

Improving Science Teachers' Level of use of Activity-Based Method in the Teaching of Science in Secondary Schools in Western Senatorial District of Kogi State.

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Abstract: The Study presents improving science teachers level of use of Activity-Based approach in the teaching of Integrated Science in Secondary Schools in western senatorial district of Kogi State. All the fifty Integrated Science Teachers from twelve Junior Secondary Schools in Kogi West were used. Three research questions guided the study. Integrated science teachers awareness questionnaire (ISTAQ) was employed. The result shows that the level of awareness of the teachers was very low. It was then recommended that Activity based method of teaching should be given adequate attention and popularized in teachers education programmes. The findings are discussed with relevant recommendations made.

Key Words: Education, Programmes, Secondary Schools, Activity-Based Method

I. Introduction

The art of teaching is an old educational practice that attracted the attention of great educational philosophers. Teachers had been saddled with the responsibility to teach students in the school system. To this end however, teachers all over the world always look out for the best approach or way of teaching their students to achieve their set behavioural objectives for every lesson. At junior secondary school (JSS) levels, the performances of the students in Integrated Science have always been discouraging. These poor performances seems to be due to some factors like the state of mind, socioeconomic background, at times intelligence and most importantly to methods of teaching the subject.

Activity Based Approach to Science

Activity- based approach is an approach or method whereby students are opportune to participate actively in the teaching-learning process. Activity-based approach is characterized by students engaging in science process and manipulating experimental materials. The core of this approach is the involvement of students in learning activities that would arouse and sustain their interests as well as achieve effective learning and enhance understanding of the learners. This approach allows free flow of information between the teacher and the students. It allows for the use of the five senses in learning unlike the lecture approach which allows for only the hearing and seeing alone. Activity-based approach removes boredom and encourages long retention in learners.

Statement of the Problem

Integrated science is a skill oriented course and it is expected of the students who study the subject to acquire basic skills that will make them employable or self-reliant. As ascertained by Idiaka (1997) Integrated science happens to be one of the subjects which cannot be adequately imparted without proper instructional facilities and equipment. It has been observed that most of the students of Integrated science have not acquire enough skills to enable them to be self-reliant (Odukwe, 2003).

Objectives of the Study

Generally, the purpose of the study is to find out how Activity-based approach can improve Integrated Science teaching for effective skills acquisition. Specifically, the study intend to;

- i. Find out how activity-based method can lead to effective skill acquisition in Integrated Science
- ii. Identify the level of preparedness of teachers in the use of activity-based method
- iii. Find out level of involvement of science teachers in the use of activity-based method

Significance of the Study

The study would highlight the need for proper establishment of activity-based method in teaching integrated science to enhance skill acquisition. It would also create awareness in students on the need to be fully integrated and involved in practical. This would help the science teachers to improve in quality of their instruction.

Research Questions

1. Are Integrated Science teachers aware of activity-based approach as teaching tool?
2. What is the level of use of activity-based method by integrated science teachers?
3. What are Integrated Science teachers perception about its effectiveness in integrated science teaching?

II. Research Method

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Research Design

The method of investigation was purely inductive.

Area of Study

The study was conducted in secondary schools in Kogi West Local Government Area of Kogi State.

Population

The population used for the study was fifty (50) Integrated Science teachers from Junior Secondary School located in Kogi West Local Government Area of Kogi State. The teaching experience of teachers ranges from 5 to 20years. The teacher's qualification ranged from N.C.E to B.SC Education, some of them also have M.Ed/or PGDE degrees.

Instruments for the study

Integrated Science teachers' awareness questionnaire (ISTAQ) and interview was used to collect data for the study. The ISTAQ was divided into three sections. Section A contain information on respondents bio-data, Section B contain different methods for teaching Integrated Science and some problems of teaching Integrated Science while Section C contain specific questions on the awareness of Activity- based as a teaching method. It also contained questions on the preparedness of the teachers in using it in their classrooms.

The structured interview was used for the teachers who showed a good level of awareness on their perception of the method in terms of its effectiveness.

Data Collection

The Integrated Science teacher awareness questionnaire was administered to fifty (50) Integrated Science teachers. The data to be generated from the instrument was analysed using tables and percentages.

Validity of the Instrument

The instrument was given to two experts in integrated science for face validation and correction to be effected.

III. Data Presentation and Analysis

Research question 1: Are integrated science teachers aware of activity-based method as a teaching tool? The analysis of data collected from the ISTAQ revealed that out of the 50 respondents, 42 respondents indicated that they did not know anything about activity –based method and they left all questions pertaining to the use of and effectiveness of the method unanswered while the remaining 8 indicated various degree of awareness of the method, see table below;

Awareness	No of Teachers	Percentage (%)
Awareness of Activity- Based	8	16
Not Aware	42	84
Total	50	100

Research Question 2: What is the level of use of activity-based method by integrated science teachers? Their responses are presented in the table below:

Table 2: Integrated Science Teacher's use of Activity-based method

Level of Use	No of Teacher	Percentage (%)
Not Used	50	100%
Occasionally Used	0	0%
Often Used	0	0%
Only When Necessary	0	0%
Total	50	100%

All the teachers (100%) indicated that though they have heard about the method, they have never used it before.

Research Question 3: What are integrated science teachers perception about the effectiveness of Activity- Based method in integrated science teaching?

The integrated science teacher could not say whether the method is effective or not since they have never used it before.

IV. Recommendation

On the basis of the findings of this study, it was recommended that;

- Teachers of Integrated Science should make use of Activity-Based method in the teaching of Integrated Science
- All Integrated Science teachers should be given adequate orientation through workshops and seminars and in – service training to update their knowledge on activity-based method in the teaching of integrated science
- The activity – based method of teaching should be given adequate attention and popularized in teacher education programmes and through in-service training
- Government should properly fund integrated science education in secondary schools.

V. Conclusion

Based on the analysis of data and interpretation of results, the following conclusion could be drawn from this study;

The degree of awareness of activity – based method is highly negligible. That is, one can conveniently say that integrated science teachers are not aware of the method as a tool in effective teaching and learning of integrated science. This implies that some of the teaching tools like the constructivist teaching models, if included in the methodology courses at the teachers education level will be highly acceptable by the teachers. Even for those that are in service training so that they can familiarize themselves with the new method that can be used to improve the teaching and learning of integrated science in such a way that teachers will not be tagged as being professionally incompetent.

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