

Effect of Computer Text Gloss Strategy on Students' Interest in Reading Comprehension in Nigeria

Evelyn Ukoha¹, Josephine U. Akabogu^{1*}, Amuche P. Nnamani¹, Ulo-Bethels C. Annah¹, Moses O. Ede²

¹Department of Arts Education, Faculty of Education, University of Nigeria, Nsukka. P.M.B. 410001, Enugu State, Nigeria.

²Department of Educational Foundations, Faculty of Education, University of Nigeria, Nsukka. P.M.B. 410001, Enugu State, Nigeria.

*Corresponding Author's name: Josephine U. Akabogu

Abstract

The study was designed to investigate effect of computerized text gloss instructional strategy on secondary school students' interest in reading comprehension. A quasi-experimental factorial research design was used. Specifically, the non-randomized control group design involving four intact classes was used. The sample for the study consisted of 77 SSII students from four co-educational secondary schools in Nsukka Local Government Area. A purposive sampling technique was used. The instrument used for data collection was English Language Reading Comprehension Interest Inventory (ELRCII) which was validated by three experts. The research questions were answered using Mean and Standard Deviation, while hypotheses were tested using Analyses of Covariance (ANCOVA) at 0.05 level of significance. The results indicated that computer text gloss had significant effect on students' interest in reading comprehension. It also indicated that gender had significant effect on students' interest in reading comprehension. It also showed a significant interaction effect of instructional methods and gender on students' interest in reading comprehension. The study therefore provided evidence of the effectiveness of computerized gloss in improving students' interest in reading comprehension.

Keywords: English Language, Reading, Reading Comprehension, Interest, Computer Text Gloss, Gender.

INTRODUCTION

The English language serves as an effective medium of communication among Nigerians from different linguistic backgrounds. In the field of education, the place of the English language is highly prominent. The National Policy on Education in the Federal Republic of Nigeria (FRN), (2004) states that English language should progressively be used as a medium of instruction from the fourth year of primary school. It also makes English a core subject at senior secondary school level and it is compulsory to pass it at credit level before one can gain admission into any tertiary institution (Nigerian Education Research and Development Council (NERDC, 2007). It is, therefore, indisputable that how well students' progress in their academic pursuit is hinged to a large extent on their level of proficiency in English (Egbe, 2015). This agrees with the investigation of Feast, (2002) that when students are deficient in the language of instructions, it

indicates that they would not perform well in the various subjects taught in the target language.

The West African Examinations Council (WAEC) and National Examinations Council (NECO) objectives for setting comprehension question in English Language is to test candidates' ability to find appropriate equivalent for selected words and phrases; understand the factual content of the passage; make inferences from the content of the passages; respond to the use of English Language expressions to reveal/reflect sentiments, emotions, attitudes; identify and explain basic literacy terms and expressions (WAEC, 2008-2011). Also, the objective of teaching the English language as stated in the National Policy on Education in Federal Republic of Nigeria (FRN), (2004) is to help students acquire permanent literacy and to equip them with the basic language skills to enable them communicate effectively.

English language has four skills. They are listening, speaking, reading and writing. The four basic language skills are related to each other by two parameters: In the mode of communication (oral or written) and the direction of communication (receiving or producing the message (SIL, 1999). Reading as one of the language skills is very important for any student who wants to excel academically. Reading is a complex interaction between the text and the reader and connected with the reader's prior knowledge, experiences and attitudes. Omojuwa (2005) sees reading as getting meaning from text or symbols that represent the language spoken. Thus, it is interacting with the language that has been coded into print. Therefore, reading is a tool for learning other subjects and a yardstick for measuring academic progress.

Comprehension, on the other hand, means understanding and making sense of what is being read or heard. Akpama, Egong and Akwa (2005) see reading and comprehension as complementary. The authors established that effective reading comprehension for students in context area is very vital and that reading comprehension questions help to ascertain their level of understanding at the vocabulary, grammar, and content levels. It therefore follows that lack of understanding in any of these areas contribute greatly to mass failure of students in the English language examination especially in reading comprehension tests. Groot (2000) opines that for a student to understand a text, he/she must be able to understand the vocabulary used in the text. According to Adams (2000), the word knowledge is important to understanding of reading text. Nation (2001) maintains that ninety-eight to ninety-nine

percent word knowledge is common expectation for better understanding of a text. Thus, it is important to reflect on more concrete method that will aid readers know the meaning of most of the words in a text and to read it successfully with proper comprehension.

