Assessment of Encarta Software in the Teaching and Learning of Vocabulary in Senior Secondary Schools in Port Harcourt City Local Government Area of Rivers State

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Abstract:The study accessed the use of Encarta software in the teaching and learning of vocabulary in senior secondary schools in Port Harcourt Local Government Area of Rivers State. The study adopted the quasi-experimental research design, which consisted of two groups, the experimental group and the control group. The population of the study comprised of 100 students from two schools which were divided into 50 for the experimental group and 50 for the control group. Students in the two schools were administered the EVAT as a pretest before the commencement of the treatment. The students in the experimental group were taught vocabulary using Microsoft Encarta software while instruction was given to the control group using the normal traditional method of teaching. At the end of the lesson, the post test was administered to both groups and data was collected after it was marked. The mean and standard deviations were used to analyze the research questions while Analysis of Variance (ANCOVA) was used to analyze the hypotheses. All the hypotheses were tested at 0.05 alpha level of significance. Recommendations were made that trainings/workshops should be organized for English language teachers in secondary schools on the use of Microsoft Encarta software.

Keyword: Encarta Software, Vocabulary, Computer-Assisted Instruction (CAI), Computer-Assisted Language Teaching (CALT), Computer-Assisted Language Testing (CALT).

1. INTRODUCTION

Recent years have demonstrated a spike in interest in utilizing computers to teach and study languages. A decade ago, only a few specialists were worried about the use of computers in language education. However, with the development of multimedia computing and the Internet, the use of computers in language learning is now a serious concern that confronts many language instructors throughout the world. Typically, this field of research is referred to as computer-assisted language learning (CALL) (CALL). For the purpose of convenience and simplicity, the term CALL will be used to refer to e-learning, computer-assisted instruction (CAI), computer-assisted language teaching (CALT), and computer-assisted language testing (CALT) (Gu, 2006). (Gu, 2006).
Studies looking at how CALL influences language acquisition have concluded that it has a favorable effect on students' learning and language ability. The bulk of study has been done on vocabulary, spelling, grammar, reading, and writing abilities as they pertain to language development. The listening skill, which many people feel to be the most critical one for learning a language, has gotten little attention in the CALL industry. This is owing to the fact that modern and multimedia were not commonly employed until recently.

According to Nazli (2005), CALL is a set of instructions that must be loaded into the computer before it can be utilized in a language school. Computer Assisted Language Acquisition (CALL) explores the function and application of Information and Communication Technologies (ICT) in the acquisition and teaching of second languages, Ukoha (2010). (2010). Computer-assisted language learning (CALL) is a strategy that focuses on utilizing computer technology to help students learn or teach a foreign language, according to the English Wikipedia definition. The domain of computer-assisted language learning, or CALL, is extensive and contains various subfields, some of which incorporate the use of the internet, emails, apps, software, etc. Mansouri (2015). (2015). (2015). Delcloque (2000) argues that CALL makes use of computer technology to aid with the presentation, reinforcement, and assessment of learning information. CALL aids students.

Based on current improvements in the use of computers in education, we can see that computer software facilitates the formulation and implementation of the curriculum simpler. By combining graphics, graphs, and prompts to animate the course presentation, it makes learning highly exciting and fascinating. The tool offers the user rapid feedback and assists in assessing both their talents and limits. Take phonetics as an example, which was formerly worthless owing to the unavailability of proper software tools but is now outdated. Using computer software frees the teacher up from planning and delivering lessons since computers do the bulk of the work required in teaching. The employment of computer software in education has evolved to the point where it is being utilized as an appliance to solve challenges in many elements of human learning. This comprises the educational management, assessment, resources, and learning material as well as learning strategies.

The key job focussed on while learning a language is memorizing vocabulary. The fundamental difficulty and purpose of new language learners is vocabulary acquisition. It is one of the most important challenges that language learners confront while learning a new language, Mansouri (2015). (2015). This may be understood by noting that most individuals acquire a book or

dictionary of the local language before visiting a new region or country in order to interact with the natives.

