

Factors Affecting the use of Instructional Media for Teaching in Technical Schools in Niger State

Hassan, Abdullahi Muhammad
Department of Industrial and Technology Education,
School of Science and Science Education,
Federal University of Technology,
Minna Nigeria

Abstract

The purpose of this study was to examine the factors affecting the use of instructional media for teaching in technical schools in Niger State. Four research questions were formulated on possible factors that could affect the usage of instructional media in technical schools in Niger State. A descriptive survey design was employed and questionnaire was used for collection of data. One hundred and fifty (150) technical teachers teaching in six technical schools in Niger state was used. Data collected was analyzed using percentage, mean and Standard Deviation. Results of the study showed that 50% of the samples studied have printed instructional media such as textbooks charts, and periodicals. Majority of the teachers did not have adequate training in the use of instructional equipment; and that the technical teachers' were motivated enough to use instructional materials and equipment. However, more than 75% of the schools have basic amenities such as water and electricity that will enhance the use of these aids. Based on these finding, some recommendations were made to the Niger State Ministry of Education.

Introduction

Over the years, there had been a dwindling performance of students in technical schools In Niger State. This has been attributed to inadequate number of qualified teachers, poor educational policies, inadequate time allocation and so on. It is however, sad to note that there are identified ineffective utilization of instructional media. (Adeniran, 2002). In the opinion of Bakare (2002), instructional media in the classroom setting are aimed at making the teacher to function better, thus making his job more interesting, meaningful and efficient.

Many researchers, educators and psychologists have stressed the usefulness of instructional media in teaching. According to Ajewole (2002), instructional media such as print are not specially designed for instruction; they are simply information carrying technologies that can be used for instruction. In the same vein, Adeniran (2002), affirmed that active learning it promoted with the use of instructional media. Thus instructional media is used to improve the quality of teaching/learning and consequently students' achievements in technical education. It has therefore become necessary to find out the factor affecting the use of instructional media for teaching in technical colleges in Niger

state.

Purpose of the Study

Specifically the study was designed to:

1. find out level of the availability of instructional media.
2. find out whether the teachers have adequate training to handle and use instructional media.
3. find out whether the technical schools were provided with basic amenities such as water and electricity.
4. find out whether technical teachers were given all the necessary motivation that would enable them to use instructional media in the classroom during their lessons.

Research Questions

1. What is the level of availability of instructional media in technical schools in Niger State?
2. To what extent are teachers trained to handle and use instructional media?
3. To what extent are the schools provided with basic amenities such as water and electricity that will enhance the use of instructional media?
4. To what extent are the technical teachers motivated enough to use instructional media?

Review of Related Literature

Various studies conducted by researchers on the current topic were reviewed to provide a conceptual framework for the study.

Abubakar (2002), observed that many technical colleges in the country lacks essential working tools/equipment and where available, no qualified manpower to use them. Consequently the teaching is done theoretically without adequate laboratory/workshop practices. This development undermined the professional competences of a technical teacher to design, construct and test-run high power machines. In the same vein, Olaitan (2003) gave reasons for the slow development of science and technology in Nigeria to include the students attitude towards technical courses, inadequate funding, poor infrastructures, poverty, poor mathematical and scientific background among others. He therefore suggested the introduction of virtual library in technical schools, adequate remuneration and promotion of technical teachers; organized workshops, seminar and conferences on capacity building; and re-strengthening of Students Industrial Work Experience Scheme (SIWES).

Bakare (2002) reported in his research findings on the state of technical colleges in the 21st century that 55% of teachers in technical schools in Nigeria lacked essential practical skills. The study further revealed that inconsistent government policies and the constant changes in the schools calendar has affected the smooth running of technical schools in Niger State and Nigeria at large resulting in under achievement in external examination.

Olaitan (2002), listed the benefits of technical education for a sustainable national development to include building a more virile and self-reliant nation, promoting creative skills development among children, to reduce wastages or over dependency on foreign technical experts to promote the growth and development of local industries, to reduce importation and promote local production using available resources.

