

## Effects of Audio - Visual Compact Disc Instructional Packages on Performance of Junior Secondary School Students in Igbo Vowels and Consonants in Minna Metropolis, Niger State

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### Abstract

The study investigated the effects of audio-visual compact disc instructional packages on achievement of junior secondary school students in Igbo vowels and consonants in Minna Metropolis, Niger State. It examined the significant difference in the test achievement scores of students taught using audio-visual compact disc and lecture method. Two research questions were raised and two null hypotheses were tested at 0.05 alpha level. Sixty (60) junior secondary school students were drawn from two junior secondary schools within Minna metropolis as sample for this study. The population for the study comprises all secondary school students in Minna metropolis. The research design adopted was pretest posttest experimental control group design. The experimental group were taught using audio compact disc package while control group was treated using conventional lecture method. A 20-item Vowel-Consonant Achievement Test (VCAT) was developed and was validated. Its reliability was found to be 0.88. The two hypotheses of this study were tested using t-test statistic. The findings of the study showed that students taught Igbo vowels and consonants using audio compact disc package performed better than those taught using conventional lecture method. Male and female students did not differ significantly when both were taught using audio disc instructional package. Based on the above findings, it was recommended that audio-visual disc instructional package should be used by all language teachers especially those Igbo language teachers in secondary schools.

**Keywords:** Audio-Visual disc, instructional packages, vowels, consonants, semivowels

### Introduction

The role of educational technology in promoting teaching and learning cannot be overemphasised. Educational technology is a complex integrated process involving people, procedures, devices and organisation for analyzing problems and devising, implementing, evaluating and managing solutions to those problems involved in all aspect of learning (Adekunle, 2005). It is a veritable tool for enhancement of teaching and learning and for fostering development and acquisition of skills by teachers and students for economic empowerment and self reliance (Wushishi & Aniah, 2013). No meaningful progress would occur in the teaching and learning sector unless proper instructional facilities are put in place. Proper participation by students in the process of teaching and learning can only be realised through the use of educational technological tools.

Audio and video compact disc instructional materials are one of the educational technology innovative media used in promoting meaningful, qualitative and productive education to the learners. Olumba (2009), emphasised that Audio Compact Disc Instructional Package is the easiest way for students to listen to variety of speakers on variety of topics in a variety of genres, dialogues, interviews, lectures for receptive skill development. Audio compact disc is very essential in productive skills and the most powerful piece in voice recording. Audio is very vital in achieving the educational objectives in three domains of learning namely the cognitive, affective and the psychomotor. Audio-visual instructional packages can be used in all levels of education and in teaching all sound-related topics.

Poor background in Igbo Language has consistently been mentioned as the major cause of failure recorded in Igbo Language (Anagbogu, 2001). This could be traced to poor usage and understanding of the vowels and consonant sounds of the language. In phonetics, vowel is a sound in spoken language like Igbo, English and others. Vowels are speech sounds during whose production the articulators do not come

very close such that the airstream flows out very freely without significant friction (Mba, 2000). Vowels and consonants are the building blocks of every language which are very important in assessing the performance of the learners. Consonants are speech sounds produced by an obstruction of air from the lung in the oral cavity (Agbedo, 2003). The obstruction may be partial or complete depending on the consonants sound being produced. He further defined vowels as the speech sounds produced by allowing air to pass through the oral cavity without any noticeable obstruction. The easiest way to learn the pronunciation of the language which is embedded in its alphabetical foundation is by a systematic study of sound and initiation of the way in which they are produced. Naturally man engages in communication mainly by means of two kinds of sensory stimulation. These are visual and auditory. From the very early stage, children learn to respond to tunes and sound which their elders taught them. As they grow older they begin to communicate with the current sound patterns with which they have become familiar. Olumba, (2009) opined that children make use of speech early in life. Consequently with their exposure to the sound system of language like the vowel and consonant sounds, a rapid acquisition of words used in that language is made. Later in life, the child will be taught the visual representation of the speech.

The best way to learn the rubrics of Igbo Language is through proper understanding of its alphabets which is made up of vowels and consonants. These aspects of Igbo Language do not seem to be receiving serious attention from teachers and students. This is made manifest in the performance of students at JSSCE examinations which has been quite below expectation.

### Statement of the Problem

Several studies have reported poor performance of students in Igbo Language in Junior Secondary School Certificate Examination (JSSCE) despite its importance as stated in the National Policy on Education. The decline in performance of students has been attributed to poor teaching methods, linguistic interferences, dearth of instructional resources, large language classes, abstract nature of the subject and inadequate use of instructional material. NECO Chief Examiners Report (2008) observed that the students' major weaknesses in Igbo language are inability of the students to express themselves very well in the standard Igbo, poor knowledge of grammatical rules, inability to put diacritic marks where necessary, inability to understand questions, use of dialects in writing and lack of seriousness. Lack of interest shown by students towards the study of Igbo language is not inherent in the language itself but could be traced to teachers' use of inappropriate methods and materials in teaching (Anagbogu, 2001). The dominant method of teaching Igbo language is teacher oriented not learner focused. It makes learners to be passive listeners instead of active language users. It is subject matter oriented thereby encouraging memorization or rote learning (Offorma, 2004). Therefore, a need to develop audio and video compact disc instructional packages in order to restore high positive interest to the learners has been the aim of the researcher.

