

**EFFECTS OF INTERACTIVE MULTIMEDIA INSTRUCTIONAL APPROACH ON JUNIOR  
SECONDARY STUDENTS' ACADEMIC ACHIEVEMENT IN ISLAMIC STUDIES IN KADUNA STATE,  
NIGERIA**

**BY**

**Muhammad Suleiman (PhD): Department of Islamic Studies, Federal College of Education, Zaria;  
E-mail: msulaiman1277@gmail.com**

**&**

**Sani Mamuda: Department of Islamic Studies, Federal College of Education, Zaria;  
E-mail: sanimamuda@ymail.com**

**Abstract**

*The study examined the effects of interactive multimedia instructional approach on junior secondary students' academic achievement in Islamic Studies in Kaduna State, Nigeria. The design of the study was the non-equivalent pre-test post-test control group. The population of the study consisted of JSSIII Islamic Studies students in Zaria Education Zone, Kaduna State totalling 30,622 as at 2019/2020 academic session. Two secondary schools were purposively selected. These are Barewa College and Alhuda-huda College, Zaria. However, sixty (60) students were selected i.e. 30 from each school. Instructional packages called Islamic Studies Interactive Multimedia Package (ISIMP) Islamic Studies Conventional Lecture Method (ISCOLM) were used in the experiment. The teacher-made test used to evaluate the students learning was named Islamic Studies Achievement Test (ISAT). The content and construct validity of the instrument was determined by relevant experts and the reliability coefficient index of the instrument was 0.86. The study's research question was answered using means and standard deviation while Analysis of Covariance (ANCOVA) was used in testing the null hypothesis at 0.05 alpha level of significance. It was found that interactive multimedia instructional strategy enhanced students' academic achievement in Islamic Studies in junior secondary schools in Zaria Education Zone, Kaduna State, Nigeria. In the light of the foregoing it is recommended that there is the need for Kaduna State government to build and equipped computer laboratories in each secondary school in the state. This will assist in effective utilization of interactive multimedia instructional strategy in teaching Islamic Studies.*

**Keywords:** *Academic Achievement, Multimedia, Islamic studies, Teaching and Strategy*

**Introduction**

The quality of teaching and learning lies on the effective utilization of teaching and learning resources by the classroom teacher. Hence, academic achievement of students depends greatly on the teachers' knowledge, skills and attitude towards technology integration in teaching and learning. Schools that have qualified teachers, interactive teaching and learning materials, conducive learning environment can provide qualitative and quantitative education for its learners. In this regard, Salihu (2015) stated that the selection and effective integration of relevant teaching technique by a qualified teacher is the starting point for attaining of classroom teaching and learning objectives. One of such technologies introduced in the area of teaching and learning is the interactive multimedia instructional strategy. Interactive multimedia is most commonly used to mean the use of multimedia and Information Communication Technology (ICT) equipment to offer an effective dialogue between the resource materials- indirectly with the instructor and the students in comparison with traditional methods of teaching which may lack such interactivity (Nusir, Alsmadi, Al-Kabi & Shardqah, 2011; Salihu, Muhammed & Muhammad, 2020). Interactive multimedia has the potential to create high quality learning especially for students, and also has the ability to create a more pragmatic learning context through its different medias- text, graphics, sound, animation and so on which will enhance students' academic achievement (Salihu, Muhammed & Muhammad, 2020).

The influence of instructional materials in promoting students' academic performance and at promoting teaching and learning in an educational system is indisputable. The teaching of Islamic studies in Nigerian secondary schools needs to be properly handled. The materials used by teachers to teach and drive home their subject points at the secondary school levels of Nigerian education system is incontrovertibly a paramount important issue in practical classroom interaction and successful transfer of knowledge from the teacher to the learners. Instructional materials are materials which assist teachers to make their lessons explicit to learners. They are also used to transmit information, ideas and notes to learners (Ijaduola, 2007). Presently, there are different resources for teaching and learning of Islamic Studies in junior secondary schools, the choice of resources to be used depends on the topic in question. In junior secondary school Islamic Studies curricular, some of the themes from which different topics could be derived include: Tawhid, Fiqh, Tahdhib, Sirah or Tarikh and Hidayah (Kareem in Mandama, 2007). Islamic studies curricular at junior secondary school in Nigeria is designed to enable the learners develop interest in

their religion (Islam) , acquire basic knowledge and skills in act of Ibada (Worship), and also apply their knowledge and skills in worship of Allah as it is revealed in the holy book(Al-Qur'an).