Similarly, George (2002), gave the following advantages of an instructional media in a classroom learning situation as:

- (i) Promote students understanding of abstract concept by developing their psychomotor skills.
- (ii) Can be used to teach large group of students of varying backgrounds.
- (iii) Arouse students interest and motivate them for further learning.
- (iv) Promote the spirit of teamwork and cooperative learning style.
- (v) Encourage individualized learning and ensure prompt evaluation especially when computer and other electronics are used.

Okorie (2001), identified the criteria for selection and utilization of instructional media in a classroom setting to include ease of operation/usage, good audio or visual and audiovisual quality, appropriateness to the stated objectives, time saving and experience yielding among others.

The study reviewed literature work on factors in selecting and utilization of instructional media, classification of instructional media, the historical development of technical and vocational skills acquisition centres.

Methodology

The study adopted the descriptive survey research method. This method allows samples of respondents to be administered with questionnaires. Their responses then form the bases for the data for answering the research questions. The population for this study was made up of 150 technical teachers in the six technical schools in Niger.

Research Instrument

The instrument used for this study is a 40-item structured questionnaire designed by the researcher which was tailored to answer the research questions. The questionnaire was meant for the technical teachers. The questionnaire was divided into three sections, Section A, B and C. Section A sought information about respondents' age, sex, qualification, while section B and C sought information on the availability instructional media and training on the use of instructional media.

Reliability of Instrument

KR-21 formula was used to calculate the reliability coefficient of the instrument. A reliability of 0.85 was obtained.

Method of Data Collection and Analysis

Data were collected by administering the questionnaire to all technical teachers in the six technical schools in Niger State. A total of 150 questionnaires were sent and received from respondents. The data gathered was analysed using mean, standard and deviation.

Results

Research Question 1: What is the level of availability of instructional media for teaching in technical schools in Niger State?

Table 1: Teachers' Mean Responses on the Level of Availability of Instructional Media

S/No.	Statements	AA	MA	SA	NA	Mean	SD
		4	3	2	1		
1	Textbooks	5 (2)	55 (37)	70 (47)	20 (13)	2,3	0.8
2.	Diagrams	6 (4)	30 (20)	60 (40)	54 (36)	1.9	0.8
3.	Charts	4 (3)	26 (17)	70 (47)	50 (33)	1.9	0.8
4,	Posters	5 (3)	30 (13)	25 (17)	100 (67)	1.5	0.9
B.	Photography	0 (0)	5 (3)	5 (3)	140 (93)	1.1	0.7
6,	Journals, Magazines, Periodicals	3 (2)	7 (5)	20 (13)	120 (80)	1.3	0.8
7.	Overhead Projector	3 (2)	17 (11)	10 (7)	120 (80)	1.4	0,8

8,	Opaque Projector	1 (1)	9 (6)	5 (3)	135 (90)	1,2	C.6
9.	Television set	2 (1)	7 (5)	41 (27)	100 (67)	1.4	. 0.7
10.	Models	5 (3)	6 (4)	29 (19)	110 (73)	1.4	0.3
11.	Computer System	0 (0)	0 (0)	1 (1)	149 (99)	1.0	0,7
12.	Realia (real object)	2 (1)	10 (15)	10 (7)	128 (85)	1,2	05
13,	Motion pictures (16mm films)	4 (3)	8 (15)	12 (8)	126 (34)	1.3	0.7
14.	Slides	0 (0)	5 (5)	10 (7)	132 (88)	1,2	0,7

Table 1: Teachers' Mean Responses on the Level of Availability of Instructional Media