In addition to English, German, French, Spanish, Dutch, Italian, Portuguese, and Japanese, Microsoft has produced a variety of educational interactive Compact Discs (CDs) under the titles Duruamaku-Dim, Joy, Domike, and Geo (2010,). (2010,). The UI of Encarta is highly user-friendly. You may click to uncover academic information, and it is easy to browse. Because of its interactive qualities, Microsoft Encarta is the recommended reading companion for students. According to Microsoft (2009), Encarta software allows you to explore more than 60,000 articles, more than 25,000 photographs and graphics, more than 800 videos and interactive games, and more than 3,000 sound and music clips, according to Cohen (2009). (2009). The application provides tools like dictionaries, thesaurus, translations, interactive world.

Statement of the Problem

Even though a car has a great appearance outside, it cannot drive if it lacks an engine. In a similar spirit, a computer may be skillfully made, but worthless if no software is installed within. Computers are utilised to execute almost all jobs in the twenty-first century. This activity is not carried out by computers on their own; rather, software delivers instructions to the computers' hardware. Several scholars have researched what software is and have created a variety of definitions for the them.

The researcher and current authors have observed a link between the poor and falling levels of English language teaching and learning and the general deterioration in educational standards. When studying English, the value of acquiring new vocabulary grows. The answer is simple: English has a very broad and diversified variety of words. That's because, the lexicon of English is a complicated combination of Germanic and Romance terms (2005). (2005).

There are various challenges with the teaching and learning of English as a second language (L2) in Nigeria. These are obviously evident in the learners' substandard performance on the certificate test. Only 616,370 applicants, or 38.68% of the 1,593,442 candidates who sat the tests, according to the WAEC board's 2015 results, obtained credits in English and Mathematics (Vanguard, 2015). (Vanguard, 2015).

Computers must now be employed as instructional material in English language teaching and learning owing to recent improvements in information and communication technologies (ICTS) (ICTS). It is claimed that knowing how to utilize current computer technology could aid increase vocabulary teaching and learning, thus helping in the teaching and subsequent mastery of the English language as a whole.

There is a considerable possibility that the utilization of computer software as a kind of instructional material or media will make it simpler to teach and learn English, boosting students' performance. Therefore, the goal of this study is to analyze whether or not employing computer software as a teaching tool will genuinely result in students doing better on vocabulary exams in the English language.

Purpose of the study
The purpose of this study was assess the teaching with Microsoft Encarta software on the academic performance of English students in vocabulary. Specifically, the study intend to:
1. Determine the mean achievement scores of English students taught with Microsoft Encarta software and those taught without the software.
2. Find out if there is significant difference on the academic performance of male and female students taught using Microsoft Encarta software.

2. RESEARCH QUESTIONS

This following research questions were raised to guide the study:
1. Is there significant difference on the academic performance of students taught with Microsoft Encarta software and those taught without the software?
2. Is there significant difference on the academic performance of male and female students taught using Microsoft Encarta software?

Hypotheses
The following hypotheses guided the study:
1. There is no significant difference on the academic performance of students taught with Microsoft Encarta computer software and those taught without the computer software.
2. There is no significant difference on the academic performance of the male and female students taught using Microsoft Encarta software.

3. METHODOLOGY

The study adopted the quasi-experimental research design, which consisted of two groups, the experimental group and the control group. 100 Students selected from two schools were administered the EVAT as a pretest before the commencement of the treatment. The students in the experimental group were taught vocabulary using Microsoft Encarta software while instruction was given to the control group using the normal traditional method of teaching. At the end of the lesson, the post test was administered to both groups and data was collected after it was marked. Data collected were fully analyzed using the SPSS software. The mean and standard deviations were used to analyze the research questions while Analysis of Variance (ANCOVA) was used to analyze the hypotheses. All the hypotheses were tested at 0.05 alpha level of significance.

4. RESULTS

Research Questions 1: What is the mean achievement scores of English students taught using Microsoft Encarta software and those taught without the use of the software?

Table 1: Mean achievement scores of English students taught using Microsoft Encarta software and those taught without the use of the software

Method	N	Pre-test		Post-test			
		Mean	SD	Mean	SD	Gain	SD
Conventional Method	30	26.17	8.93	40.27	15.77	14.10	13.36
Encarta Software	30	25.17	8.79	53.60	15.27	28.43	14.40

Table 1 shows the mean achievement scores of English students taught using Microsoft Encarta software and those taught without the use of the software. It showed that pretest achievement mean score of students taught using Encarta software was 25.17, SD=8.79, while that of their control counterparts was 26.17, SD=8.93. The mean post test scores of the students taught using Encarta software was 53.60, SD=15.27 while that of their counterparts was 40.27, SD=15.77. The mean gain scores of the students taught using the Encarta software was 28.43, SD=14.40. While that of their control counterparts was 14.0, SD=13.36

Research question 2: Is there significant difference on the academic performance of male and female students taught using Microsoft Encarta software?