Academic achievement according to Salihu, Muhammed and Muhammad (2020) entails students learning outcome over a given period of time. It tells how well students are attaining their tasks and studies(Scottt, 2012). Also Okorie (2014) academic achievement is the ability to study and remember fact and being able to communicate one's knowledge verbally or written on paper. Studies abound on indicating the potency of interactive multimedia instruction in enhancing students' academic achievement compared to traditional/conventional expository methods. Some of these studies include Salihu, Muhammed and Muhammad (2020); Owolabi and Oginni (2013); Salihu, Abdullahi, Alfa and Muhammed (2015); Cyril (2016); Sani (2019); Reis (2007); Umar, Idris, Audu, Arah, Yusuf and Beji (2016). Despite the fact that studies have proven that interactive multimedia instruction enhances students' academic achievement very few teachers of Islamic Studietry to utilize it for the benefit of promoting students learning especially in this 21st century where teaching and learning is undergoing massive restructuring, remodelling and revitalization to suit the current demands and also to stand the test of time(Salihu, Muhammed & Muhammad, 2020). It is based on this note that this study examines theEffects of Interactive Multimedia Instructional Approach on Junior Secondary Students' Academic Achievement in Islamic Studies in Kaduna State, Nigeria.

### Objective of the Study

- i. to find out the mean academic achievement scores of students taught Islamic Studies using interactive multimedia instruction and those taught using conventional lecture method;

### Research Question

- i. What is the difference in the mean academic achievement scores of students taught Islamic Studies using interactive multimedia Instruction and those taught using conventional lecture method?

### Null Hypothesis

H<sub>01</sub>: There is no significant difference in the mean academic achievement scores of students taught Islamic Studies using interactive multimedia instruction and those taught using conventional lecture method;

### Methodology

This study employed Quasi-experimental research design. Precisely, the non-equivalent pre-post-tests comparison design was adopted. According to Salihu, Muhammed and Muhammad (2020) the design requires a pre-test and post-test for a treated and comparison group. It is a design in which the effects of a treated or intervention are estimated by comparing outcomes of a treatment group and a comparison group but without the benefit of random assignment (Salihu, 2015). The population of the study consisted of JSSIII Islamic Studiesstudents in Zaria Education Zone, Kaduna State totalling 30,622 as at 2019/2020 academic session. Two secondary schools were purposively selected. These are Barewa College and Alhuda-huda College, Zaria because of the availability of functional computer laboratory which is necessary for the conduct of the experiment. However, sixty (60) students were selected i.e. 30 from each school based on the recommendation of Olayiwola (2010) who set 15-30 participants as adequate for the experiment. An instructional package called Islamic Studies Interactive Multimedia Package (ISIMP) to assist in the teaching of experimental group was used. The package consisted of hypertext, animation, pictures and sound to assist the students in learning Sirah (Islamic History). Additionally,there was an instructional package for control group Islamic Studies Conventional Lecture Method (ISCOLM) which used printed instructional materials as complement. The students were pretested before being exposed to the packages. The teacher-made test used to evaluate the students learning was named Islamic Studies Achievement Test (ISAT). The pre and post tests were marked and scored over 60.The content and construct validity of the instrument was determined by relevant experts and the reliability coefficient index of the instrument was 0.86.

The data for the study were the scores of the teacher made-test (ISAT) obtained from the pre-test and post-test administered to the control and experimental groups. The study's research question was answered using means and standard deviation while Analysis of Covariance (ANCOVA) was used in testing the null hypothesisat 0.05 alpha level of significance.

**Results**

**Research Question One:** What is the difference in the mean academic achievement scores of students taught Islamic Studies using interactive multimedia Instruction and those taught using conventional lecture method?

**Table 1: Descriptive Statistics on the Difference in the Mean Academic Achievement Scores of Students in Experimental and Control Groups**

Group	N	Pre-test		Post-test	
		Mean	S.Dev	Mean	S.Dev
Experimental	30	58.90	13.89	69.12	8.08
Control	30	60.01	12.48	54.16	11.54
Mean Difference		1.11		16.41	

Result in Table 1 shows the difference in pre-test and post-test mean academic achievement scores of JSSIII students taught using interactive multimedia instructional strategy and those taught using conventional lecture method. It indicates that the pre-test mean scores difference of the two groups was 1.11 in favour of the control group. The post-test mean difference between the two groups was 14.96 in favour of the experimental group.

**Null Hypothesis One:** There is no significant difference in the mean academic achievement scores of students taught Islamic Studies using interactive multimedia instruction and those taught using conventional lecture method;

**Table 2: summary of One Way Analysis of Covariance on the Difference in the Mean Academic Achievement Scores of experimental and Control Groups**

Source of Variation	Sum Squares	Df	Mean Squares	F	Sig	Eta Squared
Corrected Model	34432.995 <sup>a</sup>	2	16716.497	328.682	.000*	.698
Intercept	22222.617	1	21222.617	417.282	.000*	.595
Treatment	15132.577	1	14132.577	277.877	.000*	.495
Method	21660.154	1	20660.154	405.233	.000*	.585
Error	15444.002	57				
<b>Total</b>	<b>1171141.000</b>	<b>60</b>				

Significant at  $P < .05$

The results of Table 2 shows that there is significant difference in the mean academic achievement scores of students taught Islamic Studies using interactive multimedia instruction and those taught using conventional lecture method. The calculated F-value 405.233 indicated that method is a significant factor on students' academic achievement at  $P < 0.05$ . The effect size (eta squared = .585) suggests that 59.8% of the difference in academic achievement scores is due to method of teaching. Thus, the null hypothesis is therefore rejected.

