchenna and Ikeminanchi, (2015); Josiah and Tobiloba (2015) who reported that there was no significant difference in the interactive effect of learning strategies and gender on students' achievement and retention. Similarly, the findings revealed no significant interaction effect of learning strategies, computer assisted instructional strategy and conventional method and gender on students' retention. CAIS and conventional strategies in the study had proven no significant difference in the male and female students taught Oral English using the two strategies. This finding is in agreement with Dzer (2024), Tyoor (2019) who reported that there was no significant difference in the interactive effect of learning strategies and gender on students' retention.

Gender has been regarded as an important factor that plays a specific role and influence in Oral English proficiency. Gender disparity is a phenomenon that exists in all spheres of life. Ojakovo (2019) stated that as realistic as this assertion is, it cannot be wholly accepted that one's sex is a determinant factor towards his or her

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ability to perform well in the ICT in English Language. According to Muodumogu, Udu and Iorpev (2021), gender refers to the socio-cultural and psychological factors that differentiate male from female. Similarly, Nwabara (2017) defined gender as socially constructed roles and socially learned behaviour and expectations associated with males and females. Gender is viewed as one of the factors for the observed differences in the performance of students in English Language in most secondary schools. Opeifa, Adelana and Atolagbe (2022) posited that the ultimate goal of understanding gender difference is to accommodate individual students' needs given that males and females deserve an equal chance of learning access. There are varying views held by scholars over the years as to whether achievement in Oral English is gender sensitive. With regards to student' achievements and retention, Muodumogu and Unwaha (2016) are of the view that both male and female students perform significantly same if instructional strategies are modernized to meet up with their psycho-social challenges. Akabougu and Ajiwoju (2015) conducted a study on effects of gender and school location on secondary school students' achievement in English vocabulary in junior secondary schools in Akoka South Education Zone, Ondo State. Findings of the study revealed among others that there was no significant difference existed in the achievement of male and female students exposed to CAI. This finding agrees with the findings of Atolagbe and Adelana (2020); Tyoor, Musa, Dogo and Azige (2021) who found out that there was no significant difference between gender and achievement of students who are exposed to CAIS in English and Mathematics. The researchers stated that learning across gender will be significantly same if collaborative learning methods are employed and male and female students are given equal chance of learning access. Many studies have shown the positive effects of using Information and Communication Technology (ICT) in teaching and learning process in general. Galle (2021) in his study found out that both male and female students achieved and retained high scores in xperimental than their counterparts in conventional group. Several literatures reviewed of empirical studies by scholarly researchers such as Dzer and Nyitse (2025); Tyoor et al (2021) indicated that the male and female exposed to computer simulation strategy had a higher retentive ability. The study conducted by Yu et al (2019) also revealed that there is no significant interaction effect of treatment and gender on students' retention in Oral English. Similarly, the study carried out by Nwoye and Okeke (2022) showed that there is no significant interaction effect of treatment and gender on students' retention in physics. It is against this background that the study seeks to examine the effect of computer assisted instructional strategy on students' achievement and retention in Oral English in Gboko LGA of Benue State, Nigeria.

Statement of the Problem

Student's performance in English language in both internal and external examinations has been poor year in year out. The West African Examinations Council (WAEC) analysis of percentage performance of candidates in 2017, 2018, 2019 and 2020 revealed 61.32, 66.19, 73.92 and 65.24 as percentage failure for the aforementioned years respectively in English language (WAEC Report). The common deficiencies observed in Oral English among learners of English as second language include; improper pronunciation, mispronunciation, poor intonation as well as misrepresentation of phonetic sounds. The weak foundation of learners coming from a language policy that is not consistent in its operations and implementations or lack of clarity in its provisions, also creates confusion because it is often fraught with lapses. The mother tongue of most learners and users of English often interfere with the free flow of utterances.

Several factors could be responsible for students' poor performance in English language. The current researchers observed that teachers of English Language are insensitive to employ modern strategies for classroom instruction. Teachers' inability to use modern instructional

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strategies could negatively affect both male and female students' performance and retention in Oral English and other aspects of the language.

In view of the poor performance of students in English Language, teachers of English need to adopt proactive and modern instructional strategies to teach Oral English and other aspects of the language like; grammar, vocabulary and reading comprehension. There are many new changes and challenges that teachers of English face which are required to be adopted. These include modern and westernized approaches to school new strategies of teaching and learning because of emergence of Information and Communication Technology. Also, with the increase in students' population and explosion in the development of teaching and learning of English Language oracy skills with ICT, teachers have to update their knowledge and skills to cope with the demand of the present day teaching. Findings from different studies revealed that students who are exposed to Computer Assisted Instructional Strategy performed better and retained higher than those taught with conventional method.

