
Communication Skills required by Technical Teachers for Effective Implementation of Basic Technology Curriculum in Edo State, Nigeria

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ABSTRACT

This study was conducted to identify communication skills required by technical teachers for effective implementation of Basic Technology curriculum in junior secondary schools in Edo State, Nigeria using descriptive survey research design. Two research questions were answered by the study while two null hypotheses were formulated and tested at .05 level of significance. The population for the study consisted of 302 technical teachers from the universities, technical colleges and public secondary schools in Edo State of Nigeria. Since the population was manageable, there was no sampling. The instrument used for data collection was a 19 items questionnaire which was validated by five experts. The reliability of the instrument was determined using Cronbach's Alpha and a reliability coefficient of .85 was obtained. The research questions were answered using mean while ANOVA was used for testing the hypotheses. Based on the data collected and analyzed, the study found that all the items were identified as communication skills required by technical teachers for effective implementation of basic technology curriculum. Based on the findings of this study, it was recommended among others that the identified communication skills where technical teachers required improvement be packaged for re-training through conferences, seminars, symposium and colloquium to equip the teachers.

Keywords: Communication Skills, Basic technology, Curriculum implementation

INTRODUCTION

Basic Technology is one of the core prevocational subjects at the junior secondary school level responsible for exposing the learners to the world of work through exploration. The subject according to Adamu and Udoh (2012) geared towards equipping the youths with basic skills, competence, knowledge and understanding for their self-reliance. Through the subjected students develop a broader understanding of industrial and business processes and prepare their minds, interest and aptitudes towards self-reliance upon graduation. The philosophy of Basic Technology according to Federal Ministry of Science and Technology (2007) is to (i) provide prevocational orientation for further training in technology; (ii) provide basic technological literacy for everyday living; and (iii) stimulate creativity. This probably explained why Adamu (2015) argued that vocational and technology education is a pillar for growth and development of individual and society at large.

In order to ensure that the curriculum of basic technology at Junior Secondary School in Nigeria is functional, integrated curriculum in its development was adopted. The subject provides a broad field of knowledge for a linkage for metalwork, woodwork, applied electricity, basic electronics, technical drawing, automobile, air flow, water flow, physics, chemistry, food preservation, ceramics, plastics and building (Uwameiye & Oviawe, 2006). Skill manpower and facilities are very essential for realization of the objectives of the integrated Basic Technology. However, it was generally agreed that when it comes to education more especially technical subjects, the role of teachers matter most. By this, it therefore means that the role of teachers in classroom, their communication skills and competencies has the potentials of improving students' skills acquisition and understanding of the subject matter.

In education, communication is an indispensable life skill and the ability to master and employ it effectively influences the level of success in all spheres of educational sector. Hybels and Weaver (2001) defined communication as the process in which people share information, ideas and feelings which involve not only the spoken and written word but also non-verbal language. Communication according to Aina and Ogunbiyi (2012) is a network that creates and makes possible consensus understanding among individuals. Earlier, (baran (2004) describe communication as a complex process that its effectiveness of understanding require requisite skills. Communication is an interactive process through which persons or groups relate to each other and share information, experience, feelings and knowledge (Nwigwe, Izuagba & Afurobi, 2014). By summary, communication can be described as a tool used to inform, share, discover, persuade and influence relationships and behaviour of others. From the above, it can be concluded that communication occurs when individuals involved in the exercise share common meanings by the act. Invariably, all involved in the act of communication should possess the skills and competencies in order to communicate effectively.

Skill is the ability to do something expertly. Skills according to Okorie (2000), is the habit of acting, thinking and behaving in a specific activity in such a way that is acceptable by professionals in that field. Osinem and Nwoji (2005) defined skill as the ability of a person to perform expertly. It is a well-established habit of performing task in a manner acceptable in a particular profession (Okeme, Alawa, & Akwagiobe, 2014). Ben (2010) posited that skills are the abilities and capacities acquired through deliberate systematic and sustained effort. Skills involve the ability to pragmatically apply, consciously or unconsciously ones knowledge in practical settings. It is the manifestation of acquired knowledge; it is a knowledge that is translated into practical use.

