PERCEIVED STRATEGIES FOR ENHANCING QUALITY ASSURANCE ON SECONDARY SCHOOL PHYSICS TEACHERS IN KOGI EAST EDUCATIONAL ZONE

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ABSTRACT

Quality assurance entails the systematic review of educational provision to maintain and improve its quality, equity and efficiency. It involves self-evaluation, external evaluation, staff evaluation, student evaluation and school evaluation. The purpose of the study was to investigate strategies for enhancing

INTRODUCTION

The idea of quality in education entails quality of educational input, process, content and output. Quality is seen as baseline standard in education, which can be measured on a scale of preference. In the context of teaching and learning, quality refers to acquisition of concepts, abilities, competences, attitudes and values to such an extent that a failure to meet the designated standards indicates a lack of quality (Balarabe, 2009). Quality assurance in physics education is essential for ensuring that students receive effective instructions and are adequately prepared for

quality assurance in physics education in Kogi East Educational Zone. The study adopted descriptive survey research design. The population for the study comprised all the physics teachers in Kogi East. The sample size for the study consisted of 120 physics teachers which were selected from private and public co-educational secondary schools in the study area using random sampling technique. Two research questions and two hypotheses guided the study. The instrument used for collection of data was a structured questionnaire, titled: Physics Education Quality Assurance Questionnaire (PEQAQ), which was developed by the researcher and validated by experts. The reliability index of the instrument using Cronbach Alpha yielded 0.69. The data collected were analyzed using descriptive and inferential statistics. Findings revealed among others that ensuring functional quality assurance mechanisms in secondary schools in Kogi East provided positive feedback to educational management to enhance performance. Based on the findings, the following recommendation was made. Develop and implement targeted professional development programmes in Kogi State, focusing on research-based quality assurance, strategies and contextualized to address local challenges and needs.

Keywords: Strategy, Quality Assurance, Physics Teachers.

future academic professional endeavours. Quality assurance is an organizational process of ensuring that the products or services it renders meet the acceptable quality standards. Quality assurance in secondary school setting entails avoidance of failure through proper planning, execution, monitoring and evaluation using laid down standards and objectives for sustainable educational development (Shuturaev, 2021).

The fundamental objectives of excellent education is to effectively transmit information, skills and values to learners, enabling them to effectively address personal and societal challenges within their country, state or region. Nigeria, like other developing countries of the world recognizes that education is the major instrument for effecting technology, social, economic, military and

political development goals (Federal Republic of Nigeria [FRN], 2014) which can fully be attained if quality assurance is rendered from the grassroots (primary, secondary and post-secondary) educational system. Osai and Nwalado (2017) observe that education is a significant instrument for imparting positive changes in the society. Osai and Nwalado stressed further that education does not only develop the personality of the recipients, but the quality that would enable them perform notable functions that will help them achieve self-reliance in decision making.

Promoting the right quality education in institutions of learning has become one of the core issues in the on-going educational reforms worldwide, championed by United Nation Educational Scientific and Cultural Organization (UNESCO) that education should not just be only accessible to all but also the right quality of it be made available as documented by Imhangbe et al. (2020), Vaccari and Gardinier (2019). As stated by National Policy on Education (FRN, 2014) no educational system can rise above the quality of its teachers as they form the major input factors to the quality of education. Therefore, the quality of standard of secondary school physics teachers should not be over-emphasized.

Quality assurance according to Agu and Okeke (2018) is an organizational process of ensuring that the products or services it renders meet the acceptable quality standards. In the work of Isa and Jailani (2014) quality assurance is conceptualized as synonymous to excellence, efficiency, relevance and worthiness as measured against a set standard. When applied to physics education, it is the process with which an institution provides the enabling environment and input for students to effectively achieve worthwhile or desirable academic goals. Quality assurance in school setting is made possible through proper planning, execution, monitoring and evaluation using set standards and objectives (Fasanya, et al., 2023). The process of quality supervision, monitoring, management of human and material resources lead to quality physics education, which is represented by acquisition of physics concepts, skills, competences and values.

Quality assurance serves as an indispensable component of quality control strategy in secondary educational system to improve performance of teachers

in teaching and evaluation of students. According to Nwabueze et al. (2017) teachers' functional performance encompasses effective teaching, lesson note preparation and delivery, good classroom management, effective use of scheme of work, effective supervision, monitoring of students' work and disciplinary ability. Unfortunately, the poor quality assurance practices in most secondary educational system, especially in Kogi State have threatened the successful performance of the teaching staff. On the basis of this, Ekpo and Asuquo (2020), Okeke and Edikpa (2015) commenting over the low level of quality assurance effectiveness in public secondary and tertiary educational system stated that situation today has greatly eroded the main focus of establishing the system such that most students only crave for certification when actually they do not acquire the knowledge. Quality assurance is therefore, needed to evaluate the efficiency and appropriateness of teaching and learning of physics in secondary schools to ensure high quality delivery and career development and in-service for teachers (Ogunmode & Adanna, 2022).