Objectives of the Study

This study is designed to determine the effect of computer assisted instructional strategy on students' achievement and retention in Oral English in Gboko LGA, Benue State, Nigeria. Objectives of the study are to determine the:

1. Mean achievement score of students taught Oral English using Computer Assisted Instructional Strategy (CAIS) and those taught with the conventional method.
2. Interaction effect of gender and teaching methods on the mean achievement scores of students taught Oral English.
3. Interaction effect of gender and teaching methods on the mean retention scores of students taught Oral English.

Research questions

The following research questions guided the study:

1. What is the mean achievement scores of students taught Oral English using Computer Assisted Instructional Strategy (CAIS) and those taught with the conventional method?
2. What is the interaction effect of gender and teaching methods on the mean achievement scores of students taught Oral English?
3. What is the interaction effect of gender and teaching methods on the mean retention scores of students taught Oral English?

Hypotheses

The following null hypotheses formulated for the study were tested at 0.05 level of significance.

$\mathbf{H_{01}}$: There is no significant difference in the mean achievement scores of students taught Oral English using Computer Assisted Instructional Strategy and those taught using the conventional method.

$\mathbf{H_{02}}$: There is no significant interaction effect of gender and teaching methods on the mean achievement scores of students taught Oral English.

$\mathbf{H_{03:}}$ There is no significant interaction effect of gender and teaching methods on the mean retention scores of students taught Oral English.

Theoretical Framework

Cognitive Theory of Multimedia Learning (1986)

The Cognitive Theory of Multimedia Learning was propounded by Richard E. Mayer in 1986. The theory states that meaningful multimedia learning depends on building connections between mental representations of corresponding words and pictures. The theory can be summarized as having the following components: (a) a dual-channel structure of visual and auditory channels, (b) limited processing capacity in memory, (c) three memory stores (sensory, working, long-term), (d) five cognitive processes of selecting, organizing, and integrating (selecting words, selecting images, organizing work, organizing images, and integrating new knowledge with prior knowledge), and theory-grounded and evidence-based multimedia instructional methods. Computer Assisted

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Instruction is an instructional media that appeals to the senses of hearing and sight which help the teacher to teach effectively by increasing the level of interest and attention of the learner in order to achieve the desired educational goal. Dzer (2024) posited that these mental connections lead to meaningful learning, defined as a deep understanding of the material, integrating it with relevant existing knowledge. The author further stated that meaningful learning occur when connections are made between information in the visual and the verbal processing channels of the working memory. Instruction that utilizes the two working memory modalities provides the learners an opportunity to create meaning between them, leading to schema connections and enhanced long-term memory utilization.

Cognitive psychology postulates that information is stored in long-term memory in the form of nodes which connect to form relationships in networks. There shall be proper location of information on the screen, the attribute of the screen (colour, graphic, size of text etc.); the pacing of the information and the mode of delivering (audio, visual, animation). The learner must receive the information in form of sensation before perception and processing can occur. To promote perception and processing, Adegbija (2016) stated that:

i. Important information should be placed in the centre of the screen for reading.
ii. Information critical for learning should be highlighted to focus learner's attention.
iii. The material must match the cognitive level of the learner.

Stressing advantages of the use of audio-visual like Computer Assisted Instruction, Dzer (2024) observed that CAI reduces the need for in-person trainers by allowing for programmed responses to student actions. The author further maintained that CAI offers a dual benefit of giving instantaneous feedback to students and continually adjusting the material that the student is being taught. These items help to maximize student's learning. In addition, CAI instructions save energy and time of both the teachers and the students and are useful for education of masses.

This theory relates with the present study as both are computer base and is relevant to this study because the use of CAIS will be more appealing to learners' senses of seeing and hearing. It would make students to retain what they have learnt for a long period of time when need arises. Also, meaningful multimedia learning depends on building connections between mental representations of corresponding sounds or words and pictures therefore, it will benefit the students to understand retain information easily as the information will be appealing to their senses of seeing and hearing.