Communication skills are the transmission of a message that involves shared understanding between the contexts in which the Communication takes place. In education, communication skills are the basic learning instruments usually referred to as the 4Cs – communication skills, critical thinking, creative thinking and collaboration. Communication skills which a teacher must possess to interact properly with the students include: positive motivation; effective body language; sense of humour; understanding the students; team formation; and technical skills. Today, the discussion on Communication skills goes beyond the basic skills and includes digital communication tools. The importance of communication skills in all aspects of life cannot be over emphasized. In classroom situation, communication is used for teaching and learning activities. According to

Nwigwe, Izuagba and Afurobi (2014), four factors are necessary for communication process to function in the classroom. These are: the teacher, the students, the subject and feedback. Therefore, for teaching and learning to be meaningful, it must involve the teacher, and the students in the sharing of common wearing or the value of thought and experiences as well as receiving messages from the environment through the subject matter. In the context of this study, it implies that before communication can be said to have occurred during basic technology lesson, there must be the technical teacher, the students, the subject matter of basic technology and the feedback.

Importance of effective communication in teaching cannot be overestimated. It is only through communication skills/competencies that a teacher can introduce creative and effective solutions to the problems of the students. In education, teachers are charged with the responsibility of managing the activities in the classroom. In class, teacher is an instructor, preceptor, tutor, pedagogue, educator or school master or mistress whose occupation is to instruct others. To Nwokike (2013), a teacher is a curriculum implementer, motivator of learning, facilitator of learning and a guide for learning. This explained why Adamu and Udoh (2012) maintained that teachers are the people who has undergone a teacher preparatory programme and charged with the responsibility of managing the learning behaviour of the students. Effective teaching methods help transform the boring classroom into an interesting learning environment that challenges the students and equips them with good presentations skills. By implication, communication is crucial process that facilitate in teaching and learning.

The teaching of basic technology has not been without challenges. Studies have shown that quality teachers are the major issue affecting the realization of prevocational education objectives in Nigeria (Uwameiye & Ogunbamerun, 2012). Generally, it was agreed that that of all the factors which influence the quality of education, skills, competency and readiness of the teachers are the most significant. Aina and Ogunbiyi (2012) opined that of all the factors necessary for the implementations of the new approaches to the curriculum, the orientation of teachers appear to the most important. Alshare, Lane and Miller (2011) identified ineffective communication skills amongst teachers as the main reason for problems that occur during instructional process as well as the poor performance of students.

For any effective teaching and learning, teachers must possess sufficient communication skills for carrying out their duties. Okunna (2004) outlined some principles of effective communication which teachers (technical) and students should exhibit for enhancing understanding of concepts in any teaching subject including technical subjects. He posited that to produce effective communication in the classroom, the teacher should exhibit communication skills such as selecting appropriate; simple and understandable medium to the students; presenting messages of meaning in an orderly comprehensive and comprehensible sequence; removing all forms of noise that might interfere with the elements of communication; and ensuring that the students are actively participating by asking for a feedback among others.

By this, it is obligatory for technical teacher educators to equip their graduates with skills and competencies that will enable them engage in a life of work and interact effectively with their students and the public. Bolarinwa and Adeola (2012) posited that teachers who teach vocational and technical subjects need to improve on their communication skills in order to prepare students for roles in the public and private sectors of the economy with the ability to adapt to changing

realities and the problem solving skills required for tackling economic and other related problems. The accessions prompted the researchers to assess the communication Skills required by Technical Teachers for Effective Implementation of Basic Technology Curriculum in Edo State, Nigeria