Physics education plays a vital role in the effective pursuit and attainment of overall growth and technological advancement of any nation. Therefore, if Nigeria as a nation is to achieve competitive growth and technological advancement, the quality and type of her physics education system must be attained and sustained. The quest for a sustained high quality technological education in Nigeria may not yield positive results if there is no corresponding functional and effective quality assurance in physics education right from secondary schools. This forms the focus of this study.

In most secondary schools in Kogi East Educational Zone, there are numbers of students in crowded classrooms where inadequate and obsolete facilities with disillusioned teachers as well as principals seem to lack the ability and willingness to exhibit practices which would help in proper management of instructional leadership. These combined deficiencies according to Ogunmode and Musa (2020), Isa and Jailani (2014) form a major gap in the quality of teaching and learning, thereby preventing the educational system from getting the best out of its efforts to achieve the required level of attainment in secondary schools. This poses a challenge to physics teachers, principals and external evaluators (Adekunle, 2016). That is why Agu and Okeke (2018) posit

that many students who graduated from secondary schools can neither usefully live in the society nor endeavour to move to higher institution due to poor quality assurance effectiveness in areas such as teaching-learning process. This dwindling nature of quality assurance should be urgently checked so that the society will not be breeding highly trained criminals and girls of easy virtue.

Enhancing quality control requires some basic administrative measures which serve as determinants of quality assurance and performance in school system. These measures according to Usman (2020) are: the quality and content of instruction and curriculum; the quality of students' intakes; the quality of instructional materials such as classrooms, libraries, laboratory, student-teacher ratio and work load; the quality of monitoring supervision among others. On the basis of this, there is need to re-evaluate the present examination-oriented educational system, because value system on certificates without adequate skills contributes greatly to examination malpractices.

Quality assurance in areas such as examination administration, teaching-learning process, records-keeping, supervision and proper maintenance of facilities seems to have suffered some attendance consequences such as ineffective leadership skills in implementing true examination policies without bias, haphazard record of data and inequitable assignment of tasks to teachers. This ineffective supervision in educational system make many teachers indulging in various forms of unprofessional attitudes such as lateness to work, trading during school hours, absenteeism, ineffective use of lesson notes during classroom instruction, aiding and abetting examination malpractices, especially during external examinations to give a false impression of high performance in school (Ekpo & Asuquo, 2020; Ojedokun & Aladejana, 2012).

In view of above, it appears that public secondary schools in Kogi East Educational Zone are not living up to expectation in discharging its statutory obligations as it relates to quality assurance. This is due to the researcher's observation with dismay the poor performance of some teachers in classroom activities, general teaching and learning process as well as poor performance of students in external examinations. This may be due to factors such as willful

attitude of physics teachers towards facility management and reluctant to embrace new teaching methods (Aluede et al., 2020).

In spite of societal demand for quality assurance in educational system, there is a growing concern for realization of secondary school objectives due to doubts about effective instructional supervision by principals and external evaluators in Kogi East Educational Zone. Many principals seem to give little or no attention to instructional supervision and external evaluators are few and irregular in their visits especially in secondary schools in rural areas. This study therefore focused on perceived strategies for enhancing quality assurance on secondary school physics teachers in Kogi East Educational Zone of Kogi State.

Purpose of the Study

The main purpose of the study was to examine some perceived strategies for enhancing quality assurance on Physics teachers in senior secondary schools in Kogi East Educational Zone. The study was designed to achieve the following specific objectives. To:

i)   find out factors affecting quality performance of public and private senior secondary school Physics teachers in Kogi East Educational Zone of Kogi State.

ii)   find out strategies for enhancing public and private senior secondary school physics teachers quality performance in Kogi East Educational Zone of Kogi State.

Research Questions

The following research questions were generated to guide the study:-

i)   1. What are the factors affecting quality performance of public and private senior secondary school physics teachers in Kogi East Educational Zone of Kogi State?

ii)   2. What are the strategies for public and private senior secondary school Physics teachers' quality performance in Kogi East Educational Zone of Kogi State?

Hypotheses

The following hypotheses were formulated and tested at 0.05 level of significance.

1. There is no significant difference between the mean responses of public and private senior secondary school Physics teachers on the factors affecting quality performance.