Methodology

The study adopted quasi-experimental design with pre-test, post-test and post post-test non-equivalent and non-randomized group through intact classes who are exposed to different treatment conditions. A pre-test was given to both experimental and control group before treatment. Four weeks after treatment, a post-test was administered and post post-test was also administered after two weeks for retention. The control group was taught Oral English using conventional method while the experimental group was taught Oral English using CAIS.

The target population for the study was 3,360 SS2 students for 2024/2025 session. Stratified random sampling was used to select the sample size of 108 students from two intact classes. The study used Students' Achievement Test of Speech Sounds (SATOSS*) as an instrument to collection data.* The SATOSS consisted of two sections: A and B. Section A required students to supply their personal information or bio-data, while section B contained 40 multiple choice questions with four options (lettered A to D) and were scored over 100. The questions were drawn from four segments of Oral English. SATOSS consisted of ten lesson plans used for both experimental and control groups.

The instrument was content validated by three experts, two from the Department of Arts and Social Science Education, Federal University of Kashere, Gombe State and Benue State University, Makurdi and the other from the

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department of Educational Foundations, Federal University of Kashere, Gombe State. The reliability of the instrument was obtained by carrying out a trial test using test retest method on the group of 20 students. The administration of the test yielded two set of scores which were analyzed using Kuder-Richardson (KR-20) formula and it yielded a coefficient relationship of 0.89. The coefficient relationship of 0.89 was considered high, reliable and good for the study. Data collected were analyzed using mean and standard deviations to answer the three (3) research questions while Analysis of Covariance (ANCOVA) was used to test the three (3) hypotheses at 0.05 level of significance.

Results

The data presented were analyzed and interpreted based on the research questions and hypotheses. Mean and standard deviation of scores were used to answer the three research questions. Analysis of Covariance (ANCOVA) was used to test the three null hypotheses at 0.05 level of significance.

Research Question 1

What is the mean achievement scores of students taught Oral English using Computer Assisted Instructional Strategy (CAIS) and those taught with the conventional method?

Table 1: Mean and Standard Deviations of Students' Achievement Scores for Experimental and Control Group at Pre-test and Post-test taught Oral English using CAIS and conventional method.

Group		Pre-test	Post-test	M Gain
	Mean	20.53	71.07	50.54
Experimental	N	45	45	
	Std. Deviation	4.930	9.969	
	Mean	17.16	31.81	14.65
Control	N	63	63	
	Std. Deviation	3.734	8.563	

Table 1 shows mean gain achievement scores of students exposed to computer assisted instructional strategy (CAIS) and conventional method. The computer assisted instructional strategy (CAIS) has the highest mean gain achievement score of 50.54 and conventional method has the lowest mean gain achievement score of 14.65 which indicates that students taught with CAIS performed better that those taught with conventional method. The standard deviation scores of students taught with CAIS and conventional method are 4.930 and 3.734 respectively and there were low, indicating that the scores of students taught with CAIS and Conventional Method were close to the mean, this gives credence to the value of the mean.

Hypothesis 1

There is no significant difference in the mean achievement scores of students taught Oral English using Computer Assisted Instructional Strategy and those taught using the conventional method.

Table 2: Result of Analysis of Covariance on Achievement Scores of Students Taught Oral English using CAI S and Conventional Method.

Source	Type III Su of Squares	Df	Mean Squa	F	Sig.	Partial Eta Squared
Corrected Mod	41124.598[a]	2	20562.299	261.75	.000	.833
Intercept	8424.124	1	8424.124	107.23	.000	.505
Pretest	670.112	1	670.112	8.530	.004	.075
Group	31581.272	1	31581.272	402.02	.000	.793
Error	8248.402	105	78.556			
Total	299936.000	108				
Corrected Total	49373.000	107				

a. R Squared = .833 (Adjusted R Squared = .830)

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Table 2 shows the result of one-way ANCOVA of post-test scores as the dependent variable with the pre-test as the covariance used in the analysis. From the table, the result from the groups revealed that there is significant difference between the mean achievement scores of students taught Oral English in the experimental and control groups. This is from the fact that, F=ratio of 402.021 was obtained with associated exact probability value of 0.00. Since the p-value of 0.00 is less than 0.05 level of significance, the dependent variable indicates a significant difference suggesting that the null hypothesis is rejected. Therefore, this implied that there is significant difference in the mean achievement scores of students taught Oral English using CAIS and those taught using the conventional method.

Research Question 2

What is the interaction effect of gender and teaching methods on the mean achievement scores of students taught Oral English?

