IMPACT OF TEACHERS' INSTRUCTIONAL TASK PERFORMANCE ON STUDENTS' ACADEMICACHIEVEMENT IN BASIC TECHNOLOGY IN SECONDARY SCHOOLS IN GUSAU, ZAMFARA STATE

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Teachers instructional task performance is a vital determinant of students' academic achievement. Therefore, the creativity and innovative skills of thetechnology teachers in instructional delivery process impacts on the students' academic performance. The study assessed the impact of teachers' instructional task performance on students' academic achievement in basic technology in secondary schools in Gusau, ZamfaraState. Two research questions and one hypothesis were formulated to guide the study. The population consistsof four principals, eight teachers and 120 students which gives a total of 132 respondents,sampled from government secondary schools in Gusau. 132 copies of structured questionnaires were used for data collection. The data were analyzed using mean and standard deviation. The hypothesis was tested using t-test at 0.05 level of significance. The findings revealedthatthe basic technology lessons were not adequately and effectively delivered by the teachers. Lack of conducive teaching and learning environment, inadequate instructional materials and effective utilization in teaching basic technology affected students' academic achievement.From the findings, recommendations are that the government and stakeholders should ensure that only technical teachers are employed to teach basic technology and are periodically engaged in re-training programmes. Provide adequate and relevant teaching aids to facilitate the teaching and learning process in a conducive environment.

Keywords: Instructional Task, Academic Achievement, Basic Technology, Secondary School

Introduction

The academic success of students in basic technology depends on the teachers' demonstration in the knowledge of basic technology and competence in performance of instructional task with the sole aim of facilitating the learning of

various students and raise achievements for all students to meet the specified educational standards and contribute to the larger society. The aim of any teacher in a classroom should be to help learners learn, acquire knowledge and skills, solve problems and prepare the learner for future prospects; these can only be accomplished when instructional tasks are properly applied. Effective teaching is the degree or level to which teaching objectives are achieved that will lead the students to acquire the knowledge, skills and competencies necessary for their area of specialization. The teaching and learning outcomes and the overall educational development depend on how effective teachers teach their students (Igwe, Ohize, Atsumbe, Onoh, and Ibeneme, 2013).

According to the National Policy on Education (FGN, 2004) the main outcomes of education among others is the acquisition of appropriate skills, development of mental, physical and social abilities as personal resources for the individual to succeed in life and make necessary contribution to the advancement of the society. Unfortunately, the academic achievement of the students has fallen below the expectations of the stakeholders considering the huge resources invested in the education sector. In Zamfara State, statistics shows that the academic performance of students in Junior Secondary School (JSS) examination conducted by state ministry of education from 2008 to 2012 on basic technology subject was below 60%. In 2009 May JSS WAEC, 80% out of 1021, 56.1% of 780 and 40% out of 775 numbers of students who sat for basic technology examination in some of the government secondary school obtains pass and below pass, while in 2012 May JSS WAEC, out of the 946 students that sat for the examination, 34.5% obtained lower than credit pass.

The alarming rate of poor academic performance in secondary schools in Nigeria is a major worry considering the fact that it is unequal to the government and parent, contributions to enhancing the educational standards.Poor academic achievement of students in Nigeria has been linked to poor teacher's performance in terms of accomplishing the teaching task, negative attitude to work and poor teaching habits have been attributed to poor motivation (Ofoegbu, 2004). Afe, (2001) noted that teachers have important influence on students' academic achievement because the teacher is considered responsible for translating, implementing policy and principles based on practice during interaction with learners. Igwe, Ohize, Atsumbe, Onoh, and Ibeneme(2013) posited that teachers and facilities constitute important resources for education and academic achievement.