2. There is no significant difference between the mean responses of public and private senior secondary school Physics teachers on strategies for teachers' quality performance in Kogi East Educational Zone of Kogi State.

Methodology

The study adopted descriptive survey design. The population for the study was all the physics teachers both in public and private senior secondary schools in Kogi East. The sample size for the study was 60 physics teachers, which consisted 30 from public senior secondary school and 30 from private secondary school using simple random sampling technique. The instrument for data collection was a structured questionnaire titled: Quality Assurance in Physics Education Questionnaire (QAPEQ), which was validated by experts. The modified Likert Scale of Strongly Agree (SA) = 4, Agree (A) = 3, Disagree (D) = 2 and Strongly Disagree (SD) = 1 for positive statements, but reversed for negative statements was adopted for the study. The reliability coefficient of the instrument was carried out using Cronbach Alpha reliability index method. The reliability index of the instrument was 0.69. Descriptive statistics (mean and standard deviation) was used to answer the research questions. In testing the hypotheses, t-test was used at 0.05 level of significance.

Presentation of Results

Research Question 1: What are the factors affecting quality performance of public and private senior secondary school physics teachers in Kogi East Educational Zone?

Table 1: Mean Ratings of Factors Affecting Public and Private Physics Teachers on Quality   Performance

S/N	Factors	Public Mean	St.D	Private Mean	St.D	Ave/Dec
1	Low quality of instructional materials.	2.96	1.06	3.16	0.98	3.06/Agreed
2	Non-payment salary/remuneration of Physics teachers.	3.26	0.88	3.16	0.91	3.19/Agreed
3	Lack of motivation of Physics teachers reduces the zeal of physics teachers.	3.06	0.81	2.65	1.02	2.86/Agreed

4	Excess workloads for Physics teachers	3.10	0.79	2.87	1.01	2.99/Agreed
5	Lack of quality assurance mechanism in senior secondary schools	3.18	0.89	3.21	0.66	3.19/Agreed
6	Government policy	3.20	0.82	2.88	0.71	3.04/Agreed
	Aggregate mean scores & standard deviation	**3.13**	**0.89**	**2.98**	**0.88**	**3.06/Agreed**

The results in table 1 revealed that the mean scores of all the six items were above the criterion mean score of 2.50. This implies that the aforementioned items are factors affecting public and private senior secondary school Physics teacher quality functional performance in Kogi East Educational Zone of Kogi State.

Research Question Two: What are the strategies for public and private senior secondary school Physics teachers for enhanced quality performance in Kogi East Educational Zone of Kogi State?

Table 2: Mean Ratings of Public and Private Senior Secondary School Physics Teachers on the Strategies for Enhanced Quality Performance.

S/N	Strategies	Public		Private		Average	Decision
		Mean	St.D	Mean	St.D		
7	Provision of quality assurance mechanism in secondary schools by the school administrators	3.72	0.62	3.28	0.71	3.50	Agreed
8	Sponsoring both public and private physics teachers on external workshops, conferences, seminars among others by school administrators.	3.11	0.69	3.41	0.49	3.26	Agreed
9	Regular reward/reinforcement of physics teachers with outstanding performances.	3.51	0.48	3.13	0.81	3.72	Agreed
10	Reduction of excessive workloads	2.98	1.21	3.07	0.48	3.03	Agreed
11	Adequate provision of high quality instructional materials.	2.66	1.22	3.09	0.91	2.88	Agreed
12	Regular free flow of information between school administrators and Physics teachers.	2.76	1.26	3.03	0.97	2.90	Agreed
	Aggregate mean scores & standard deviation	**3.11**	**0.91**	**3.10**	**0.68**	**3.11**	**Agreed**

Table 2 revealed the mean and standard deviation of public and private secondary school physics teachers on the strategies for enhancing quality

performance in Kogi East Educational Zone of Kogi State. The respondents agreed on all the items with mean scores above the mean criterion of 2.50. From the analysis, the aggregate mean scores of 3.11 with standard deviation of 0.91 and 3.10 with standard deviation of 0.68 for public and private secondary school Physics teachers indicated that the respondents agreed on the items in Table 2. Hence, the strategies for enhancing quality performance of public and private secondary school Physics teachers include: provision of functional quality assurance mechanism by school administrators, sponsoring of physics teachers on external conferences or workshop, regular reward/reinforcement of Physics teachers with outstanding performance among others.

Testing of Hypotheses
Hypothesis One: There is no significant difference between the mean responses of public and private secondary school Physics teachers on the factors affecting quality performance in Kogi East Educational Zone of Kogi State.

Table 3: Analysis of t-test on Factors Affecting Performance.