Table 3: Mean and Standard Deviations of Students' Achievement Scores on the Interactive Effect of Gender and Teaching Strategies in Oral English.

Method	Gender		Pre-test	Post-test
CAIS	Male	Mean	20.32	70.40
		N	25	25
		Std. Deviation	4.793	10.774
	Female	Mean	20.80	71.90
		N	20	20
		Std. Deviation	5.207	9.066
Conventional	Male	Mean	17.45	32.32
		N	31	31
		Std. Deviation	3.704	7.231
	Female	Mean	16.87	31.31
		N	32	32
		Std. Deviation	3.799	9.773

Table 3 shows that the mean achievement scores and standard deviation of the interaction of gender and teaching strategies. From the table, the mean achievement scores of male students in CAIS and Conventional Method were 70.40 and 32.32 with standard deviation of 10.774 and 7.231 respectively; while the mean achievement scores of the female were 71.90 and 31.31 respectively for CAIS and Conventional Method with standard deviation of 9.066 and 9.773.

Hypothesis 2

There is no significant interaction effect of gender and teaching methods on the mean achievement scores of students taught Oral English.

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Table 4: Result of Two-Way ANCOVA Interaction of Teaching Strategies and Gender on Students' Achievement Scores in Oral English.

Source	Type III Su of Squares	Df	Mean Squa	F	Sig.	Partial Eta Squared
Corrected Mo	41148.230[a]	4	10287.058	128.82	.000	.833
Intercept	8442.023	1	8442.023	105.72	.000	.507
Pretest	652.679	1	652.679	8.174	.005	.074
Method	31450.579	1	31450.579	393.86	.000	.793
Gender	1.943	1	1.943	.024	.876	.000
Method * Gender	23.304	1	23.304	.292	.590	.003
Error	8224.770	103	79.852			
Total	299936.00(	108				
Corrected Tot	49373.000	107				

a. R Squared = .833 (Adjusted R Squared = .827)

Table 4 shows the summary of the Two-way ANCOVA table on interaction of the instructional strategies and gender on student' achievement scores in Oral English. It shows the mean scores of students of the two levels of teaching strategies and gender relationship. The result in table revealed that there is no significant effect between teaching strategies and gender for achievement as measured at 0.05 alpha level. From the table, F-ratio is 0.292 and p-value of 0.590. Since the p-value of 0.590 is greater than 0.05 set alpha then, the null hypothesis is upheld. This implies that that there is no significant interaction of teaching strategies and gender. This interaction effect suggested that male and female do not respond differently to the treatments. Therefore, gender is not a factor in designing intervention.

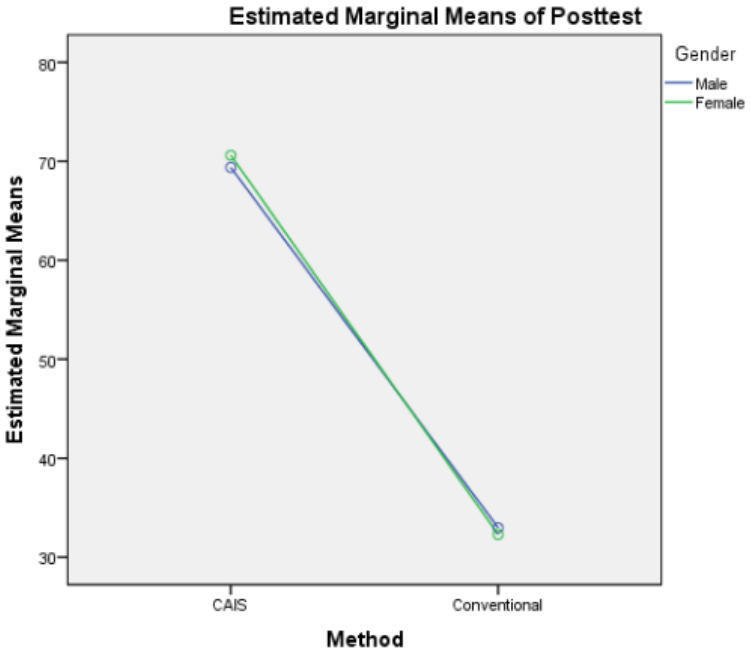

Fig. 1: A Graph Representing Interaction Effect of Teaching Strategies with Gender on Mean Achievement Scores.

