

Effects of Audio-Visuals on Academic Achievement of Junior Secondary School English Language Students in Zaria Education Zone, Kaduna State, Nigeria

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Abstract

*The study investigated the Effects of Audio-Visuals on Academic Achievement of Junior Secondary School English Language Students, Zaria Education Zone, Kaduna State, Nigeria. The study adopted quasi-experimental research design. The study's population consisted of 26,322 junior secondary school English language pupils. The participating schools for the quasi-experiment were chosen using a purposive sampling technique. The study used 60 junior secondary school students, 30 as an experimental group and 30 as a control group. As a result, GJSS, Muchiya was designated as an Audio-Visual Learning Environment (AVLE) while GJSS, Tudun-Wada was designated as a Conventional Learning Environment (CLE). This study used a teacher-created test known as the ELAT (English Language Achievement Test) as a data collection instrument. The mean and standard deviation were utilized to answer the study's research questions, while the null hypotheses were tested using an independent samples *t*-test at a significance threshold of 0.05. The findings from the study indicate that students taught English language using conventional method aided by television outperformed those taught using conventional method only and that gender does not significantly affect the academic performance of junior secondary school students when taught English language using conventional method aided by television. The study among others recommended that English language teachers in junior secondary schools in Zaria Education Zone, Kaduna State, should be encouraged to employ audio-visual resources during instructional delivery because they improve students' academic achievement.*

Key Words: Audio-Visuals, English Language, Academic Achievement, Secondary Schools

Introduction

Information and communication technology (ICT) has grown rapidly over the last two decades. It is characterized by the digital era, particularly electronic and multimedia media. In order to achieve optimal and effective learning for students, the learning process also necessitates the existence of adjustments in educational institutions in the use of a method of teaching and learning that utilizes electronic and multimedia media. The tools and infrastructure of telecommunication and technology are also required at the institutional level, such as in elementary schools, to improve the quality of the institution and to address the difficulties that have arisen. Learning is the process of communication and interaction in education between the instructor and the students, in which the students receive, acquire, understand, respond to, and develop information, science, knowledge, and study material from the teacher through various activities. It has to do with the teaching and learning process that takes place in the classroom, and it requires the professionalism of the teacher to achieve particular goals.

Audio-visual is defined by Terrebonne Parish Library System (2000) as "Instead of words, sound and image are used to deliver information." Audio-visual elements are becoming increasingly crucial in schools as kids become more acclimated to technology. Students learn in a number of ways, which is why incorporating audio-visual elements into the classroom can serve to improve the learning environment. According to Brinton (1988:63), audio-visual materials are instructional materials that deliver information to pupils without the need for paper and pencil. Audio-visual products are beneficial in the classroom since they move away from a textbook-only approach to learning.

The audio-visual approach is one of the strategies that can be utilized in the classroom to teach elementary school children. It incorporates both visual and auditory elements and allows for the addition of learning materials. Electronic and multimedia technology have become more accessible and available, allowing more students to participate in the learning process in the classroom. Teaching and learning become more successful and valuable when audio-visual aids are used. It is the most effective means of disseminating knowledge and information, and it is becoming increasingly crucial in classrooms. In the classroom, the teacher can introduce and display a variety of audio-visual media such as television, video, movies, projectors, and computers. It will improve their English comprehension and vocabulary, as well as foster a more creative environment in the elementary classroom and make it more inviting.

In the English language classroom, instructional tools and resources are essential factors in facilitating efficient transactions and communication between the teacher and the students. Effective English language instruction will not only pique students' interest in the topic, but will also improve their exam performance. The utilization of relevant instructional materials and resources is required to achieve effective teaching and learning in English language. Audio-visual resources are educational products that appeal to both the auditory and visual senses. They support the teacher in instructing pupils and assist students in learning efficiently. In our secondary schools, audio-visual tools are a significant part of the teaching technique.

In light of the foregoing, Kochhar (2004) observes that the most notable development in modern education is the increased use of supplementary devices, which allow the teacher to clarify, establish, and correlate accuracy, concepts, interpretation, and appreciation; increase knowledge; rouse interest; and even evoke worthwhile emotions and enrich the imagination of students through the use of one sensory channel. In this regard, Dale (1996) and Fillmore (2008) suggest that in education, we should appeal to the mind primarily through the visual and aural sense organs, as these senses may absorb up to 85 percent of our learning.