Variable	N	Mean	St.D	Df	t_{cal}	t_{cri}	Decision
Public Phy Tr.	30	3.13	0.89				
				58	0.658	1.672	Accepted
Private Phy. Tr	30	2.98	0.88				

Table 3 revealed the analysis of t-test on the difference between the mean responses of public and private secondary school Physics teachers on the factors affecting quality performance in Kogi East Educational Zone of Kogi State. The analysis indicated that the t-calculated value of 0.658 is less that the t-critical value of 1.672. Hence the null hypothesis was accepted. This implies that there is no significant difference between the mean responses of public

and private secondary school physics teachers on the factors affecting quality performance in Kogi East Educational Zone of Kogi State.

Hypothesis Two: There is no significant difference between the mean responses of public and private physics teachers on the strategies for enhancing quality performance in Kogi East Educational Zone of Kogi State.

Table 4: Analysis of t-test on Strategies for Enhancing Quality Performance

Variable	N	Mean	St.D	Df	t_{cal}	t_{cri}	Decision
Public Phy Tr.	30	3.11	0.91				
				58	**0.048**	**1.672**	Accepted
Private Phy. Tr	30	3.10	0.68				

Table 4 revealed the analysis of t-test on the difference between the mean responses of public and private secondary school physics teachers on strategies for enhancing quality performance in Kogi East Educational Zone of Kogi State. The analysis indicated that the t-calculated value of 0.048 is less that the t-critical value of 1.672. Hence the null hypothesis was accepted. This implies that there is no significant difference between the mean responses of public and private secondary school physics teachers on the strategies for enhancing quality performance in Kogi East Educational Zone of Kogi State.

Discussion of Findings

In response to research question one, it was revealed that the factors affecting quality performance of public and private secondary school physics teachers in Kogi Esat Educational Zone of Kogi State include: lack of quality assurance mechanisms in secondary schools, low quality of instructional materials, non-payment of salary/remuneration of physics teachers, educational policy among others. The test of hypothesis equally revealed that there is no significant difference between the mean responses of public and private secondary

school physics teachers on the factors affecting quality performance in secondary schools in Kogi East Educational Zone of Kogi State. This indicates that both the public and private secondary school physics teachers agreed to the items positively as factors affecting quality performance of physics teachers in Kogi East Educational Zone. The findings from the study are in agreement with Ajeet and Sadhana (2013) who identified poor working conditions, non-payment of salary, work overload, among others as factors that affect quality performance of teaching staff in secondary schools.

In response to research question two, it was equally revealed that the strategies for enhancing quality performance of Physics teachers in secondary schools in Kogi East Educational Zone of Kogi State include: provision of quality assurance mechanisms in secondary schools, sponsoring Physics teachers on external workshops, conferences, seminars, regular reward/reinforcement of Physics teachers with outstanding performance among others. The test of hypothesis in Table 4 revealed that there is no significant difference between the mean responses of public and private physics teachers on the strategies for enhancing quality performance in Kogi East Educational Zone of Kogi State. The respondents agreed on all the items positively indicating that the items are positive strategies for enhancing the performance of secondary school physics teachers in Kogi East Educational Zone of Kogi State. The findings confirmed the studies of Shaturaev (2021), Ogunmode and Akinlade (2021), who revealed that engaging teachers in external conferences, workshops, seminars among others are strategies for enhancing quality performance of teachers in Nigeria institutions. In view of this, quality assurance forms an input for productive processes within educational system, which in turn enhances functional performance of the teaching staff as well as students' productivity.

Conclusion

The study had revealed that achieving quality assurance in school system would help in the realization of educational goals and objectives. Therefore, there is need to maintain quality in schools so as to improve the academic functional performance of staff as well as ensuring that the quality of graduates is assured. To achieve this, special allowances should be given to

Physics teachers. There is also the need for adequate supply of high quality instructional materials in schools. More so, utilizing varied and reliable assessment methods ensure the accuracy evaluation of students understanding and proficiency in physics concepts.

Recommendations

On the basis of the findings from the study, the following recommendations were provided.

1. Develop and implement targeted professional development programmes in Kogi State, focusing on research-based quality assurance, strategies and contextualized to address local challenges and needs.

2. Establish a mentorship programme pairing experienced and novice Physics teachers in Kogi State, to foster knowledge sharing, collaborative planning and support for effective quality assurance practices.

3. Conduct regular school-based monitoring and evaluation of Physics education programme in Kogi State, using data-driven approaches to identify areas for improvement and inform evidence based-decision making

4. Collaborate with stakeholders including teachers, school administrators, policymakers and community members to develop and implement framework for Physics education in Kogi State aligned with national and global best practices.

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