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Figure 1, graph showing the relationship between teaching strategies and gender on SATOSS scores. In the plot, gender 1.00 and 2.00 represents male and female respectively while in the group CAIS and Conventional Method. The lines are clearly un-parallel. Whenever the lines are un-parallel, there is interaction. Therefore, the plot above shows that the male and female students do not respond to the treatment differently, hence gender is not a factor in designing the intervention.

Research Question 3
What is the interaction effect of gender and teaching methods on the mean retention scores of students taught Oral English?

Table 5: Mean and Standard Deviations of Students' Retention Scores on the Interactive Effect of Gender and Teaching Strategies in Oral English.

Method	Gender		Post-test	Retention
CAIS	Male	Mean	70.40	78.56
		N	25	25
		Std. Deviation	10.774	10.389
	Female	Mean	71.90	78.25
		N	20	20
		Std. Deviation	9.066	7.793
Conventional	Male	Mean	32.32	28.94
		N	31	31
		Std. Deviation	7.231	8.074
	Female	Mean	31.31	27.59
		N	32	32
		Std. Deviation	9.773	9.270

Table 5 shows that the mean retention scores and standard deviation of the interaction of gender and teaching strategies. From the table, the mean retention scores of male students in CAIS and Conventional Method were 78.56 and 28.94 with standard deviation of 10.389 and 8.074 respectively; while the mean retention scores of the female were 78.25 and 27.59 respectively for CAIS and Conventional Method with standard deviation of 7.793 and 9.270.

Hypothesis 3
There is no significant interaction effect of gender and teaching methods on the mean retention scores of students taught Oral English.

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Table 6: Result of Two-Way ANCOVA Interaction of Teaching Strategies and Gender on Students' Retention Scores in Oral English.

Source	Type III Su of Squares	Df	Mean Squ	F	Sig.	Partial Eta Squared
Corrected Mo	71709.241[a]	4	17927.310	671.19	.000	.963
Intercept	498.884	1	498.884	18.678	.000	.154
Posttest	5612.416	1	5612.416	210.12	.000	.671
Method	1673.902	1	1673.902	62.671	.000	.378
Gender	27.139	1	27.139	1.016	.316	.010
Method * Gender	6.027	1	6.027	.226	.636	.002
Error	2751.083	103	26.710			
Total	335437.00(	108				
Corrected Tot	74460.324	107				

a. R Squared = .963 (Adjusted R Squared = .962)

Table 6 shows the summary of the two-way ANCOVA table on interaction of the instructional strategies and gender on student' retention scores in Oral English. It shows the mean scores of students of the two levels of teaching strategies and gender relationship. The result in table revealed that there is no significant effect between teaching strategies and gender for retention as measured at 0.05 alpha level. From the table, F-ratio is 0.226 and p-value of 0.636. Since the p-value of 0.636 is greater than 0.05 set alpha then, the null hypothesis is upheld. This implies that there is no difference in the interaction effect of teaching strategies and gender. This interaction effect suggested that male and female do not respond differently to the treatments. Therefore, gender is not a factor in designing intervention.

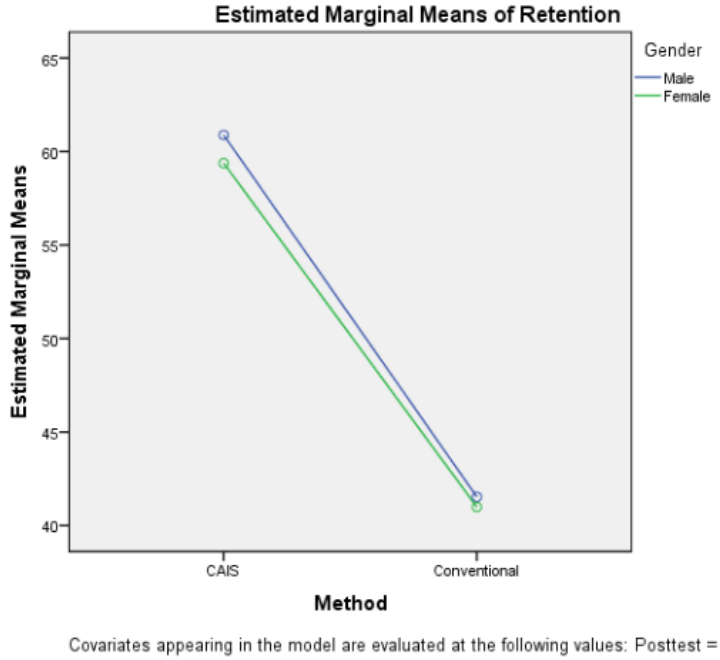

Fig. 2: *A Graph Representing Interaction Effect of Teaching Strategies with Gender on Mean Retention Scores.*

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Figure 2, graph showing the relationship between teaching strategies and gender on SATOSS scores. In the plot, gender 1.00 and 2.00 represents male and female respectively while in the group CAIS and Conventional Method. The lines are clearly un-parallel. Whenever the lines are unparalleled, there is interaction. Therefore, the plot above shows that the male and female students do not respond to the treatment differently, hence gender is not a factor in designing the intervention.

