

EFFECT OF ICT SUPPORTED MEDIA ON THE PRONUNCIATION OF SOME ENGLISH WORDS BY SECONDARY SCHOOLS STUDENTS IN ILORIN METROPOLIS

By

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Abstract

This study examined the effect of information and communication technology supported media on pronunciation of some English words in selected secondary schools in Ilorin Metropolis. The study targeted all senior secondary school II students in Ilorin Metropolis. Sixty second year senior secondary school students were sampled from three public secondary schools in Ilorin, Kwara State, Nigeria. Pre-test post-test experimental control group design was employed. English Language Pronunciation Achievement Test (ELPAT) was used to collect necessary data. The pre-test and post-test data were analyzed using One-way ANOVA and t-test statistics. Findings of study showed that performance of students exposed to Electronic Encarta Dictionary audio version pronunciation and those exposed to CDROM audio version pronunciation were better than their counterparts exposed to the conventional classroom instruction. However, there was no significant difference in the performance of male and female students exposed to Electronic Encarta Dictionary audio version pronunciation and CDROM audio version pronunciation. Based on the findings, it was recommended that English language teachers should always adopt ICT supported media for their teaching and learning activities in and outside the school.

Keywords: Information and Communication Technology, Media, English, Pronunciation.

Introduction

Communication is an act of making facts, news, opinions, requests, feelings and thoughts known to others. Various animals do communicate in different forms but the most complex form of communication is human form and it is specially referred to as language. Language is a distinct attribute possessed by human beings above other living souls. It basically qualifies human beings above other living souls. It equally qualifies human beings for the status of higher animals. Language is a systematic means of communicating by the use of sounds or conventional symbols. It is also a system of words for communication. Human communication uses the medium of language to communicate either through verbal or non-verbal means. Although Language is primarily speech because it is meant to be said. The four major skills of language are listening, speaking, reading and writing in the order of the first language (L₁) acquisition (Clark, 2009).

According to Oloruntoba-oju and Alabi (2013) speaking skill is based on proper identification of permissible sounds and their realization in connected speech of a given language. They elucidate that effective speaking skill involves both micro skills and macro skills. The micro skills concern the sound system of a language i.e. ability to manipulate the sounds effectively when speaking while macro skills include the mechanism for preparation of the speech and its effective delivery. Chiang (1998) however, sees speaking as the process of building and sharing meanings through the use of verbal and non-verbal symbols in a variety of contexts.

Clark (2009) describes speaking as the expression of ideas to inform, to persuade and to entertain while NTI (2015) asserts that speaking is a complex cognitive process, an interactive process of constructing meaning which typically involves receiving, processing and producing information either through verbal and non-verbal symbols. Abdulsalam (2013) affirms that language is essentially speech and speech is communication by sounds. She expatiates that speaking is a skill used by someone in daily life communication whether in the school, at home or elsewhere.

Speaking is an oral skill as well as a productive skill. Pronunciation is a subdivision of speaking that deals with the way a word or a language is customarily spoken. It is seen as generally agreed sequences of sounds used in speaking a given word or language in a specific dialect or simply a way a particular individual speaks a word or language. Pronunciation is the ability of an individual to utter words in the acceptable manner of a language. Pronunciation of English words has four basic elements that must be mastered by learners. They are (1) sounds (consonants and vowels) (2) Rhythm (Stress) (3) music (intonation) and; (4) flow (thought, groups, linking and connected speech).

Ilorin is the capital of Kwara State in Nigeria. It is in the north central geographical zone. It is a multilingual community with predominantly Yoruba language speakers. The town is often referred to as a settlement because the habitants speak different languages which include Yoruba, Hausa, Fulfude, Nupe and Bariba (Fasiku and Adetokunbo 2018).

Despite the presence of the afore mentioned languages, English language the country's lingua franca is used in all schools at all levels in Ilorin. English is the (L₂) Second Language and learners need to be vast in its usage. It is beyond dispute that learners who want to develop good speaking skill in a language also need to develop good pronunciation. Pronunciation is recognized as a crucial component of second language learning. Yet, research continues to report that

pronunciation still has low visibility in the curriculum. The marginalization of pronunciation is most likely a result of teachers' adopted strategies (Fakeye, 2002).

Strategy as a term, originated from the Greek word "Strategia" which means "generalship". Yunusa (2012) refers to strategy as a plan i.e., a means of getting from here to there; in other words, it is a "perspective" while Fakeye (2002) opines that strategy consists of the important action, necessary to realize a direction. Strategy is concerned with how someone will achieve his/her aims.