Adelekan (2010) stated that several measures have been recommended to improve students' attitudes and academic achievement in secondary school subjects. Among the measures recommended are appropriate use of teaching methods, instructional media (audio-visual aids), and resources. Also, Oyedeji (2002) stressed that research has proved the facilitative potential of instructional media in enhancing students' academic achievement and

also enriching classroom instruction. In the light of the foregoing, this study examined the Effects of Audio-Visuals on Academic Achievement of Junior Secondary School English Language Students, Zaria Education Zone, Kaduna State, Nigeria.

Objectives of the Study

The main objective of this study was to determine the Effects of Audio-Visuals on Academic Achievement of Junior Secondary School English Language Students, Zaria Education Zone, Kaduna State, Nigeria. Specifically, the study is aimed at:

- i. Determining the mean academic performance scores of junior secondary school students taught English language using conventional method aided by television and those taught using conventional method alone?
- ii. Examining the mean academic performance scores of junior secondary school students taught English language using conventional method aided by television in relation to gender?

Research Questions

In the light of the foregoing the following questions were asked;

- i. What is the difference between the mean academic performance scores of junior secondary school students taught English language using conventional method aided by television and those taught using conventional method alone?
- ii. What is the difference between the mean academic performance scores of male and female junior secondary school students taught English language using conventional method aided by television?

Research Hypotheses

The following null hypotheses postulated were tested at 0.05 level of significance:

- H₀₁: There is no significant difference between the mean academic performance scores of junior secondary school students taught English language using conventional method aided by television and those taught through conventional method alone;
- H₀₂: There is no significant difference between the mean academic performance scores of male and female junior secondary school students taught English language using conventional method aided by television.

Methodology

The study is quasi-experimental in nature. The non-equivalent pre-test and post-test comparison group design was used in this study. The study's population consisted of 26,322 junior secondary school English language pupils. The participating schools for the quasi-experiment were chosen using a purposive sampling technique. According to Salihu (2015), purposeful sampling is a type of non-probability sampling in which the researcher makes decisions about who should be included in the sample based on a variety of criteria, such as

specialist knowledge of the research issue or capacity and willingness to participate in the study. However, according to Olayiwola (2007), 30 participants for each group (treatment and control) is sufficient for this type of study. This study used 60 junior secondary school pupils, 30 as an experimental group and 30 as a control group, according to Olayiwola's recommendations. As a result, GJSS, Muchiya was designated as an Audio-Visual Learning Environment (AVLE), or experimental group, while GJSS, Tudun-Wada was designated as a Conventional Learning Environment (CLE), or control group.

This study used a teacher-created test known as the ELAT (English Language Achievement Test) as a data collection instrument. The instrument was duly validated by experts in English language, instructional technology and test and measurement. The reliability coefficient index of the instrument stood at 0.77 determined using Cronbach alpha methods. The mean and standard deviation were utilized to answer the study's research questions, while the null hypotheses were tested using an independent samples t-test at a significance threshold of 0.05.

Results

Research Question 1: What is the difference between mean post-test academic performance scores of junior secondary school students taught English language using conventional method aided by television and those taught using conventional method alone?

Table 1: Descriptive Statistics on the Difference in the Post-test Mean Academic Performance Scores of Experimental and Control Groups

Groups	N	Mean	SD
AVLE	30	29.25	8.57
CLE	30	18.02	5.14

The difference in the mean post-test academic performance scores of junior secondary school students taught English using a conventional technique supported by television against those taught using a conventional method exclusively is shown in detail in Table 1. According to the findings, the experimental and control groups computed mean academic performance scores were 29.25 and 18.02, respectively. The experimental group outperformed the control group by 11.23 points on average (AVLE).

Research Question 2: What is the difference between the mean post-test academic performance scores of male and female junior secondary school students taught English language using conventional method aided by television?

Table 2: Descriptive Statistics on the Difference in the Mean Post-test Academic Performance Scores of Experimental Group in Relation to Gender

Gender	N	Mean	SD
Male	15	30.27	8.26
Female	15	28.23	8.89

The difference in mean post-test academic performance scores of male and female students taught English using conventional method enhanced by television is seen in Table 2. Their computed mean academic performance scores for male and female students, respectively, were 30.27 and 28.23. The mean difference in favour of male students-participants was 2.04.