Table 2: Mean difference in the academic performance of male and female students taught using Microsoft Encarta software

Treatment			Pretest		Posttest		Gain	
			Mean	SD	Mean	SD	Mean	SD
Encarta Software	11	Male	24.09	6.99	59.45	11.94	35.36	15.00
	19	Female	25.79	9.81	50.21	16.22	24.42	12.76

Table 2 showed that mean difference in the academic performance of male and female students taught using Microsoft Encarta software. The result showed that the pretest mean score of the male students was 24.09, SD=6.99 and the pretest mean score of the female students was 25.79, SD=9.81. The posttest mean score of the male students was 59.45, SD=11.94 while the posttest mean score of the female students was 50.21, SD=16.22. The mean gain score of the male students was 35.36, SD=15.00 while the mean gain score of the female students was 24.42.

Test of Hypotheses
H01: There is no significant difference in the academic performance of students taught with Microsoft Encarta computer software and those taught without the computer software.

Table 3 Summary of ANCOVA on the difference in the academic performance of students taught with Microsoft Encarta computer software and those taught without the computer software.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	5612.241	2	2806.120	14.512	.000
Intercept	4285.141	1	4285.141	22.162	.000
Pretest	2945.574	1	2945.574	15.234	.000
Treatment	2988.213	1	2988.213	15.454	.000
Error	11021.492	57	193.360		
Total	148798.000	60			
Corrected Total	16633.733	59			

Table 3 showed the summary of ANCOVA on the difference in the academic performance of students taught with Microsoft Encarta computer software and those taught without the computer software. The result showed that there is significant difference in the academic performance of students taught with Microsoft Encarta computer software and those taught without the computer software ($F_{1, 57}=15.454$, $p<.05$). The null hypothesis was rejected at .05 alpha level.

H02: There is no significant difference on the academic performance of the male and female students taught using Microsoft Encarta software

Table 4: Summary of ANCOVA on the difference on the academic performance of the male and female students taught using Microsoft Encarta software

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1749.394	2	874.697	4.714	.018
Intercept	4301.847	1	4301.847	23.185	.000
Pretest	1154.080	1	1154.080	6.220	.019
Sex	756.576	1	756.576	4.078	.053
Error	5009.806	27	185.548		
Total	92948.000	30			
Corrected Total	6759.200	29			

Table 4 showed the summary of ANCOVA on the difference on the academic performance of the male and female students taught using Microsoft Encarta software. The result showed that

there is no significant difference on the academic performance of the male and female students taught using Microsoft Encarta software ($F1$, $27=4.078$, $p>.05$). The null hypothesis was not rejected at .05 alpha level.

5. DISCUSSION OF FINDINGS

1. The students taught English language using Encarta software had a mean gain score of 28.43 while their control group counterpart had 14.0.This means that the students taught using Microsoft Encarta software significantly outperformed their counterparts who were not taught using the software. They experimental group gained more than their counterparts in terms of achievement in English.
2. The male students taught using the Encarta software outperformed their female counterparts over achievement in English language. However, there was no significant difference between the achievement of the male and the female students in English language

6. CONCLUSION

Based on the results from this study, the following conclusions were drawn;
1. Students taught using Microsoft Encarta software performed better than those taught without the use of the software.
2. The male students taught using the Encarta software outperformed their female counterparts over achievement in English language. However, there was no significant difference between the achievement of the male and the female students in English language

Recommendations
Based on the findings of this study, the following recommendations were made:
1. Teachers should be encouraged to use computers in the classroom to teach students and not just using them to prepare lesson notes.
2. English teachers should make efforts to integrate the use of Microsoft Encarta software in the teaching and learning of Vocabulary as it can improve the academic performance of students.
3. Trainings/workshops should be organized for English language teachers in secondary schools on the use of Microsoft Encarta software.

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