All effort by the government to ensure qualitative education and bring about high competent products both in academic and employability, there have been persistent reports of high failure rate among graduates. One probable cause of the high failure of students in recent years according to Ugwu (2005) is partly due to lack of the requisite communication competencies for making students understand technical subject matter. Nwigwe, Izuagba and Afurobi (2014) had earlier asserted that teachers' poor performance in the classroom could be as a result of poor communication strategies adopted by the teachers during classroom instruction. Earlier study by Alshare Lane and Miller (2011) identified ineffective communication skills amongst teachers as the main reason for problems that occur during instructional process as well as the poor performance of students. The situation creates doubt on possessed communication competency of technical teachers in secondary schools. Nwigwe, Izuagba and Afurobi (2014) posited that teacher needs to be retrained not once or twice but on continuous basis to improve his knowledge, skill and attitude towards teaching. Could be some of the skills they possess on graduation become obsolete with time and while others need updating? Could poor performance of students be due to poor communication and poor teaching ability on the part of the teachers? Could there not be any strategy for enhancing the communication skills of technical teachers for good teaching performance? The situation specifically leads the researcher to empirically (1) determine the communication skills needs of technical teachers for effective implementation of basic technology curriculum in junior secondary schools in Edo State; and (2) determine the strategies for enhancing the communication skills needed by technical teachers' for effective the effective implementation of basic technology curriculum in junior secondary schools in Edo State.

Research Questions

In line with the objective of the study, two research questions was raised

1. What are the communication skills needed by technical teachers for effective implementation of basic technology curriculum in junior secondary schools in Edo State?
2. What are the strategies for enhancing the communication skills needed by technical teachers' for effective the effective implementation of basic technology curriculum in junior secondary schools in Edo State?

Research Null Hypotheses

In line with the research question the study hypothesized that:

1. There is no significant difference among the of basic technology teachers on their communication skills needs for effective implementation of basic technology curriculum in junior secondary schools in Edo State.
2. There is no significant difference among the of basic technology teachers on strategies for enhancing the communication skills needs of basic technology teachers in junior secondary schools in Edo State?

METHODOLOGY

This study adopted the descriptive survey research design. The researchers used the entire 302 technical teachers for the study. The population comprised of 12 technical teacher educators from the two public universities in Edo State (Ambrose Alli University, Ekpoma and University of Benin, Benin City), 68 technical teachers from the technical colleges in Edo State and 222 basic technology teachers from all the public secondary schools in Edo State of Nigeria.

The instrument which was validated by five experts in test and measurement, technical teachers and vocational technical education from a neighbouring Delta State University, Abraka, Delta State was used for data collection. The instrument contained five point Likert-type scale response option of Very Highly Needed (VNR) – 5; Highly Needed (HN) – 4; Needed (N) – 3; Moderately Needed (MN) – 2; and Not Needed (NN) – 1.

The valid instrument was pilot tested using 10 technical teachers teaching basic technology, five technical education lecturers and five technical teachers in technical colleges from Delta. Data collected were subjected into Cronbach's Alpha test; a reliability coefficient of 0.85 was obtained.

The researchers assisted by five research assistants administered the instrument. The copies of questionnaire retrieved were subjected to data analysis. An interval scale was used for data analysis using 4.50 to 5.00 (Very Highly Needed); 3.50 to 4.49 (Highly Needed); 2.50 to 3.49 (Needed); 1.50 to 2.49 (Less Needed) and 1.00 to 1.49 (Highly not needed). The standard deviation was used to decide on the closeness or otherwise of the respondents to the mean in their responses.

The hypotheses formulated were tested at .05 level of probability using Analysis of Variance (ANOVA). A hypothesis of no significant difference was retained where P-value is greater than .05; the hypothesis of no significant difference was rejected where p-value is less than .05.

RESULTS

The results of research questions and test of null hypotheses are presented in Table 1 to 4

Research Question One: What are the communication skills needed by technical teachers for effective implementation of basic technology curriculum in junior secondary schools in Edo State?