The basic technology teacher is expected to perform the following instructional task for effective and efficient learning to take place; such tasks

include adequate and proper planning of basic technology lesson notes, effective delivery of basic technology lesson, proper classroom management, supervision of students' performance in basic technology subject, regular checking and marking of students' notes, providing feedback on students' performance and utilizing of instructional materials in teaching basic technology. Aside the knowledge of the lesson plans, record keeping, use of teaching aids and standardized testing. It is also imperative for the teacher to possess a good measure of self-understanding. Psychological awareness and insight so as to be able to demonstrate expert quality in the performance of instructional tasks (Bottery, 2008).

The numerous qualities of basic technology teacher such as creativity, innovation and manipulative skills, have little or no value if they are not utilized in instructional processof transmitting knowledge to students and will in turn impact the academic achievements of the students, hence the need for this study.

The Problem

There has been steady declining in students' academic performance in basic technology in secondary schools which depicts non-realization of quality education in Nigeria despite the mega financial and material resources channeled towards the educational sector (Ofoegbo, 2004). Amongst the factors that contributes to students' poor academic performance which include inadequate funding, poor learning environment, curriculum material and other facilities needed to facilitate teaching and learning process,this paper is on the effect of teachers' instructional task performance on students' academic achievement in basic technology in secondary schools in Gusau, Zamfara State.

Significance of the Study

The findings of this study will be hopefully beneficial to the educational planners, principals, teachers and students. Educational planners and administrators will take advantage of the findings of this study to improve the basic technology curriculum in the aspect of instructional task performance of the teachers. This will enhance their productivity and better the academic achievement of the students.

The study will reveal the various instructional task performance by the teachers as it affects students learning outcome enabling the principles to take appropriate corrective measures in monitoring and evaluation of the teachers in

order to ensure effective supervision of the teachers and delivery of instruction during teaching and learning process. Furthermore, it serves as a guide to school principals by providing constant and adequate feedback to the teachers on their instructional task performance to ensure periodic review and facilitate capacity development for further improvement in classroom management and curriculum delivery.

Objectives of the Study

The aim of this study was to assess the impact of teachers' instructional task performance on students' academic achievement in basic technology in secondary schools in Gusau, Zamfara State. Specifically, the objectives of the study were to:

1. determine the perception of students on the effectiveness of basic technology teachers' instructional task performance.
2. ascertain the principals and teachers' perception on impact ofinstructional task performance on students' academic achievement in basic technology.

Research Questions

The under listed research questions were developed to guide the study:

1. What is the perception of students on the effectiveness of basic technology teachers' instructional task performance?
2. Does the principals and teachers' perception on instructional task performance have impact on students' academic achievement in basic technology?

Hypothesis

A null hypothesis was formulated to guide the study and was tested at 0.05 level of significance.

HO_1 There is no significant difference in the mean responses of principals and teachers on the extent to which teachers' instructional task performance impact on students' academic achievement in basic technology.

Methodology

A survey research design was adopted for the study. The four government secondary schools in Gusau, Zamfara State of Nigeria were covered. The population of the study comprises of four (4) principals, eight (8) teachers and 120 students. Structured questionnaire was the instrument used for data collection.

comprising of Part I: Respondents' data and Part II consists of 30 items covering the two research questions. The questionnaire was subjected to face validation by three experts in technology education. 132 copies of the questionnaire were distributed by the researcher and a research assistant and there was 100% return rate. The data generated was analyzed using mean and standard deviation for the research questions. Any item with mean equal to or above 2.50 was considered agreed while not less than 2.50 was regarded as disagreed. Chi-Square was used to test the hypothesis at 0.05 level of significance.

Results

Table 1: The Mean Responses on the Perception of Students on the Effectiveness of Basic Technology Teachers Instructional Task Performance.