Discussion of Findings

The findings of this study revealed the effect of computer assisted instructional strategy on students' achievement and retention in Oral English in Gboko LGA of Benue State-Nigeria. The result revealed significant difference between the mean achievement scores of students taught Oral English in the experimental and control groups. The mean gain of students taught Oral English using CAIS was higher than their counterparts who were exposed to conventional method. Computer assisted instructional strategy have been found to be fascinating students' achievement in Oral English. This might be due to the fact that CAIS helps students to remember more conceptual ideals and are able to relate the test to prior knowledge. This was consistent with the findings of Usman and Ahmadu (2021) that students taught with CAI performed significantly better as compared to when there were not exposed to CAI. Similarly, it also agreed with the findings of Dzer et al (2021) *that students who were taught Oral English using Computer Assisted Learning Techniques achieved better than when they were not exposed to CALT as well as that of Olubunmi and Adenubi (2015)* which showed that *there was significant difference in students' achievement in Oral English when they were exposed to Computer Assisted Instructional Package (CAIP) as compared to when they were not exposed to CAIP.* Furthermore, the findings of Salihu et al (2022) concurred with the findings of the present study that experimental group taught using Computer Assisted Teaching Technique performed better than those in the control group taught using conventional method.

The findings also revealed no significant effect between teaching strategies and gender on students' achievement. Computer assisted instructional strategy interacted with gender to produce high mean achievement scores with the female students achieving slightly higher than their male counterparts. Computer assisted instructional strategy and conventional method interacted with gender to produce low mean achievement scores with the female student achieving slightly higher than their male counterparts. Since interaction was not significant, the effect of computer assisted instructional strategy and conventional method would enable male and female students to achieve at par. This finding is in consonance with Dzer and Nyitse (2025); Tyoor (2019); Ezeugwu et al (2015); Josiah and Tobiloba (2015) who reported that there was no significant difference in the interactive effect of learning strategies and gender on students' achievement and retention.

Similarly, the findings revealed no significant interaction effect of learning strategies, computer assisted instructional strategy and conventional method and gender on students' retention. Computer assisted instructional strategy interacted with gender to produce high mean retention scores with male students retaining slightly higher than their female counterparts in the computer assisted instructional strategy group. Also, conventional method interacted with gender to produce low mean retention scores with male students retaining slightly greater than their female counterparts. Mean of the levels of both teaching strategies and gender showed a consistent trend. Although, CAIS showed high mean retention scores therefore, CAIS should be incorporated by teachers of English for both male and female students at Senior Secondary level. CAIS and conventional strategies in the study had proven no significant difference in the male and female taught Oral English using the two strategies. This finding is in agreement with Dzer and Nyitse (2025); Tyoor et al (2021); Dzer (2024) who reported that there was no significant difference in the interactive effect of learning

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strategies and gender on students' retention.

Conclusion

The study concluded that computer assisted instructional strategy is more effective than conventional method regardless of gender for achievement and retention. This implies that the learning strategies and approaches employed by teachers of English might have been partly responsible for the consistent poor achievement of students in Oral English and English Language in general since they were using conventional method most of the times. Therefore, the implication of this study hinged on developing, adopting and adapting more virile learning strategies/approaches for effective teaching of Oral English.

Recommendation

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

i. Government should make ICT resources available in schools in Gboko LGA and teachers of English Language in Gboko LGA should develop and adopt computer assisted instructional strategy in teaching and learning of English Language to improve students' achievement and retention in the subject.
ii. Teachers' ICT competence should be considered before employment in Gboko LGA and there should not be gender bias during instruction when using both strategies.
iii. Workshops/seminars should be organized regularly to teachers of English Language in Gboko LGA by professional bodies in education on the use of ICT for classroom instruction.
iv. Government and stakeholders in education should make electricity available and stable for effective use of ICT in schools in Gboko LGA.

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