In the school curriculum, reading comprehension remains an important aspect of students' area of study in schools. There are many aspects of the English language where students' knowledge is tested especially at the Senior School Certificate Examinations level such as: essay/letter writing, lexis and structure, tests of orals, summary, reading comprehension. Reading comprehension which is an aspect of the English language carries a reasonable percentage of 40 marks. This indicates that reading comprehension occupies a prominent place in the Senior School Certificate Examinations. It is therefore very important for students to acquire good reading comprehension skills to enable them do well in school since it is one of the most critical skills that students are expected to acquire.

Contrary to anticipation, the objectives of teaching and learning reading comprehension at the senior schools appear not to be achieved. Low achievement of students at the Senior School Certificate Examinations can be connected to students' lack of interest in the subject, inadequate reading comprehension skills, and inappropriate teaching method. The conventional or traditional method is the most common method of teaching used by teachers in carrying out the teaching and learning process in the classroom situations. In this method, the teacher dominates in all the activities. This implies that it is one of the autocratic teaching strategies that teachers use in the school system. The traditional drill and practice method is highly criticized and blamed for students' poor performance and reading failures. Hanushek (2005) opines that successful teachers are those who are able to use a range of teaching methods and interaction styles rather than one rigid method. Igbokwe (20007) claims that there is no best all round method in teaching, but that some methods may be better than others in the teaching of a particular skill or subject.

Considering the relevance of reading success in education, it is of great importance that reading should be accorded rightful position. This can only be achieved by introducing some realistic practical method. Such methods would not only be beneficial to the teaching and learning of English language reading comprehension but also in other subject area (Bass & Woo, 2008). With the incorporation of computerized text gloss in the teaching and learning of the English language reading comprehension, students' interest in the subject may be improved which may also enhance their performance in the English language as a whole through the intervention of the school counsellors.

The application of computer in language learning is known as Computer-Assisted Language Learning (CALL) (Simmons & Markwell, 2001). Computer-Assisted Language Learning is a language learning and teaching approach in which the computer is used as a tool for presentation, assisting students, evaluating learning material, and for interactional aspects (Ates, Altunay, & Altun, 2006). Computer-assisted language

learning has emerged as a kind of technology to aid reinforcement and assessment of authentic language materials to be used and learn (Harmer, 2007).

Glossing is an easy and fast access to words, words/pictures, and their meaning within the text (Nation, 2001). Alessi and Dwyer (2008) define textual glosses as brief definitions or translations which are most often supplied for unknown words in a text which may help limit continual dictionary consultation that may hinder and interrupt the English as a second language (L2) reading comprehension. Glosses are integrated with multimedia forms such as pictures, videos and sounds (Yoshii, 2006). The integration of glosses with multimedia, which is based on computer software, draws attention and interest in language instruction. Gloss is one of the strategies which facilitate reading comprehension. Researchers such as Al-udaini (2011), Badr El-deen (2009), and Abu Shalam (2009) have recommended that the traditional concepts related to teaching reading comprehension should be substituted by more innovative strategies. Among these strategies are the uses of computer text gloss. Solanki (2012) mentions that learners in these methods are not dependent on other members of the class, but can choose the pace at which they progress, and also control the degree of difficulty by deciding how often they (learners) repeat the exercise.

However, in the computerized text gloss, the passage is computerized and key words in the computerized text are glossed by a computer programmer. The computerized passage shows bold and underlined words and the definitions of the words.. In this study, it is expected that students in the computer text gloss group will click on the bold words in the passage and a new window will appear, which will show the definition or meaning of the word in English language for students to access.

Though, the computerized text gloss instructional strategy feasibly appear to be effective method that may improve students' interest in English language reading comprehension, no study known to the researcher has been carried out in Nsukka Local Government Area to determine the efficacy of computerized text gloss. It is believed that this method could motivate students' interest towards reading comprehension.

Interest is an important variable in language learning because when one is interested in an activity, one is likely to perform positively. Chukwu (2002) sees interest as emotionally oriented behavioural trait which determines a student's urge and vigour to tackle educational programmes and other activities. This indicates that helping professionals such as counsellors and psychologists who know how behavioural traits are linked to interest are expected to place the students according their interest in schools. Egbe (2015) sees interest as an expression of likes and dislikes which play a significant role in learning all subjects. The WAEC Chief Examiners' Report (2009) suggested that teacher and school counsellors should help students improve their achievement and develop their interest in English language through appropriate approaches and methods. Thus, this study aims at finding out the effect of computerized text gloss instructional strategy on

students' interest in English language reading comprehension. Interest could also be determined by students' gender.