'ICT', information and communication technology is defined as a diverse set of technological tools and resources used to communicate, to create, disseminate, store, and manage information. ICT implies the technology which consists of electronic devices and associated human interactive materials that enable the user to employ them for a wide range of teaching - learning processes in addition to personal use. This technology includes computers, the Internet, broadcasting technologies (such as radio and television), and telephony. ICT is that technology which uses the information to meet human need or purposes including processing and exchanging. Information and Communication Technology (ICT) is the acquisition, processing, storage and dissemination of vocal, pictorial, textual and numerical information by a micro-electronics. Anything that renders data, information or perceived knowledge in any visual format whatsoever; via any multimedia distribution mechanism; is considered part of the domains of space known as Information and communication Technology (Kulsum, 2008).

Information and communications technology (ICT) in education is the processing of information and its communications facilities and features that variously support teaching, learning and a range of activities in education. ICT in education is any hardware and software technology that contributes in educational information processing. In the context of the present era, ICT mainly comprises of Computer technology with its hardware, like, Personal computer machine, infrastructure required for setting up Internet facility and also software like, CD ROM including various programme packages, E-learning strategies etc. ICT in education is any Information Technology that focuses on the acquisition, storage, manipulation, management, transmission or reception of data required for educational purposes. ICT in education is any technology that deals with the exchange of educational information or in other words communication in the teaching-learning process. Uses of Electronic learning technologies like teleconferencing, power point presentations, and CD ROM are Communication Technologies which are parts of ICT.

Many strategies have been used to teach pronunciation, but the problem of poor pronunciation still persists. Research has shown that ICT supportive strategies have improved learners' performances in different fields. It is against this background that this study determines the effectiveness of ICT supported media in the teaching of pronunciation of English words by students in some selected secondary schools in Ilorin metropolis.

Purpose of the study

The purpose of this study was to determine the effect of ICT supported media on the achievement of students in English language pronunciation. Specifically, the study examined:

- (i) The differences in the mean achievement scores of students taught pronunciation in English language using Electronic Encarta Dictionary audio version, CDROM audio version and Conventional teaching method.

- (ii) The difference between the mean achievement scores of male and female students taught pronunciation in English language using Electronic Encarta Dictionary audio version.
- (iii) The difference between the mean achievement scores of male and female students taught pronunciation in English language using CDROM audio version.

Research Questions

The following research questions were used to guide the study:

- (i) Is there any difference in the mean achievement scores of students taught pronunciation in English language using Electronic Encarta Dictionary audio version, CDROM audio version and Conventional teaching method?
- (ii) Is there any difference in the mean achievement scores of male and female students taught pronunciation in English language using Electronic Encarta Dictionary audio version?
- (iii) Is there any difference in the mean achievement scores of male and female students taught pronunciation in English language using CDROM audio version?

Research Hypotheses

The following hypotheses were tested in this study:

- H₀₁:** There is no significant difference in the mean achievement scores of students taught pronunciation in English language using Electronic Encarta Dictionary audio version, CDROM audio version and Conventional teaching method.
- H₀₂:** There is no significant difference in the mean achievement scores of male and female students taught pronunciation in English language using Electronic Encarta Dictionary audio version.
- H₀₃:** There is no significant difference in the mean achievement scores of male and female students taught pronunciation in English language using CDROM audio version.

Methodology

The study adopted the pretest-posttest experimental control group design. Effects of three levels of independent variables (two treatments and a control), and two levels of gender (male and female) were investigated on students' achievement on pronunciation in English language.

The design layout is as shown in Table 1.

Groups	Pre-test	Treatment	Post-test
Experimental Group I	O1	(Electronics Encarta Dictionary Audio Version)	O2
Experimental Group 2	O3	CDROM Audio Version	O4
Control	O5	Conventional Method	O6

