Effects of Audio-visual Intervention on Basic Science Students' Academic Achievement in Radioactivity at the Junior Secondary Schools in Ibadan Metropolis

Oluwatobi Favour FOLADE
LCU/PG/ 001257

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Certification

This is to certify that this research work entitled Effect of Audio-Visual Intervention on the Teaching of Radioactivity in Basic Science at the Junior Secondary Schools in Ibadan Metropolis was carried out by Oluwatobi Favour FOLADE with Matriculation Number LCU/ PG/ 001257 in the Department of Science Education, Faculty of Arts and Education, Lead City University, Ibadan, Oyo state, for the award of Master Degree in Biology Education.

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Dr. Christianah Sam-Kayode Date
Supervisor

_____ _____

Prof. Philias Olatunde Yara Date
Head of Department

Dedication

This research work is dedicated to God Almighty for his divine inspiration given to me during the course of writing this project and also to my family for their immeasurable support during the entire duration of my studies.

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"Even though the above- mentioned institutions and persons have assisted in the process of this research work, I alone stand responsible for the errors, if any found in the work"

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Abstract

Radioactivity is a topic in Basic science in Junior secondary school that has poised itself as a vague topic to students due to its abstract nature and unavailability of educational materials to teach the topic which in turn leaves the students with partial or no understanding of the topic. This study used a student focused method to facilitate the knowledge of the Radioactivity in order to improve students' achievement in Basic Science. The study was carried out on the "Effects of Audio-visual Intervention on Basic Science Students' Academic Achievement in Radioactivity at the Junior Secondary Schools in Ibadan Metropolis. A 2 x 2 x 2 quasi-experimental design which involved pre-test, post-test and intact group was used for the study. Sixty (60) JSS 2 students were selected from two junior secondary schools. One school was used for treatment and the other school for control. Three hypotheses tested at 0.05 level of significance guided the study. The Basic Science Achievement Test (BSAT)(KR20 = 0.71) was used for data collection. Data were analyzed using mean, standard deviation and ANCOVA. The results revealed that there was a significant effect of audio-visual intervention on the teaching of radioactivity in Basic Science at Junior Secondary schools in Ibadan Metropolis($F=4636.838$, $p = 0.00$); there was no significant effect of audio-visual intervention on the teaching of radioactivity based on gender ($F=2.852$, $p = 0.086$) while there was a significant effect of audio-visual intervention on the teaching of radioactivity based on school type ($F = 20.351$, $p = 0.000$). It was recommended that Basic Science teachers in Junior Secondary schools should adopt the use of audio-visual materials while teaching radioactivity in class for better understanding of the subject matter.

Keyword: Audio-visual materials, Radioactivity, Basic Science, Junior secondary school,

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