Gender is another variable that affects teaching and learning. Udaya (2010) sees gender as a stratification and assignment of roles along sex lines which may be culturally determined, which is ascribed to male and female. Egbe (2015) is of the view that the females are faster in the acquisition of language and language expression. Egbe stresses that females are more disposed to expressing themselves in the second language. This positive disposition favours performance in learning. Akabogu (2002) records no gender difference in performance of male and female students in reading comprehension. Buttressing further, Offorma (2009) reports that female students achieve more than male students in foreign language acquisition. As the above assertions state that achievement may influence learning positively, counsellors should make use students psychological test when they are being counselled. Fakeye (2010) claims that males have more positive attitude, knowledge and interest than females towards computer assisted learning. This study is thus meant to discover the extent to which gender will impact on students' achievement and interest in reading comprehension when taught with computerized text gloss.

It is obvious from the foregoing discussions that much remain to be done in determining the influence of computerized text gloss instructional strategy, interest, and gender on students' academic achievement. Hence, the need for the present study which seeks to find out how computerized text gloss, interest, and gender will affect senior secondary school students' in reading comprehension.

The prevailing problem in Nigeria is that the achievement of students in the Senior School Certificate Examinations (SSCE) has been declining steadily in English language. Teachers, parents, curriculum experts and educators are worried, especially when the poor achievement has been blamed on inappropriate teaching strategy and inadequate reading comprehension skills. Hence, researchers and the examination bodies are in search of innovative teaching methods and strategies that will enhance achievement and interest in reading comprehension. How computerized text gloss would affect the interest of Nigerian students who operate in a different socio-cultural environment by gender is yet to be determined. Therefore, the problem of this study put in question form is: What is the effect of computerized text gloss instructional strategy on senior secondary school students' interest in reading comprehension based on their gender?

PURPOSE OF THE STUDY

The main purpose of the study is to determine the effects of computerized text gloss on senior secondary school students' interest in reading comprehension. Specifically, the study sought to determine the:

1. Effect of computer text gloss on students' interest in reading comprehension.
2. Influence of gender on students' interest in reading comprehension.

RESEARCH QUESTIONS

The following research questions guided the study:

1. What is the effect of computer text gloss on the mean interest scores of students in reading comprehension?
2. What is the influence of gender on the mean interest scores of students in reading comprehension?

RESEARCH HYPOTHESES

The following hypotheses were tested at 0.05 level of significance:

1. There is no significant difference in the mean interest scores of students taught reading comprehension using computer text gloss and conventional method.
2. There is no significant difference in the mean interest scores of male and female students in reading comprehension.

METHODOLOGY

The research design for this study was quasi-experimental research design. Specifically, it is the non-randomized, control group, pre test, post test design. This design was adopted because the students used for the study were in intact classes. The study was conducted in Nsukka Local Government Area of Enugu State. The population of this study consists of all the 3,370 senior secondary two (SS II) students in Nsukka Local Government Area of Enugu State in the 2016/2017 academic session. The sample for the study consists of 77 students in four intact classes in four co-educational schools in Nsukka Local Government Area. The instrument used for data collection is the English Language Reading Comprehension Interest Inventory (ELRCII) and was subjected to face validity. It was face validated by three experts from the Faculty of Education. In order to determine the reliability of the instruments, the researcher administered the English Language Reading Comprehension Interest Inventory (ELRCII) to 25 SSS II students from Community Secondary School, Imufu, Enugu Ezike, Igbo-Eze North Local Government Area, Enugu State. The students tested are outside the area of the study. They have similar educational characteristics like those that were used for the study.

The internal consistency of the ELRCII was estimated using Cronbach's Alpha. The instrument yielded a reliability coefficient of 0.84, indicating that it is reliable. The data were analysed using mean and standard deviation to answer the research questions while Analysis of Covariance (ANCOVA) statistic was used to test the hypotheses at 0.05 level of significance. ANCOVA was used in order to remove the effect of the covariate which is the pre test.

RESULTS

The results were presented in line with the research questions and hypotheses that guided the study.

