Technical Teachers' Perception of Factors Affecting Practical Skill Acquisition among Technical College Graduates in Adamawa State Nigeria

Kumazhege, Stephen Zira[1], Egunsola, A. O. E. [2]

[1]Department of Technology Education, [2]Department of Vocational Education,
ModibboAdama University, Yola, Adamawa State, NIGERIA.

[2] dregunsola2010@yahoo.com, [2]dregunsola@gmail.com

ABSTRACT

The purpose of this study was to investigate technical teachers' perception of factions affecting practical skill acquisition among technical college graduates in Adamawa state, Nigeria. The study was guided by four research questions. The population for the study was 41 trade course technical teachers from three technical colleges in the state. Whole population was used for the study. A structured questionnaire was used for data collection. The data for the study was analyzed using Mean and Standard Deviation. The findings were: technical teachers agreed that their schools lacked infrastructures such as workshops, classrooms, libraries, power supply and workshop tools and equipment for practical instructions. They also agreed that they can handle the practical aspect of their lessons effectively. The teachers were also not satisfied with their students' disposition to practical lessons in the various trades. It was recommended that government should take a bold step towards providing classrooms, libraries and functional workshops with standby generators for all the trades in the technical colleges. The government should come up with a development of teacher trainer programme whereby teachers of technical vocational education can be trained more in their specific skill areas practically.

Keywords: Practical skill acquisition, technical college graduates, technical teachers

INTRODUCTION

Practical skill acquisition is best defined from the learner as the process of obtaining knowledge of technical and practical nature from an individual, group or institution that can impart such knowledge (Ubong and Oguzor, 2007). Skills are more commonly used in the context of trade, occupations and vocations and are usually aimed at practical purposes. Technical Colleges, the domain of practical skill acquisition are regarded as the principal vocational institutions in Nigeria. They give full vocational training intended to prepare students for entry in to various occupation (Okoro, 1999). According to him, technical college train craftsmen in motor vehicle mechanics (MVM), plumbing, carpentry and joinery, cabinet making, painting and decorating, welding, electrical installation, radio and television (TV) repair, building construction and others. On completion of the course of training, it is expected that students will obtain work in industries or establish business on their own.

The National Board for Technical Education (NBTE) introduced a new curriculum for all technical colleges. The new curriculum is presented in modules and students are certified as having successfully completed the National Technical Certificate (NTC) course or the Advanced National Technical Certificate (ANTC) course when all the relevant modules have

been passed. It is hoped that this new curriculum will produce trained technical manpower at the various levels and in various technical fields.

The National Policy on Education (FRN, 2004) places considerable emphasis on vocational and technical education, practical skills acquisition, and lifelong education. The document

ISSN: 2307-3721, eISSN: 2307-3713

submits that technical and vocational education as a composite concept is used as a comprehensive term referring to those aspects of educational process involving obtaining knowledge of technical and practical skills in addition to general education. It further emphasized on the study of technologies and related sciences, and acquisition of practical skills, attitudes, and knowledge relating to occupation in various section of economics and social life.

The leaning toward greater practice rather than theory informs the American system of vocational education. The bottom line is practical application of what is taught, that is, the relevance and utility of technical and vocational education lies in the practical application of what is taught. Teachers, curricula and Schools teaching technical and vocational courses have to emphasize the practical aspect of the different specialities in technical and vocation education (Ubong and Oguzor, 2007).

Investing in education and skill for men and women to help economies to achieve dynamic growth with quality jobs is a pressing priority throughout the globe. At the 2008 International Labour Conference, the International Labour Organization (ILO) tripartite constituency of government, employers and workers adopted a set of conclusions squarely focused on this challenge. These conclusions provide practical guidance for strengthening education, vocational training and life-long learning, and a central pillar of employability for workers and sustainability for enterprises within the Decent Work Agenda (ILO, 2008).

In Nigeria, education is recognized as an instrument "per excellence" for effective national development (FRN, 2004). The National Policy on Education set the objective for graduates of technical college institutions to be "immediately employable". However, since the inception of the policy, some major constraints to its effective implementation have been identified to include: dearth of qualified teachers, lack of adequate teaching materials, equipment and tools (Ammani and Ogunyinka, 2011).

Consequently, instructions in technical colleges today have remained essentially devoid of practical skills in the different trades. The implication is that technical colleges are graduating students with inadequate or complete lack of practical skills in the various trade areas. This portrays a bleak future for the attainment of the lofty goals of the National Policy on Education, of making technical college graduates "immediately employable" or self-employed. No wonder with the three technical colleges in Adamawa State, there are still high number of technical college drop-out roaming the streets in the State instead of contributing their own quota to national development!