15.	Filmstrips	0 (0)	3 (2)	5 (3)	142 (95)	1.1	0.6
16.	Videotape Films	2 (1)	3 (5)	5 (3)	135 (91)	1,3	0,6
17,	Audiotape recordings etc	2 (1)	8 (5)	5 (3)	135 (91)	1,2	0.6
18.	Videotape recorder	2 (1)	6 (4)	4 (3)	138 (92)	1.1	0.7
19,	Transparencies	5 (3)	5 (3)	10 (7)	130 (87)	1,2	0.8
20,	Projection Screen	3 (2)	7 (5)	13 (9)	127 (84)	1.2	0.8
21.	Motion Pictures Projector	0 (0.0)	5 (3)	12 (8)	133 (89)	1.1	0.6

NOTE:

(1) AA: Adequately Available

MA: Moderately Available

SA: Scantily Available

NA: Not Available

(3) The figures in parenthesis show the percentages of

(2) The instructional media numbered from 1 to 21 are the ones used for the research work.

(4) Level of acceptance of the mean is 2,5.

respondents for each option.

In Table 1, the figures in parenthesis represent the percentages of the respondents. The very low mean scores for items 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16; 17, 18, 19, 20 and 21 which range from 1.0 to 1.9 and the combined high percentages of 76, 80, 84, 96, 93, 87, 93, 94, 92, 100, 92, 92, 95, 98, 93, 95, 95, 94, 94 and 97 for scantily available and not available for the items respectively show that majority of the respondents indicate that the instructional media are not available in their schools. Also the mean score of 2.3 for item 1 (textbooks) and the combined percentage 60 for the item show that more than half of the respondents indicate that the instructional media mentioned in the item is only scantily available in their schools.

Research Question 2: To what extent the technical teachers in the technical schools have adequate training to effectively handle and use instructional media?

Table 2: Teachers' Mean Responses on Training and Ability to use instructional Media.

S/No	Statement	AA	MA	SA	NA	MEA	SD
		4	3	1	1		
22.	Inadequate knowledge in the Operation of Instructional equipment affect 11 Usage in the classroom.	65 (43)	70 (47)	10 (7)	5 (3)	3.3	1.0
23.	Inability of the teachers to handle instructional media.	83 (55)	27 (18)	25 (17)	15 (10)	3.2	0,7
24.	Teasers lack of adequate training in the use of instructional media.	30 (20)	70 (47)	23 (15)	27 (18)	3.7	0.8
25.	Most teachers are unskilled in the use of instructional media.	35 (23)	55 (57)	20 (13)	10 (7)	3.0	1.1
26.	Inability of teachers to operate the gadgets (operational problems) hinders the use of learning and instructional media.	25 (17)	78 (52)	28 (19)	19 (13)	2.7	0.8
27.	Some teachers lack the ability to select suitable Instructional medias.	38 (25)	30 (53)	12 (8)	20 (13)	2.9	0.9

In Table 2, the high mean scores of 3,3,3,2 and 3.0, for items 22, 23, and 25, and the combined high percentages of 9,73 and 80 for the items respectively, clearly show that most of the respondents agreed with the item statements.

The mean scores of 2.7, 2.7 and 2.9 for items 24,26 and 27 and the combined percentages of 67, 69 and 78 for adequately available and agreed for the items respectively show that more than half of the respondents agreed with the statements of the items.

Research Question 4: To what extent are the schools provided with basic amenities such as water, road and electricity that will enhance the use of instructional media?

Table 4: Teachers' Mean Responses on the Availability of Basic Amenities in Technical Schools

S/No	Statements	AA	MA	SA	NA	MEAN	SD
		4	3	1	1		
33.	Our technical school lack constant power supply	70 (47)	40 (27)	15 (10)	25 (16)	3.0	0.8
34.	There is no NFPA supply in our school and the generator is put on only in the evenings.	15 (10)	20 (13)	75 (50)	40 (27)	2.0	0.9
35.	There is tap water but the supply is not constant.	26 (17)	14 (10)	75 (50)	35 (23)	2.2	0.9
36.	The bore-hole in our technical school is not functioning.	27 (18)	13 (9)	78 (52)	33 (21)	2.2	0.8

In Table 4, the mean score of 3.0 for item 33 and the combined percentage of 74 for adequately available and agreed four the item, indicate that respondents agreed with the item statement. While the low mean scores of 2.0, 2.2 and 3.2 and the combined percentages of 77, 73 and 73 for disagreed and strongly disagreed for items 34, 35 and 36 respectively, show that reasonable number of the respondents disagreed with the statements of the items.