S/NO	ITEMS	X	REMARKS
1.	The teacher delivers basic technology lesson adequately and effectively	2.42	Disagreed
2.	The teacher properly managed basic technology classroom	2.58	Agreed
3.	The teacher checks and marks the students' basic technology note on a regular basis	1.90	Disagreed
4.	The teacher gives regular feedback on student learning outcome in basic technology	1.80	Disagreed
5.	The teacher improvises instructional materials in the process of teaching	1.81	Disagreed
6.	The teacher disciplined the students properly	2.67	Agreed
7.	The teacher explained various topics in basic technology with the use of instructional materials	2.21	Disagreed
8.	The teachers effectively utilize teaching aids relevant to basic technology	2.10	Disagreed
9.	The periodic evaluation of students works by the teacher	1.85	Disagreed
10.	The learning environment is conducive for teaching and learning of basic technology	1.90	Disagreed

Table 1. Shows the extent to which students perceptive on the effectiveness of basic technology teachers' instructional task. It revealed that some of the

respondents agreed with item 2 and 6 having a mean score of 2.58, 2.67 and all other items with mean score below 2.5 is considered disagreed.

Table 2. The Mean responses of Principals and Teachers on the Instructional Task Performance Impact on Students' Academic Achievement in Basic Technology.

S/NO	ITEMS	X_1	X_2	X_t	REMARKS
11.	Utilization of improvised instructional materials such as pictures of components in basic technology affect students' academic performance	3.50	3.00	3.25	Agreed
12.	Improper classroom management affect students' academic performance	3.50	3.25	3.38	Agreed
13.	Insufficient instructional materials such as drawing instrument during technical drawing lesson affect students' academic performance	3.50	3.63	3.56	Agreed
14.	Non-utilization of drawing instrument during the teaching of technical drawing affect students' academic performance	3.75	3.38	3.56	Agreed
15.	Ineffective delivery of basic technology instruction affects student academic performance	3.00	3.13	3.06	Agreed
16.	Utilization of instructional materials such as the picture of wood in teaching the two types of wood affect students' academic performance	3.50	3.00	3.25	Agreed
17.	Use of various metallic object for the demonstration of properties of metals affect students' academic performance	3.00	3.38	3.19	Agreed
18.	Use of the different types of soil for demonstrating the process of making concrete, mud and pottery affect students' academic performance	3.00	3.25	3.13	Agreed
19.	Use of permanent magnet and a piece of iron to demonstrate magnet and magnetism affects students' academic performance	3.25	2.88	3.06	Agreed
20.	Use of iron fillings, glass and magnet to demonstrate the lines of force of a magnet affect students' academic performance	3.00	3.25	3.13	Agreed
21.	Regular check and marking of	3.25	3.38	3.31	Agreed

	students' basic technology note has effect on students' academic performance				
22.	Providing regular feedback on students' performance in basic technology has effect in students' academic performance	2.50	2.63	2.56	Agreed
23.	Use of projector to demonstrate the working principle of a motor affect students' academic performance	3.00	3.13	3.06	Agreed
24.	Evaluation carried out on students of basic technology affect their academic performance	3.50	3.00	3.25	Agreed
25.	Conducive atmosphere of learning contributed to students' academic performance in basic technology	3.00	2.25	3.13	Agreed
26.	Students' disciplinary intervention affect students' academic performance in basic technology	2.50	3.38	2.75	Agreed
27.	Adequate and effective delivery of basic technology lesson affect students' academic performance	3.50	3.00	3.25	Agreed
28.	Inadequate use of instructional materials such as pictures of various materials in basic technology affect students' academic performance	3.50	3.00	3.25	Agreed
29.	Lack of utilization of simple hand tools such as screw driver, pliers, file, chisel for carrying out practical's in the workshop affect students' academic performance	3.25	3.38	3.31	Agreed
30.	Preparation of a comprehensive lesson plan on basic technology affect students' academic performance	3.25	3.00	3.13	Agreed

$SD_1 = 0.58$, $SD_2 = 0.7$

Table 2. show the principals and teachers rating on the impact of teachers' instructional task performance on students' academic achievement in basic technology. It revealed that all the respondents agree with all the items having mean scores above 2.5.

Hypothesis (HO_1)

There is no significant difference in the mean responses of principals and teachers on the impact of teachers' instructional task performance on students' academic achievement in basic technology.

