

EVALUATION OF THE IMPLEMENTATION OF QUALITY ASSURANCE IN CHEMISTRY TEACHING IN SECONDARY SCHOOLS IN DELTA CENTRAL SENATORIAL DISTRICT

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Abstract

The study focused on the evaluation of the implementation of quality assurance in chemistry teaching in secondary schools in Delta Central Senatorial District. The study employed a descriptive survey design. The population of the study consists of 174 chemistry teachers in Delta Central Senatorial District. 174 chemistry teachers selected from 179 public secondary schools in Delta Central were used as sample for the study. A questionnaire was the instrument used for data collection. The reliability of the instrument was established using Cronbach Alpha which yielded coefficient index of 0.88. The data obtained were analyzed using mean and standard deviation. The results showed that chemistry teachers seldom use appropriate teaching methods recommended for use in the chemistry curriculum; chemistry teachers often use the recommended evaluation techniques in assessing students; secondary school libraries have developed to a fair level; school principals occasionally inspect chemistry teachers during classroom teaching. The study finally revealed that lack of transport facilities for inspectors, incomplete information from head teachers, inadequate instructional materials, infrastructures and lack of in-service training for teachers are major factors affecting the effective implementation of quality assurance in the teaching and learning of chemistry.

Introduction

Education is the acquisition of knowledge, skills and attitude by an individual in order to effectively adapt to his/her society and contribute to the development of the society. Education fosters socio-economic development all over the world. Nations and individuals all over the world now agree that the way out of series of bondages plaguing them is through education (Gbenu, 2012). Some scholars define education as the transmission of life by the living to the living.

In many developed countries of the world, science, technical and vocational education is the major form of education that has transformed their economies with modern facilities provided to effect the required change. It has been found that the major cause of difference between economies of developed and developing countries lies in the quality and quantity of education offered (Gbenu, 2012).

Chemistry is one of the Senior Secondary School subjects taught in Nigeria and is integral to science curriculum. Chemistry is concerned with the composition and structure of matter and the forces that hold structures together (Ovie, 2020). Poor performance in chemistry today may be attributed to poor implementation of quality assurance in the teaching and learning process.

Research Questions

1. What is the teachers' level of compliance with the appropriate teaching methods recommended for use in the chemistry curriculum?
2. What evaluation techniques are used by chemistry teachers in assessing their students?
3. What are the factors militating against the effective implementation of quality assurance in the teaching and learning of chemistry?

Methodology

The study adopted descriptive survey design. The population consisted of 174 chemistry teachers across 179 public secondary schools in Delta Central Senatorial District.

Total enumeration sampling technique was used. The instrument for data collection was a 61-item questionnaire titled "Evaluation of the Implementation of Quality Assurance Indices in Senior Secondary School Questionnaire (EIQAISSSQ)" adapted from Ifeobu (2014). Face validity was established by three experts. Reliability was determined using Cronbach Alpha which yielded 0.88. 174 copies of the questionnaire were administered and collected immediately after completion. Data were analyzed using mean and standard deviation with 2.50 as benchmark for decision-making.

Results

Table 1: Teachers' Compliance with Recommended Teaching Methods (N=174)

Teaching Method	Mean	SD	Decision
Laboratory practical method	2.21	0.74	Seldom Used
Inquiry-based learning	2.18	0.69	Seldom Used
Guided discovery	2.33	0.71	Seldom Used
Problem-solving	2.41	0.77	Seldom Used
Demonstration	2.46	0.73	Seldom Used

Grand Mean = 2.32 (Seldom Used)

Table 2: Evaluation Techniques Used by Chemistry Teachers (N=174)

Evaluation Technique	Mean	SD	Decision
Continuous assessment	3.12	0.66	Often Used
Written tests	3.28	0.59	Often Used
Practical assessment	2.87	0.72	Often Used
Assignments/projects	2.76	0.81	Often Used
Oral questioning	2.68	0.75	Often Used

Grand Mean = 2.94 (Often Used)

Table 3: Factors Militating Against Quality Assurance Implementation (N=174)

Factor	Mean	SD	Decision
Lack of transport facilities	3.41	0.63	Major Factor
Incomplete information	3.02	0.70	Major Factor
Delay in action on recommendations	2.88	0.76	Major Factor
Inadequate instructional materials	3.36	0.68	Major Factor
Inadequate infrastructure	3.44	0.61	Major Factor
Lack of in-service training	3.27	0.73	Major Factor
Unavailability of lab/library	3.39	0.65	Major Factor

Grand Mean = 3.25 (Major Factor)

Conclusion

The implementation of quality assurance in chemistry teaching in secondary schools in Delta Central Senatorial District was only fairly achieved. While evaluation techniques were often used, compliance with recommended teaching methods and infrastructural provisions were weak.

Recommendations

1. Government should periodically revise and strengthen quality assurance implementation.
2. Adequate supervision of chemistry teachers should be carried out regularly.
3. Government should provide adequate transport facilities, instructional materials and infrastructure.
4. Regular in-service training should be organized for chemistry teachers.
5. Functional chemistry laboratories and libraries should be provided.

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