A multi-stage sampling techniques was adopted to select the subjects. Firstly, purposive sampling procedure was adopted to obtain three secondary schools in Ilorin Metropolis, Kwara State Nigeria. These schools were sampled based on availability of necessary facilities (computer laboratories, and manpower), school type (public schools), and gender composition (co-educational schools). The three schools were randomly assigned to experimental group I (Electronics Encarta Dictionary Audio Version group), experimental group II (CDROM Audio Version group) and control group (conventional teaching methods). Finally, stratified sampling technique was used to select 60 SSII students. The experimental group I had 20 (10 male – 10 female), experimental group II had 20 (10 male – 10 female) students and control 20 (10 male – 10 female) students. English Language Pronunciation Achievement Test (ELPAT) was used as a test instrument, while ICT audio media was used as a treatment instrument. The test instrument used in collecting data for the study was a researcher adopted English Language Pronunciation Achievement Test (ELPAT). The ELPAT consists of 20 multiple choice objective question items with five options (A–E) adopted from past examination questions of West African Examination Council (WAEC, May/June) and National Examination Council (NECO, June/July). The ELPAT was validated by experts in English language, as well as test and measurement experts and its reliability coefficient determined as 0.85 using Pearson Product Moment Correlation Coefficient. Treatment instrument 1 was the adopted Electronics Encarta Dictionary Audio Version while the treatment instrument 2 was developed by the researchers and recorded on the CDs to be installed on the computer CDROM and normal verbal face to face teaching method was used as treatment for the control group. The content of the treatment was based on some difficult concepts in Oral English language in the Nigerian Senior Secondary School curriculum. These were identified concepts/words students find difficult to understand as reported by (WAEC Chief Examiners’ report, 2019).

Before the commencement of the experiments, the Encarta software was installed and audio CD instructional media was copied into the computers for experimental groups 1 and 2. The experimental group 1 was taught pronunciation of some English words using electronic Encarta Dictionary Audio version, experimental group 2 was taught using audio CD instructional media while students in control group were exposed to conventional teaching method for forty minutes duration each. The scores obtained were analyzed with One-way Analysis of Variance and Scheffe’s post-hoc analysis at 0.05 alpha level.

Results

Research Question One

Is there any difference in the mean achievement scores of students taught pronunciation in English language using Electronic Encarta Dictionary audio version, CDROM audio version and Conventional teaching method?

Hypothesis One

There is no significant difference in the mean achievement scores of students taught pronunciation in English language using Electronic Encarta Dictionary audio version, CDROM audio version and Conventional teaching method.

Table 2: Analysis of Pre-test scores of the Experimental groups 1, 2 and the Control Group

Source of variables	Sums of square	of Df	Mean (x)	F-calculated	p-value
Between Groups	7.900	2	3.950		
Within Groups	232.950	57	4.087	0.967ns	0.387
Total	240.850	59			

Not Significant at 0.05 level

Table 2 gives the result of ANOVA comparison of the two experimental groups and control group. From the table, the calculated F-calculated (0.967, $p = 0.387$) was not significant at 0.05 alpha level. This implies that there was no significant difference among the pre-test mean scores of the experimental group I; experimental group II and the control group at 0.05 level of significance.

Table 3: ANOVA of the Post - test scores of Experimental groups 1, 2 and the Control Group

Source of variables	Sums of square	of Df	Mean Square	F-ratio	p-value
Between Groups	17823.333	2	8911.667		
Within Groups	15370.000	57	269.649	33.049*	0.000
Total	33193.333	59			

Not Significant at 0.05 level

Table 3 presents the result of ANOVA comparison of the post test scores of the two experimental groups and the control group. From the table, the calculated F-calculated (33.049, $p = 0.000$) was significant at 0.05 alpha level. This indicates a statistically significant difference in the post test of the three groups. Hence, the null hypothesis one (HO1) was rejected. Based on the established significant difference in the post-test achievement scores of the groups, a Scheffe’s test was used for the post-hoc analysis. The results of the post-hoc analysis are as shown in Table 4 below.

Table 4: Scheffe’s test of post test scores of the subjects

Groups	Mean Scores	Exp. Group 1	Exp. Group 2	Control Group
Experimental Group 1(Encarta Audio Version)	84.50	0.574		*0.000
Experimental Group 2(CDROM Version)	79.00	0.574		*0.000
Control Group	45.50	*0.000	*0.000	

* The mean difference is significant at the 0.05 level.

The result in Table 4 indicates that there was no significant difference in the posttest mean scores of students exposed to CDROM audio version (X = 84.50) and those exposed to Encarta audio version (X = 79.00). It however, indicates a significant difference in the posttest mean scores of students exposed to CDROM audio version (X = 79.00) and those exposed to conventional lecture method (45.50). Significant difference was also established in the posttest mean scores of students exposed to Encarta audio version (X = 84.50) and those exposed to conventional lecture method (X = 45.50).