### Aims and Objectives of the Study

The main aim of this study was to investigate the effects of audio-visual compact disc instructional packages on achievements of secondary school students in Igbo vowels and consonants in Minna metropolis Niger state. The study specifically attempted to:

1. Determine the difference in the achievement of students taught Igbo vowel and consonant using audio compact disc instructional package and those taught with conventional lecture method.
2. determine the difference in the mean achievement of male and female students taught Igbo vowels and consonants using audio compact disc instructional package.

### Research Questions

This research is aimed at finding answers to the following questions:

1. Is there any difference in the achievement scores of students taught Igbo consonant and vowels using Audio Compact Disc Instructional Packages and those taught using conventional lecture method?
2. Is there any difference in the mean achievement scores of male and female students taught Igbo vowels and consonants using Audio Compact Disc Instructional Package?

### Research Hypotheses

Ho<sub>1</sub>. There is no significant difference in the mean achievement scores of students taught Igbo vowels and consonants using Audio Compact Disc Instructional Package and those taught using conventional lecture method.

Ho<sub>2</sub>. There is no significant difference in the mean achievement scores of male and female students taught Igbo vowels and consonant using Audio Compact Disc Instructional Package.

**Significance of the Study**

This research is significant and relevant because it will guide educational policymakers, educational administrators, curriculum planners, students, teachers, researchers and those who are involved in implementing the Igbo Language component in the National Policy on Education to have a well articulated designed focus.

**Research Design**

The research design adopted for this research was the pretest – post test experimental control group design. The design represented two levels of treatment and two levels of gender (male and female). The two groups were taught the concepts of vowels, consonants and semi-vowels. The experimental group was taught using audio compact disc package while the control group was taught using conventional lecture method.

**Population**

The population of the study comprised all secondary school students in Minna metropolis of Niger State. The target populations were Ninety-Nine (99) junior secondary two (JSS II) students in 2 co-educational junior secondary schools in Minna metropolis of Niger State.

**Research Instrument**

The research instrument used to gather data for the study was the Vowel Consonantal Achievement Test (VCAT). VCAT was made up of twenty (20) items multiple choice objective test that was validated and its reliability determined as 0.88 using Cronbach Alpha Method statistics. The audio package was produced by the researcher and media specialist. The topics treated were the Vowels, Semi-Vowels and the Consonants of Igbo Language.

**Result**

**Hypothesis One (Ho<sub>1</sub>)**

There is no significant difference in the mean achievement scores of students taught Igbo consonants and vowels using audio compact disc instructional package and those taught using conventional lecture method.

**Table 1.1: t-test Comparison of the Mean Scores of Experimental Group (Audio compact disc) and Control group.**

Variables	N	Df	Mean (X̄)	S.D	t-values calculated	Sig. Level P-value
Experimental Group (ACD)	20	38	67.55	12.352	4.684*	.000
Control Group	20		49.20	12.425		

\* = significant at 0.05 level of significance.

From the table, the mean score for the experimental group (ACD) is 67.55 with standard deviation 12.352, while that of control group is 49.20 with standard deviation of 12.425. The table revealed that the t-value calculated of 4.684 is significant at .000 level of significance (t-cal = 4.684, df= 38; P<0.05). This means that there was statistically significant difference between the mean scores of the two groups. Hence, hypothesis I was rejected.

**Hypothesis Two (Ho<sub>2</sub>)**

There is no significant difference in the mean achievement scores of male and female students taught Igbo vowels and consonants using audio compact disc instructional package.

**Table 1.2: t-test Comparisons of the Mean Scores of Males and Females Experimental Group (ACD)**

Variables	N	Df	Mean (X̄)	S.D	t-values calculated	Sig. Level
Male	10	18	68.30	13.367	-245	.809
Female	10		69.80	13.959		

The mean scores for the male experimental group are 68.30 with standard deviation 13.367 while the mean score for the female experimental group is 69.80 with standard deviation of 13.959. The t-value calculated is -245 at .809 level of significant. The table indicated that the male score did not differ significantly from the female scores when both were taught Igbo consonant and vowels using audio compact disc instructional package. Hence hypothesis 2 was retained.

**Discussion of Results**

Findings from the study indicated that the use of audio-visual compact disc instructional package in the teaching of Igbo language improved the performance of students. Research question one indicated that there was a significant difference between the groups. This study agrees with previous findings of Nworji (2000), Dunn (2000), Ikwuka (2005), Isiaka (2007), Ayogu (2000) and Israel 2007 who found out that the use of audio, and video tape instructional packages improve student's academic learning. In support of this finding, Deveancy (2009) also opined that an intelligent use of audio visual aids will save time and will stimulate student interest

The findings on the mean achievement of male and female students showed that the male score did not differ significantly from the female scores when both were taught using ACD instructional package (tcal = -245; df= 18; P>0.05). Therefore, hypothesis 2 was retained. These findings agree with earlier findings of Ikwuka (2005) and Ofili (2001) that video tape instructional package improves both male and female academic performance.

**Conclusion**

Conclusion arising from the findings of this study revealed that the use of audio visual instructional materials in teaching Igbo vowels and consonant have significant effects on the performance of students. If all the findings in this study could be adhered to the performance of students generally could be enhanced. The issue of gender was also addressed in this study. The finding of this study seems to confirm earlier findings that gender has no effect on the performance of students. The methods used in this study were gender friendly. They brought about significant changes in the performance of male and female students thereby nullifying the claim that gender improves the performance of students.

**Recommendations**

Audio-visual compact disc instructional packages were more effective than the use of lecture method. It is therefore, recommended that students should be exposed to audio-visual instruction in order to promote effective and active participation in the teaching – learning process.

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