Null Hypothesis 1: There is no significant difference between the mean post-test academic performance scores of junior secondary school students taught English language using conventional method aided by television and those taught through conventional method alone;

Table 3: Summary difference between the mean post-test academic performance scores of junior secondary school students taught English language using conventional method aided by television and those taught through conventional method

Groups	N	Mean	SD	df	t-cal	t-Crit	Sig (p)
Experimental	30	29.25	8.57				
Control	30	18.02	5.14	58	8.71	1.96	0.00

Calculated $p < 0.05$, calculated $t > 1.96$ at $df 58$

Table 3 shows that there is a significant difference in mean post-test academic performance scores between junior secondary school students taught English language using a conventional approach supplemented by television and those taught using a conventional method exclusively. This is due to the fact that the calculated significance (p) value of 0.00 was found to be less than the 0.05 alpha level of significance. This means that students who were taught English using a conventional method supplemented by television outperformed students who were taught using simply a conventional method. As a result, the null hypothesis was rejected.

Null Hypothesis 2: There is no significant difference between the mean academic performance scores of male and female junior secondary school students taught English language using conventional method aided by television.

Table 4: Summary of difference between the mean academic performance scores of male and female junior secondary school students taught English language using conventional method aided by television.

Gender	N	Mean	S.Dev	Df	t-cal	t-crit	Sig (p)
Male	15	30.27	8.26	28	.92	1.96	0.36
Female	15	28.23	8.89				

Calculated p > 0.05, calculated t < 1.96 at Df 28

Table 4 shows that there is no significant difference in the mean post-test academic performance scores of male and female junior secondary school students who were taught English using a conventional approach, supplemented by television. This was because the computed significance (p) value of 0.36 was greater than the 0.05 alpha level of significance. This suggests that when teaching English to junior secondary school students using a conventional method supported by television, gender has no significant impact on their average academic achievement ratings. As a result, the null hypothesis is retained.

Findings

The study indicated that:

- i. students taught English language using conventional method aided by television outperformed those taught using conventional method only;
- ii. gender does not significantly affect the academic performance of junior secondary school students when taught English language using conventional method aided by television.

Discussion of Findings

Academic Performance Scores of Junior Secondary School Students taught English Language using Conventional Method Aided By Television and those taught using Conventional Method

The findings from the study indicate that students taught English language using conventional method aided by television outperformed those taught using conventional method only; gender does not significantly affect the academic performance of junior secondary school students when taught English language using conventional method aided by television.

The findings of this study are consistent with those of Kozma (1991); Wetzel, Radtke, & Stern, 1994; Mitchell & Surprise, 1994; Okwo, 1994; Le Doux, 1997; Olagunju, 2000; Osokoya, 2007; Money, Appiah, & Wilmot, 2010; Oladajo, Olosunde, Ojebisi, & Isola, 2011;

Owusu, Nwike, and Onye For example, Le Doux (1997) discovered that when audio-visual aids are employed in the instructional segment to bring abstract thinking to life and make it more concrete, students learn better. In a similar line, Wetzel, Radtke, and Stern (1994) discovered that adding music to still pictures improves learning more than just adding motion. Similarly, Kozma (1991) discovered that television's use of many symbol systems results in greater learning gains than media that use only one. Furthermore, Olagunju (2000) discovered a significant difference in the achievement scores of students taught with various instructional materials and those not exposed to use of instructional materials.

Academic Performance Scores of Junior Secondary School Students taught English Language using Conventional Method aided by Television in Relation to Gender

It was also found that gender does not significantly affects the academic performance of junior secondary school students when taught English language using conventional method aided by television. In line with the current finding, Nwike and Onyejegbu (2013) discovered that there was no significant difference in mean achievement scores between male and female students. In a related development, Salihu, Abdullahi, Alfa, and Muhammed (2015) discovered that the use of IMI was gender-friendly. In another vein, Omosewo, (1999) and Quarcoo-Nelson, Buabeng and Osafo, (2012) in their separate studies indicated that gender has significant effect on students' academic performance in a multimedia learning environment.

Conclusions

In light of the preceding, it is concluded that the use of audio-visual resources during English language instructional delivery in junior secondary schools in Zaria Education Zone, Kaduna State, Nigeria improves students' academic performance and is gender-friendly.