Research Question 2

Is there any difference in the mean achievement scores of male and female students taught pronunciation in English language using Electronic Encarta Dictionary audio version?

Hypothesis 2

There is no significant difference in the mean achievement scores of male and female students taught pronunciation in English language using Electronic Encarta Dictionary audio version.

Table 5: T-test Analysis of Post Test Scores of Male and Female Students in Experimental

Variables	N	Df	Mean (x)	SD	t-value	p-value
Male	10	18	84.00	8.111	0.113ns	0.912
Female	10		85.00	8.445		

ns: Not Significant at 0.05 level

Table 5 presents the t-test analysis of the post test of male and female students of experimental group I (Electronic Encarta Dictionary audio version). The mean scores were (84.00) for male and (85.00) for female students respectively. The calculated t-value of 0.113 was not significant at the 0.05 level (p = 0.912). This indicates that there is statistically no significant difference between the male and female students taught with Electronic Encarta Dictionary audio version, (t= 0.113, df = 18, P = 0.912). Hence, Ho₂ was not rejected. Therefore, there is no significant difference in the post test scores of male and female students taught pronunciation in English language with Electronic Encarta Dictionary audio version.

Research Question 3

Is there any difference in the mean achievement scores of male and female students taught pronunciation in English language using CDROM audio version?

Hypothesis 3

There is no significant difference in the mean achievement scores of male and female students taught pronunciation in English language using CDROM audio version.

Table 6: T-test Analysis of Post Test Scores of Male and Female Students in Experimental

Group Two

Variables	N	Df	Mean (x)	SD	t-value	p-value
Male	10	18	78.00	17.512	0.259	0.798ns
Female	10		80.00	16.997		

ns: Not Significant at 0.05 level

Table 6 presents the t-test of post test scores of male and female students of experimental group II (CDROM audio version). The mean scores of the male students were (78.00) and (80.00) for the female students. The calculated t-value of 0.259 was not significant at 0.05 level of significance. This indicates that there is statistically no significant difference in the achievement scores of male and female students taught with CDROM audio version, (t= 0.259,df = 18, p = 0.798). Hence, Ho3 was upheld. Therefore, there is no significant difference in the academic achievement of male and female students taught pronunciation in English language using CDROM audio version.

Discussion

The results showed that students taught English language pronunciation using CDROM audio version and those taught using Electronics Encarta Dictionary audio version performed better than their counterparts taught using conventional method. The significant difference was in favor of the students taught with Electronics Encarta Dictionary audio version and CDROM audio version. The finding equally agreed with the work of Yusuf, Gambari and Olumirin (2012), Yusuf and Afolabi (2010), Fajola (2000) and Dalton, Hannafin and Hooper (1989) who found out that students taught with computer assisted instruction in physics, biology, and mathematics respectively performed better than the students in the control group. The finding equally agreed with the findings of Basturk, (2005), Akour, (2006), Anyamene, Nwokolo, Anyachebelu, and Anemelu (2012), Bayturan and Keşan (2012), Pilli and Aksu (2013) who found out that students taught mathematics using CAI package performed better than those taught using the conventional method of instruction.

The results of t-test on the performance of male and female students taught pronunciation in English language using Electronics Encarta Dictionary audio version and CDROM audio version indicated no significant difference. This finding agrees with that of Fajola (2000), Gambari (2010), Garduno (2001),Yusuf and Afolabi (2010) and Yusuf, Gambari and Olumirin (2012) which reported that gender had no effect on academic performance of students in computer-assisted

cooperative learning. This shows that the use of electronics Encarta Dictionary audio version and CDROM audio version is not gender biased.

Conclusion

Based on the findings of this study, it can be concluded that, the use of ICT supported media are effective in teaching students pronunciation of words in English language. It is also believed that the use of electronics Encarta Dictionary audio version and CDROM audio version used as ICT supported media are gender friendly.

Recommendations

The following are recommended based on the findings of this study:

1. The government and other stakeholders in education should encourage the use of ICT supported media in schools for helping students have access to varieties of media formats for pronunciation of words in English language.
2. English language teachers should always adopt the use of ICT supported media for their teaching and learning activities in and outside the school.
3. The school authorities should make provision for necessary ICT tools and facilities that will encourage the use of ICT supported media in the schools.
4. English language teachers should constantly be trained in the use of ICT supported media to support their teaching and learning activities.

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