Table 1: Mean and standard deviation of interest scores of students taught reading comprehension using computer text gloss and conventional lecture method

Treatment	Pre-test			Post-test		
	n	Mean	SD	Mean	SD	Mean Gain
Computer Text Gloss	40	30.87	6.46	54.67	6.55	23.80
Conventional Lecture Method	37	30.62	6.38	39.86	9.83	9.24

Table 1 shows that the students who were exposed to computer text gloss in reading comprehension had mean interest score of 30.87 with a standard deviation of 6.46 at the pre-test and post-test mean interest score of 54.67 with standard deviation of 6.55 while those who were exposed to conventional lecture method had mean interest score of 30.62 with a standard deviation of 6.38 at the pre-test and post-test mean interest score of 39.86 with standard deviation of 9.83. Mean gain scores of 23.80 and 9.24 for the experimental and control groups respectively imply that the students who were exposed to computer text gloss had higher post-test mean interest score than their counterpart who were exposed to conventional lecture method. Post-test standard deviations of 6.55 and 9.83 for the two groups respectively imply that the control group varied much in their individual interest scores than the experimental group.

Table 2: Mean and standard deviation of interest scores of male and female students in reading comprehension

Gender	Pre-test			Post-test		
	n	Mean	SD	Mean	SD	Mean Gain
Male	44	30.50	7.22	42.50	12.28	12.00
Female	33	31.09	5.14	51.30	19.34	20.21

Table 2 shows that male students had pre-test mean interest score of 30.50 with a standard deviation of 7.22 and post-test mean interest score of 42.50 with standard deviation of 12.28 while their female counterpart had pre-test mean interest score of 31.09 with a standard deviation of 5.14 and post-test mean interest score of 51.30 with standard deviation of 19.34. Mean gain scores of 12.00 and 20.21 for the male and female students respectively may have indicated that female students had higher post-test interest score than their male counterpart. Post-test standard deviations of 12.28 and 19.34 for the male and female students respectively show that female students varied much in their individual interest scores than the male students.

Table 3: Analysis of covariance of the effect of methods on students' interest in reading comprehension

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	6275.354 ^a	4	1568.838	8.194	.000	.313
Intercept	5675.493	1	5675.493	29.642	.000	.292
Pre-test	590.283	1	590.283	3.083	.083	.041
Treatment	3746.422	1	3746.422	19.567	.000	.714
Gender	423.602	1	423.602	4.212	.041	.130
Treatment Gender	* 1118.173	1	1118.173	5.840	.018	.075
Error	13785.633	72	191.467			
Total	194220.000	77				
Corrected Total	20060.987	76				

a. R Squared = .313 (Adjusted R Squared = .275)

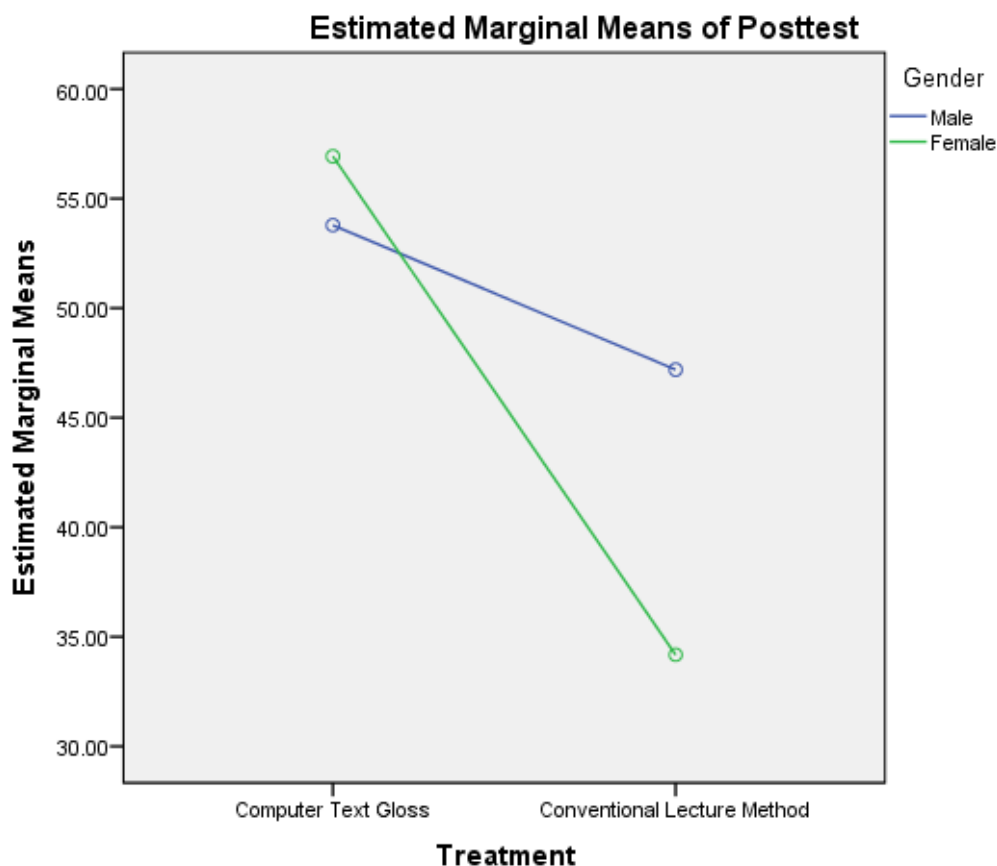
Table 3 shows that the calculated value of F (19.567) for the effect of computer text gloss and conventional lecture method on students' interest in reading comprehension had an associated probability of 0.000. Since the probability value of 0.000 is less than the 0.05 level of significance ($p < 0.05$), the