Recommendations

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

- i. English language teachers in junior secondary schools in Zaria Education Zone, Kaduna State, should be encouraged to employ audio-visual resources during instructional delivery because they improve students' academic achievement.
- ii. In co-educational settings, the use of audio-visual resources should be encouraged because they have been found to be gender-friendly in English language classrooms.

References

Buabeng, I. & Ntow, D. F. (2010). A Comparison Study of Students' Reasons/Views for Choosing/Not Choosing Physics between Undergraduate Female Non-Physics and Female Physics Students at University of Cape Coast. *International Journal of Research in Education*, 2(2), 44-53.

- Dale, E. (1996). *Audio-Visual Methods in Teaching*. New York: Dryden Press.
- Federal Republic of Nigeria (2013). *National Policy on Education*: Lagos, Federal Government Press.
- Fillmore, C. (2008). *A smarter Way to Teach Physics*. Paper presented at the International Education Research Conference, Brisbane, Australian. <http://www.aare.edu.au/08pap/fil081140.pdf>
- Kochhar, S.K. (2004). *Methods and Techniques of Teaching*. New Delhi: Publishers Pvt. Ltd.
- Kozma, R.B. (1991). Learning with Media. *Review of Educational Research*. 61, (2), 179-211.
- Le Doux, J. (1996). *The Emotional Brain: The Mysterious Underpinnings of Emotional Life*. New York: Simon and Schuster.
- Mitchell, N. L. & Surprise, S.J. (1994). *Effective Use of Video in Interactive Modules*. Proceedings on World Conference on Educational multi-media an hypermedia, Vancouver, Canada. Retrieved February 20, 2011, from <http://outerlimitsresearch.wikispaces.com/Reseach>
- Nwike, M.C. & Onyejebu, C (2013). Effects of Use of Instructional Materials on Students Cognitive Achievement in Agricultural Science. *Journal of Educational and Social Research* 3 (5), 103
- Okwo, F.A. (1994). Appropriate Media Technique for Rural Development Communication and Education in Nigeria. *Journal of Quality Education*, 1(1), 36-45.
- Oladajo, M.A., Olosunde, G.R., Ojebisi, A.O. & Isola, O.M. (2011). Instructional Materials and Students' Academic Achievement in Physics: Some Policy Implications. *European Journal of Humanities and Social Sciences*, 2(1), 113-126.
- Olagunju, I. (2000) Strategies & Utilization of Improvised Biology of Instructional Materials and Students. Achievement and Attitudes in Ekiti State Secondary Schools Nigeria. *International Journal of Research in Education* 3(2)
- Olagunju, S. O (2001) Sex, Age and Performance in Mathematics Abacus: Journal of Mathematics Association of Nigeria, 26 (1), 8-16.
- Olayiwola, A.O. (2007). *Procedures in Education Research*, Kaduna: Hanijam publications.
- Omosewo, E.O. (1999). Relative Effects of Planned Post-Laboratory Discussion on Students' Achievement in Physics. *Journal of Educational Foundations*, 4(2), 116-121.

- Osokoya, I.O. (2007). Effects of Video-Taped Instruction on Secondary School Students' Achievement in History, *International Journal of African & African American Studies*, 6(1), 27-34.
- Ouellette, R.P. (2004). *The challenges of distributed learning as new paradigm for teaching and learning*. College Park, USA: University of Maryland College.
- Owusu, K.A., Monney, K.A., Appiah J.Y. & Wilmot, E.M. (2010). Effects of Computer-Assisted Instruction on Performance of Senior High School Biology Students in Ghana, *Computer and Education*, 55, 904-910.
- Quarcoo-Nelson, R., Buabeng & Osafo, D.K. (2012). Impact of Audio-Visual Aids on Senior High School Students' Achievement in Physics, *Eurasian J. Phys. Chem. Educ.* 4(1): 46-54.
- Salihu, J.J., Abdullahi, M.B, Alfa, M.G & Muhammed, A. (2016). *Evaluation on the Effects of Interactive Multimedia Instruction on Academic Performance of Upper Basic Level Students in Kaduna State-Nigeria*. A paper presented at the 3rd International Conference organised by School of Science and Technology Education, Federal University of Technology, Minna-Niger state, Nigeria Date: Wednesday 4th- 7th October, 2015.
- Wetzel, C. D. Radtke, P.H, & Stern, H.W. (1994). *Instructional Effectiveness of Video Media*. Hillsdale, NJ: Lawrence Erlbaum Associates