Research Question 5: To what extent are the technical teachers motivated enough to use instructional media?

Table 5: Teachers' Mean Responses on Level of Motivation

S/No.	Statements	AA	MA	SA	NA	MEAN	SD
		4	3	1	1		
37.	Government has not encouraged teachers to put in their best.	80 (53.0)	40 (27.0)	17 (11.0)	13 (9)	3.2	0.7
38.	I can use instructional media but the incentives are not there.	44 (29)	65 (44)	24 (16)	16 (11)	2.9	0.8
39.	Instructional media require well trained staff and laboratory and these are not in place.	64 (43)	57 (38)	21 (14)	6 (5)	3.2	0.9
40.	The school does not have enough teachers so I cannot involve myself with use of instructional media.	27 (13)	30 (20)	62 (41)	31 (21)	2.4	0.7

In Table 5, the mean scores of 3.2, 2.9 and 3.2 for Items 37, 38 and 39 respectively and the combined percentages at 80, 73, 81 for adequately available and agreed for the items respectively show that most respondents agreed with the item statements. While the mean score of 2.4 and the combined percentage of 62 for scantily available and strongly disagreed for item 10 show that more than half of the respondents disagreed with the item statement.

Conclusion and Recommendations

Conclusion: Based on the findings of this study, the following conclusions were made: Almost all the schools covered have no instructional media except textbooks, diagrams, and charts, which are grossly inadequate. Quite a number of the teachers do not have enough training instructional media. More than three-quarter of the schools were connected to Power Holding Company of Nigeria (PHCN) which was a good development.

Recommendations: Based on the finding of this study, the following recommendations were made:

- Colleges of Education should ensure that teachers learn to design, develop, produce and use instructional media during their training and retraining programmes.
- Niger State Science and Technical Schools Board should endeavour to provide enough instructional media in technical schools.
- Technical teachers should be motivated and encouraged to use instructional media.
- Proper foundation should be laid for the use of a variety of instructional media at the teacher preparation level.

- Government should fund the Educational Resource Centres (ERC) properly in order to enable it perform its primary functions, that is organizing refresher courses, workshops and seminars for teachers, create conducive atmosphere for teachers to come to the centre to design, develop and produce their own instructional media.
- Government should also endeavour to provide computers for technical schools In Niger State.

References

- Abubakar, M. I. (2002). *A survey on the availability and utilization of print and non-print instructional materials in technical and vocational schools in Niger State, Nigeria*. Unpublished M. Tech. thesis, department of science and science education, Federal University of Technology, Minna.
- Adeniran, A. A. (2002). *New trends in access to Information communication technology. Its implication to the continent of Africa*. STAN Proceedings of the 43rd Annual conference and inaugural conference of CASTME Africa, 2002, Heinemann Educational Books (Nigeria) PLC.
- Ajewole, G. A. (2002). *The place of instructional technology in nursery and primary education*. A paper presented at a seminar organised by Association for Formidable Educational Developments, Lagos 3rd December.
- BaKare, A (2002). *The teaching of graphical communication in Nigeria technical schools*. An unpublished M.Ed. thesis University of Bath, Bath. England.
- George, L. (2002). *Vocational and practical arts education*. New York; Harper and Row Publishers.
- Okorie, J. O. (2001). *Vocational Industrial education: Bauchi: League of researchers in Nigeria*. (LRN) publishers,
- Olaitan, S, O. (2002). *The crisis of funding vocational and technical education programmes In Nigeria*. A paper delivered at the University of Nigeria lecture series.