Table 1: Descriptive statistics on data used to answer research question one

S/No	Questionnaire Items	Mean	Std. Div	Remark
1.	Ability of communicate that will create a long lasting impression in the minds of the students.	4.31	.70	HN
2.	Ability of communicate in clear, modest and audible tones to students.	4.73	.75	VHN
3.	Ability to maintain the volume, tone and rhythm of voice in the class	4.29	.71	HN
4.	Ability to use non-verbal cues like tone of voice to express and reinforce lesson in presentations	4.44	.57	HN
5.	Ability to speak on point of mutual interest and concern to the students	4.38	.90	HN
6.	Skills of communicating politely to arouse the interest of students	4.59	.76	VHN

S/No	Questionnaire Items	Mean	Std. Div	Remark
7.	Skills to clarify doubts, confusion, misconceptions and lack of understanding of the lesson received	4.51	.67	VHN
8.	Skills for presenting point and ideas logically during instruction	4.55	.78	VHN
9.	Skills to organize lesson in simple and clear language for students understanding	4.37	.81	HN
10.	Ability to fine tune presentations to appeal to the students	4.67	.87	VHN
11.	Skills to communicate feelings openly for students understanding.	4.60	.85	HN
Grant mean		4.49	0.76	HN

In response to research question 1, Table 1 reveals that all the 11 items had their mean values ranging from 4.29 to 4.73 which falls under the criterion mean value of very highly needed and highly needed. Skills in five of the items were highly needed while 6 skills were needed. This can also be seen in the 4.49 grant mean obtained with standard deviation of 0.78. The result therefore shows that the communication skills in most of the items in Table 1 were highly needed by technical teachers for effective implementation of basic technology curriculum in junior secondary schools in Edo State.

Research Question Two: What are the strategies for enhancing the communication skills needed by technical teachers' for effective the effective implementation of basic technology curriculum in junior secondary schools in Edo State?

Table 2: Descriptive statistics on data used to answer research question two

S/N	Questionnaire Items	Mean	Std. div	Remark
1	Improvisation of instructional materials for teacher's use in the classroom	4.52	.85	VHN
2	In-service training of basic technology teachers on communication skills	4.63	.56	VHN
3	Encouraging technical teachers to attend conferences, workshops, seminars and symposium on communication models	4.58	.58	VHN
4	Improving the curriculum of technical teacher education programme to master the subject matter and teaching methods	4.54	.63	VHN
5	Motivating the teachers through the provision of teaching machines, video recorder and communication facilities	4.49	.66	HN
6	Encouraging basic technology teachers to adopt a good dressing pattern/code	4.53	.56	VHN

S/N	Questionnaire Items	Mean	Std. div	Remark
7	Technical teacher education programme should improve their method of instruction as technology changes	4.55	.45	VHN
8	Regular curriculum innovations should be introduced in the institutions that prepares teachers	4.44	.44	HN
Grant mean		4.55	0.59	VHN

The mean obtained for research question two ranged from 4.44 to 4.63. From the results, 6 of the items obtained mean score that falls under the index score of very highly needed. Item 4 and 8 had mean score of 4.49 and 4.44 which were considered to be highly needed. The grant mean of 4.55 with standard deviation of 0.59 suggested that skills in most of the items were very highly needed by technical teachers' for effective the effective implementation of basic technology curriculum in junior secondary schools in Edo State.

Null Hypothesis One: There is no significant difference among the of basic technology teachers on their communication skills needs for effective implementation of basic technology curriculum in junior secondary schools in Edo State.