Table 3:Chi-Square Statistics of Principals and Teachers on the Impact of Teachers' Instructional Task Performance on Students' Academic Achievement in Basic Technology.

Variable	N	X	df	Ch-sq	P	Remark
Principals	4	3.50	1	3.21	0.073	Not significant
Teachers	8	3.57				

A chi-square test ($X^2(1, N = 12) = 3.21$, $p = 0.73$) was performed in order to test the null hypothesis (Table 3). From the table the chi value is 3.21 and p at 0.073 which is less than 0.05, the null hypothesis was therefore rejected. Hence, the respondents were unanimous in stating that teachers instructional task performance has no impact on students' academic achievement.

Findings

1. The basic technology lessons were not adequately and effectively delivered by the teacher.
2. Inadequate instructional materials for teaching basic technology affected students' academic performance.
3. The teachers could not improvise teaching aids and effectively utilize them.
4. There was no significant difference in the mean ratings of principals and teachers from the t-test analysis. Teachers' instructional task performance impacted on students' academic achievement in basic technology.

Discussion

The discussion of the finding was done in line with the research questions and hypothesis of the study. It revealed that the basic technology teachers' instructional task performance was not adequately and effectively delivered. This was as a result of the teachers' lack of adequate knowledge of the subject matter and incompetence in the application of proper delivery method and inability to manage the students in a non-conducive teaching and learning environment. The findings agreed with Uchefuna (2001), who noted that effective teacher is one

who possesses a broad repertoire of techniques and is able to skillfully use these techniques to meet the demands of the classroom and produce the desired results in the course of his duty as a teacher. This was supported by Okorie (2000) who pointed out that some teachers teaching technical subjects within the school are unable to perform any skilled work of a diversified nature. Nworgu (2008) concluded, noting that competence as expertise or accuracy of carrying out tasks as technical teachers requires adequate skills that will make them adaptable and productive to achieve national goals and objectives for technological advancement in Nigeria.

The analysis also showed inadequacy of instructional materials for teaching basic technology. This was supported by Ahmed (2003).Jaiyeoba and Atanda (2005) noted that most secondary schools in Nigeria are faced with the inadequacy of teaching and learning materials which are meant to enable the teachers achieve a high level of instructional effectiveness. Furthermore, teaching and learning takes place under poor learning environment which lacks the basic materials and facilities thus hindering the fulfillment of educational goals.

The teachers' inability to utilize the available teaching aids and not improvising adversely affected the instructional delivery task. Creativity and innovation of the teachers in an active ingredient in effective teaching and learning process of basic technology. Modungwa (2015) and Lucas, Spencer, and Claxton (2012) emphasized that the technical teachers should effectively deliver their lessons by engaging the students creatively and sustaining their attention with innovative utilization of teaching aids. This will enhance retention of acquired knowledge and eventually improve the academic achievement of the students.

Conclusion

The study revealed certain factors that affects students' achievement in basic technology in secondary schools but teachers' instructional task performance was adversely impactful on the students' performance.From the national policy on education, the objectives of pre-vocational education in Nigeria includes but not limited to; introduction and appreciation of technology towards interest arousal and choice of a vocation at the end of junior secondary school and professionalism later in life, acquiring basic technical skills, exposing students to career awareness by exploring unable options in the worlds of work and enabling youth to have an intelligent understanding of the increasing complex technological society and make contributions. These will be achieved through the teachers' effective instructional task performance in delivering basic technology

in secondary schools. Unfortunately, inadequate instructional aid lack of conducive teaching and learning environment, incompetence and skills in effectively delivering of basic technology lesson resulted in poor academic achievement of the students.

Recommendations

Thefollowing recommendations were made based on the findings of the study

1. The government and other stakeholders should periodically engagetechnical teachers in training and re-training programmes.

2. Adequate relevant instructional materials should be made available to facilitate the teaching and learning process.

3. Only trained technology teachers should be employed to teach basic technology.

4. Workshop on improvisation of teaching materials and effective utilization should be periodically organized for basic technology teachers.

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