null hypothesis was rejected. Thus, there is a significant difference in the mean interest scores of students taught reading comprehension using computer text gloss and those taught using conventional lecture method in favour of the students taught using computer text gloss. Moreover, the

partial Eta Square value (effect size) of 0.714 shows that computer text gloss had high effect on the interest of students in reading comprehension.

The Table shows that the calculated value of F (4.212) for the influence of gender on students' interest in reading comprehension had an associated probability value of 0.041. Since the probability value of 0.041 is less than the 0.05 level

of significance ($p < 0.05$), the null hypothesis was rejected. Thus, there is a significant difference in the mean interest scores of male and female students in reading comprehension in favour of the female students. Besides, partial Eta Square value (effect size) of 0.130 shows that computer text gloss had low influence on the interest of students in reading comprehension.



Covariates appearing in the model are evaluated at the following values: Pretest = 50.7532

Figure 1: Plot of the interaction effect of methods and gender on students' interest in reading comprehension

Figure 1 shows that there is a significant interaction effect of methods and gender on the interest of students in reading comprehension. The Figure shows a linear interaction of methods and gender. Thus, the students' interest in reading comprehension as a result of the exposure to different experimental conditions is dependent on their gender. However, partial Eta Square value (effect size) of 0.075 shows that there is a very low interaction effect of methods and gender on students' interest in reading comprehension.

DISCUSSION OF RESULTS

The discussion of the results of the study is presented under the following Sub-headings:

Evidence from this study showed that students who were taught English language reading comprehension using computerized text gloss (CTG) obtained a higher post-test mean interest score than those who were taught using conventional method. The results showed that the students who were taught reading comprehension using computerized text gloss had higher interest than those taught using conventional method. This result revealed that computerized text gloss had a significant effect on students' interest more than the conventional method. This is in with the findings of Chukwu (2002) whose findings revealed that appropriate teaching methods increase students' interest and that there is a positive correlation between students' interest and achievement. Computerized text gloss was able to arouse higher interest in the students because students were actively involved. The students clicked on the keywords with the

computer mouse to get the meaning of the words for better comprehension after which they continued with their reading without any interruption.

The findings of this study concerning the differences in interest scores of male and female students taught English language reading comprehension, using computerized text gloss (CTG) showed that females had higher interest scores than males.

RECOMMENDATIONS

The results of the study have shown that computerized text gloss teaching method (CTP) has significantly positive effect on secondary school students' interest in English language reading comprehension. Therefore, English language teachers should implement it in the teaching of English language reading comprehension among other language skills. Teachers should be computer literate and use its technology more in teaching Workshops, seminars and conferences should on regular basis be organized for English language teachers by education authorities such as Ministry of Education, Post Primary Schools' Management Board and the Universal Basic Education Commission (UBEC) on the use of computerized text pictorial gloss in teaching.

Curriculum developers for secondary schools such as the Nigerian Educational Research and Development Council (NERDC) should incorporate the computerized text gloss as an effective strategy in teaching English language reading comprehension in their subsequent assessment of the curriculum. In addition to this, execute more research on other aspects of the English language where computerized text pictorial gloss could be useful.

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