Table 3: Analysis of Variance used to test Hull Hypothesis One

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.394	2	.697	.887	.413
Within Groups	234.924	299	.786		
Total	236.318	301			

The ANOVA used for testing null hypothesis one in Table 3 revealed the Sum of Squares values of 1.394 and 234.924 at degree of freedom of 2 and 299 Between Groups and Within Groups respectively. The F-value obtained was 0.887 and the p-value was greater than the significant level of significance ($0.413 > 0.05$). The result therefore indicated that no significant differences exist in the mean response of three groups of respondents. It was therefore concluded that no significant difference among the of basic technology teachers on their communication skills needs for effective implementation of basic technology curriculum in junior secondary schools in Edo State. The hypothesis was retained.

Null Hypothesis Two: There is no significant difference among the of basic technology teachers on strategies for enhancing the communication skills needs of basic technology teachers in junior secondary schools in Edo State?

Table 4: Analysis of Variance used to test Null Hypothesis Two

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.180	2	.590	.735	.481
Within Groups	240.237	299	.803		
Total	241.417	301			

The Analysis of Variance used for testing null hypothesis two in Table 4 disclosed the Sum of Squares of 1.180 and 240.237 for Between Groups and Within Groups at degree of freedom of 2 and 229 respectively. The F-value obtained was .735 while the p-value stood at .481. The p-value obtained indicated that no significant difference exist among the of basic technology teachers on strategies for enhancing the communication skills needs of basic technology teachers in junior secondary schools in Edo State. The hypothesis was therefore retained.

DISCUSSION OF FINDINGS

The findings of this study revealed that the 52 items were identified as communication skills identified needed by basic technology teachers for effective implementation of the subject in junior secondary schools in Edo State, Nigeria. In line with this finding, Okunna (2004) asserted that teachers (technical teachers inclusive) should possess communication skills for them to effectively deliver their teaching duties. Similarly, Baba (2010) collaborating the findings of this study asserted that effective communication is a sine qua non for all educators because it contributes immensely towards their training of manpower for both private and public enterprises. Such communication skills include: selecting appropriate, simple and understandable medium to deliver his/her lesson and presenting messages of meanings (basic technology subject matter) in an orderly, comprehensive and comprehensible sequence, among others. This could be the reason why teachers (technical teachers) are encouraged to write lesson plans and notes before classroom instruction. Many teachers (technical teachers inclusive) may lack the communication skills which are required for lesson delivery.

In order to equip such teachers with communication skills, this study identified eight strategies for enhancing teachers who lack such skills. To this end, Iwuanyanwu (1986) in Nwigwe, Izuagba and Afurobi (2014) posited that teachers should be encouraged to attend conferences, workshops and seminars. During such meetings, the teachers are equipped with new knowledge, skills and competencies which they do not have before. The same thing may be applicable to teachers who go for in-service education. In-service education will equip the teachers with skills which they did not acquire during their pre-service training.

The application of instructional materials and other communication facilities will obviously enhance the teacher's communication skills when provided. Nwigwe, Izuagba and Afurobi (2014) emphasized the importance of facilities when he posited that resource materials result in more effective learning of factual information and skills in less time than mere verbalization. This calls to mind the need for teachers' motivation as Ugwu (2005) opined that teachers whose salaries and allowances remain unpaid for up wards of three months for whatever reasons will not communicate effectively. In order to realize the objective of teaching technical subjects in schools, the technical teachers must be empowered to communicate effectively. Without having the skills to impact the knowledge to students, both the teachers and the students will be adversely affected.

CONCLUSION AND RECOMMENDATIONS

Classroom communication is essentially a social process involving teachers (technical) and students in activities which meaning of technical subjects are shared among and between those involved in the communication. Effective communication helps to improve the concepts

understanding, knowledge, skills and attitude of students in teaching and learning. By implication, the skills gap between the reality and what is expected has contributed in hampering the realization of aims and objectives of basic technology among secondary school students. Base on this, it was recommended that (i) the identified communication skills should be integrated into the training teachers training programme in tertiary institutions; and (ii) the identified strategies should in infused in curriculum of teacher training programme, however refresher training should be organized for basic technology teachers in the state.

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