**Discussion**

It was found that interactive multimedia instructional strategy enhanced students' academic achievement in Islamic Studies in junior secondary schools in Zaria Education Zone, Kaduna State, Nigeria. The study corroborate those of Salihu, Muhammed and Muhammad (2020); Owolabi and Oginni (2013); Salihu, Abdullahi, Alfa and Muhammed (2015); Cyril (2016); Sani (2019); Reis (2007); Umar, Idris, Audu, Arah, Yusuf and Beji (2016) which indicated the efficacy of interactive multimedia instruction in enhancing students' academic achievement compared to traditional/conventional expository methods.

**Conclusion**

The implication of these results is that interactive multimedia instruction employed for the experimental group enhanced the students' academic achievement in the learning of Islamic Studies than did the control group. Hence, it is inferred that the use of interactive multimedia instruction enhanced students' academic achievement in Islamic Studies in junior secondary schools in Zaria Education Zone, Kaduna State, Nigeria.

**Recommendations**

In the light of the foregoing it is recommended that:

1. There is the need for Kaduna State government to build and equipped computer laboratories in each secondary school in the state. This will assist in effective utilization of interactive multimedia instructional strategy in teaching Islamic studies.
2. Also, there should be training and retraining of teachers on computer applications especially on interactive multimedia instruction for effective service delivery in junior secondary schools Islamic Studies.

**References**

- Cyril, M. U. (2016). Effects of Multimedia Instruction on Retention and Achievement of Basic Machining Skills in Mechanical Craft Practice, *International Journal of Education and Information Technology*, 2, (1), 1-7.
- Ijaduola, U. (2007). *The effect of instructional materials on the learning and teaching of Economics in secondary schools in Nigeria*. Retrieved Jul 12<sup>th</sup>, 2017, from: <http://www.isaet.org/images/extraimages/UH0316011.pdf>
- Mandama, A. (2007). *Situational analysis of the state of instructional materials in Pre-primary schools*. Unpublished B.Ed Project, University of Dar- Es-Salaam.
- Nusir, S. Alsmadi, I. Al- kabi, M. & Shardqah, F. (2011). "Designing an Interactive Multimedia Learning System for the Children of Primary Schools in Jordan", IEEE Global Engineering Education Conference (EDUCON), April 4-6, Amman, Jordan.
- Olayiwola, A. O. (2010). Procedures in Educational Research. Kaduna: KingoNig Ltd.
- Owolabi O. T and Oginni O.I (2014) Effectiveness of Animation and Multimedia Teaching on Students' Performance in Science Subjects. *British Journal of Education, Society & Behavioural Science*. 4 (2)
- Reis, D. (2007). Video-based multimedia designs: A research study testing learning effectiveness. *Canadian Journal of Learning and Technology*, 33(3). <https://files.eric.ed.gov/fulltext/EJ1073880.pdf>
- Salihu, J.J. (2015). *Effects of educational field trips on academic performance of JSS students in social studies in Kaduna state-Nigeria*. Unpublished M.Ed Dissertation, Ahmadu Bello University, Zaria.
- Salihu, J.J, Mohammed, A., & Muhammad, B.I. (2020). Effects of Interactive Multimedia Instruction on Social Studies Students' Academic Achievement and Retention in Junior Secondary School in Zaria Education Zone. *Journal of Information, Education, Science and Technology, Education (JIEST)*. 6, 55- 61
- Salihu, J.J., Abdullahi, M.B, Alfa, M.G & Muhammed, A. (2015). *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 3<sup>rd</sup> International Conference on Enhancing Information Management, Science and Technology Education through Interactive Multimedia and Hypermedia Instruction"organised by School of Science and Technology Education, Federal University of Technology, Minna-Niger State, Nigeria Date: Wednesday 4<sup>th</sup>- 7<sup>th</sup> October, 2015.
- Sani, A. S. (2019). Effects of Multimedia Resources on Pupils Retention and Academic Performances in Social Studies in Giwa Education Zone, Kaduna State, Nigeria. Unpublished M.Ed Dissertation, Ahmadu Bello University, Zaria.
- Umar, I. Y., Idris, A. M., Audu, R., Arah, A. S., Yusuf, E. and Beji, A. A. (2016). *Effects of multimedia instruction on student's achievements and retention in auto-mechanics at technical colleges in Niger State, Nigeria*. <https://staff.futminna.edu.ng/ITE/content/journal/33.pdf>