SUPERVISION OF INSTRUCTION FOR QUALITY ASSURANCE IN EFFECTIVE TEACHING OF MATHEMATICS AMONG SECONDARY SCHOOL TEACHERS IN ENUGU STATE

by

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Abstract

The purpose of the study was to determine the extent to which supervision of instruction is important in maintaining quality assurance in effective teaching of Mathematics among Secondary School Teachers in Enugu East LGA in Enugu State. Two research questions and one hypothesis guided the study. Descriptive survey design was used. The sample of the study was 172 Mathematics teachers. This comprised of 111 experienced and 61 less experienced Mathematics teachers. Data for the study was collected using 9-item researcher-made questionnaires. The reliability of the instrument was 0.68 using Cronbach Alpha. Mean and Standard deviation were used to answer the research questions; t-test was used to test the hypothesis at 0.05 level of significance. The finding showed that Mathematics teachers consider supervision of instruction important in maintaining quality assurance in Mathematics teaching in secondary schools. Experienced and less experienced Mathematics teachers each agreed that supervision of instruction is important in ensuring quality assurance for effective teaching of Mathematics. It was recommended that both Ministry of Education and PPSMB should continue to maintain the temp of supervision in secondary schools and if possible increase its rate.

Introduction

Quality assurance is essential in everything that is worth doing well especially in teaching and learning. Ikonta, Bakare, Onyena and Uzoko (2011) defined quality assurance as the complete process of ensuring that the nature and quality of services are adequate to secure the institution's aims and objectives. The major purpose of an educational institution is centered on how to enhance its facilities students and staff welfare so as to produce competent students. Ezeani and Agu (2015) pointed out clearly that quality of education means the worthy of education with reference to its input, the teaching and learning process and its output or the outcome of learning.

According to Okeke (2015, quality assurance is a systematic management and assessment procedures adopted by an institution and system so as to monitor performance against objectives and to ensure achievement of quality output and quality improvement. Federal Government of Nigeria (FGN 2014) stipulated that quality assurance can be ensured through regular and continuous supervision of instruction and other educational services.

In other words, quality assurance in teaching and learning can be regarded as a process of improving the quality of teaching and learning for quality output by employing hands that are within or outside the school. Consequently, one can deduce that the ultimate aim of quality assurance is to enhance quality. It is a known fact that the educational system is only as good as the quality of its teachers. Hence, to improve any educational system, the quality of teachers must be improved. To improve the quality of teachers, supervision of instruction is seriously needed. In other words, to enhance the teaching effectiveness of teachers, a supervisory body needs to supervise teachers, including Mathematics teachers Obodo (2015) defined teaching effectiveness as the type of teaching characterized by the exhibition of intellectual, social and emotional stability, love for children and positive disposition towards the teaching profession and ability to inspire good qualities in students.

Mathematics is one of the subjects taught in Secondary Schools. It is offered as a compulsory

subject. In order to obtain quality Mathematics instruction, there is need for proper and effective supervision of instruction. One of the best ways to ensure quality assurance in Mathematics teaching and learning is to supervise Mathematics teaching and learning regularly. Ugwuanyi (2016), noted that Mathematics has both unilateral and technological importance in the process of the development of any nation. Consequently, effective teaching of Mathematics through proper supervision of Mathematics instruction should be intensively pursued in order to produce high quality students and thus ensuring quality assurance. There are male and female teachers that teach Mathematics. This suggests that effective teaching of Mathematics may vary according to gender. Hence, the need arose to examine the impact of supervision of instruction in maintaining quality assurance in effective teaching of Mathematics in Secondary Schools.

PURPOSE OF THE STUDY

The purpose of the study was to ascertain the extent to which supervision of instruction is important in maintaining quality assurance in effective teaching of Mathematics among Secondary School teachers in Enugu East LGA of Enugu State. Specifically, the study examined the extent to which:

1. Supervision of instruction is important in Secondary School Mathematics teaching in Enugu East LGA of Enugu State.
2. Supervision of instruction is important in maintaining quality assurance in effective teaching of Mathematics among experienced and less experienced teachers in Enugu East LGA of Enugu State.

RESEARCH QUESTIONS

The following two research questions guided the study.

1. To what extent is supervision of instruction important in Secondary School Mathematics teaching in Enugu East LGA of Enugu State?
2. To what extent is supervision of instruction important in maintaining quality assurance in Mathematics teaching among experienced and less experienced teachers in Enugu East LGA of Enugu State?

HYPOTHESIS

One null hypothesis guided the research:

1. There is no significant difference between the mean scores of experienced and less experienced Mathematics teachers on the extent to which supervision of instruction is important in maintaining quality assurance in Mathematics teaching in Enugu East LGA of Enugu State.

METHODOLOGY

This research utilized the descriptive research design. Nworgu (2006) defined descriptive survey as a research that aims at gathering data on and describing in a systematic manner, the characteristic feature of a defined population. The population of the study was 172 Mathematics teachers teaching in all the Secondary Schools in Enugu East LGA of Enugu State. Out of the 172 Mathematics teachers, 111 are experienced while 61 are less experienced. Because the population was small, the entire population was used as sample. Hence, there was no sampling at all. Data for the study was gathered utilizing a researcher-made questionnaire. The questionnaire was structured on four-point Likert scale of very great extent (VGE), great extent (GE), low extent (LE) and very low extent with nominal values of 4,3,2 and 1 assigned to them respectively. The bench mark was tagged at the average of 2.50. Hence, items that have mean value of 2.50 and above was interpreted as great extent while those below 2.50 were interpreted as low extent. A total of 172 questionnaires were administered to the respondents. Mean and Standard deviation

were used to answer research questions 1 and 2; t-test was used in testing the hypothesis at 0.05 significant levels. The Cronbach Alpha reliability, index of the instrument was 0.68. This is considered as highly reliable instrument.

RESULTS

The results of the study are shown in tables with regards to the research questions and hypothesis.

Table 1: Mean scores and Standard Deviation of Mathematics Teachers on Importance of Supervision due to Experience.

Supervision of instruction is important in Mathematics teaching because of the following reasons:

	Overall Experienced						Less Experienced		
S/N	DESCRIPTION	$\overline{X}$	SD	DEC	$\overline{X}$	SD	DEC	$\overline{X}$	SD	DEC
1	It provides professional data/information to teachers in order to improve quality assurance	3.21	0.34	GE	3.30	0.26	GE	3.12	0.4	GE
2	It helps to enhance the incompetent teachers for a better quality	3.00	0.52	GE	3.00	0.48	GE	2.90	0.58	GE
3	It helps to ascertain the special abilities possessed by Mathematics teachers	3.44	0.26	GE	3.55	0.21	GE	3.33	0.34	GE
4	It is a necessity in improving quality assurance	3.61	0.30	GE	3.69	0.26	GE	3.53	0.40	GE
5	It helps one to find out the performance of Mathematics teachers	2.96	0.71	GE	3.02	0.65	GE	2.90	0.82	GE
	Grand Total	**3.24**	**0.42**	**GE**	**3.31**	**0.32**	**GE**	**3.16**	**0.51**	**GE**

Table 1 shows that in answer to research question 1, the respondents responded great extent in all the 5 items. Experienced Mathematics teachers responded great extent in all the 5 items. Inexperienced Mathematics teachers responded great extent in all the five items.

The result for the hypothesis is shown in Table 2.

Table 2: T-test Result for Experienced and Inexperienced Mathematics teachers on importance of Supervision of Instruction.

Type of Teachers	Mean	SD	n	df	T-cal	T-crit	Dec
Experienced	3.24	0.42	111	171	1.05	1.96	NS
Less Experienced	3.16	0.51	61				

Table 2 shows that the t-calculated value of 1.05 is less than the t-critical value of 1.96. Hence, the null hypothesis is rejected. This means that there is no significant difference between the mean scores of experienced and inexperienced Mathematics teachers on the extent to which supervision of instruction is important in maintaining quality assurance in Mathematics teaching in Enugu East LGA of Enugu State.

DISCUSSION OF FINDINGS

The results for research question 1 show that Mathematics teachers in general agreed with all the five reasons/items on the importance if supervision of instruction in the process of teaching and learning of Mathematics. This agrees with Okeke (2015) that supervision enhances quality assurance in schools. This suggests that Mathematics teachers enjoy supervision of instruction and that they benefit immensely from such supervision exercises. In other words, more supervision of instruction should be given to Mathematics teachers in order to help enhance quality assurance in Mathematics teaching. Supervision of Mathematics instruction in Secondary Schools should be more regular in secondary schools than the present rate of instructional supervision. The finding also showed that experienced and less experienced respondents responded great extent in each of the five reasons why supervision of instruction is important in ensuring quality assurance in teaching of Mathematics in Secondary Schools. Their finding agrees with the finding of Ikonta, Bakare, Onyena and Uzoka (2011) that experience is not a factor in ensuring quality education in schools. Hence, this implies that experienced as well as less experienced teachers considers supervision very important in ensuring high quality of teaching in schools.

CONCLUSION

From the findings of the study, the researcher concluded that Secondary School Mathematics teachers regard supervision of instruction important in ensuring high quality assurance in teaching Mathematics. Urban as well as rural Mathematics teachers concur that supervision of instruction is important in ensuring quality assurance in Mathematics teaching.

RECOMMENDATIONS

The following recommendations were made based on findings:

1. Both the Ministry of Education and its supervising agency such as the Post Primary Schools Management Board (PPSMB) should continue to maintain the tempo of current supervision of Secondary School Schools, and if possible, increase the rate of supervision.

2. Equal attention and emphasis should be given by Supervisors in supervising Secondary Schools in urban and rural areas. No preferential treatment should be given.

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