PURPOSE OF THE STUDY

The purpose of this study is to investigate technical teachers' perception of the factors which militate against practical skill acquisition among graduates of technical colleges in Adamawa State. The specific objectives are to:

1. determine the availability of infrastructures for the teaching/learning of practical skill in technical colleges
2. find out the adequacy of workshop personnel and instructional materials needed for the teaching/learning of practical skill in the technical college workshops
3. determine the factors related to teachers that affect the teaching/learning of practical skill
4. find out effect of learner's disposition on the teaching/learning of practical skill

In line with these specific objectives, the following research questions were also formulated:

ISSN: 2307-3721, eISSN: 2307-3713

a. What are the infrastructures available for the teaching and learning of practical skill in technical colleges?

b. To what extent are the workshop personnel and instructional materials for practical lessons adequate for the teaching and learning of practical skill?

c. What are the factors related to technical teachers that affect the teaching/learning of practical skill?

d. What effect does learners' disposition have on the teaching/learning of practical skill?

METHODOLOGY

The area of study is Adamawa State, situated in North Eastern Nigeria; it is located between latitude 7^{o} and 11^{o} N and between longitude 11^{o} and 14^{o} E (Adebayo and Tukur, 1999). The study covered the three technical colleges in the state, namely: Technical College Mubi, Technical College Numan and Technical College Yola. The study covered learners' disposition, quality and quantity of teachers, infrastructures and instructional facilities. The study used descriptive survey research design because the study was interested in observing the sampled subjects in their natural environment without any attempt to modify, manipulate or control them (Asika, 1991).

The population of the study was 41 technical teachers teaching trade courses in Adamawa State Technical Colleges in 2010/2011 session. Purposive sampling technique was used to include the whole population in the study. The instrument for the study was a researcher designed structured questionnaire. The scoring scale of the instrument was meant to elicit the respondents' level of agreement on the listed items. Five experts from Technology Education Department, Modibbo Adama University of Technology Yola validated the content, language, relevance and adequacy of the items on the questionnaire.

The comments and suggestions of the experts were considered for improving the quality of the instrument. A pilot study was carried out in the Federal Science and Technical College, Michika to determine the reliability of the instrument. The split-half method was used and it gave a reliability coefficient of 0.68.

A total of 41 copies of the questionnaire was distributed, 34 were filled and returned (83 %). The information collected was analyzed using Mean and Standard deviation. The mean was interpreted based on the scaling points of the theory of true limits of real numbers. This means that all factors with mean scores equal to or greater than 3.50 were regarded to positive effect on students' practical performance (i.e. not a factor responsible for the students' inability to perform practically well in their area of specialization). Any factor with mean below 3.50 was considered unsatisfactory and regarded to have negative effect on the students' performance (i.e. factor considered responsible for the students' inability to perform practically).

RESULTS

The responses of technical teachers in table 1 showed that there were no adequate infrastructures in Adamawa State Technical Colleges for teaching of practical skills. All the six items presented on the availability of infrastructures have mean ratings below 3.50. Therefore, all the teachers agreed that inadequacy of infrastructures affect the graduates of Technical Colleges negatively in their practical skill acquisition.

ISSN: 2307-3721, eISSN: 2307-3713

Table 1: Technical Teachers Mean Responses on Availability of infrastructures in Technical Colleges N=41

S. No	*Factor*	*X*	*SD*	*Remarks*
1	Standard workshops to support practical skill acquisition in colleges.	1.3	2.88	*Not Available*
2	Workshops for various trades available for practical lessons.	2.85	1.16	*Not Available*
3	College has standby power generating plant for practical lessons.	2.39	1.31	*Not Available*
4	Workshops are usually opened for students' use every day.	2.39	1.01	*Not Available*
5	The college has a functional library .	3.48	1.16	*Not Available*
6	The classrooms/workshops are conducive for instruction .	2.42	1.21	*Unsatisfactory*

Table 2: Technical Teachers Mean Responses on the Adequacy of Workshop Personnel and Instructional Materials in Technical colleges N=41

S. No	*Factor*	*X*	*SD*	*Remarks*
1	Tools and equipment for practical lessons are adequate.	2.56	1.00	*Inadequate*
2	School Library adequately support practical lessons.	2.25	0.97	*Inadequate*
3	Teachers have adequate practical textbooks in colleges.	2.19	0.95	*Inadequate*
4	College has qualified technologists for practical lessons.	2.74	0.93	*Inadequate*
5	Adequate workshop attendants who assist in practical lessons.	2.74	0.93	*Inadequate*
6	Students engaged in independent practical projects .	2.26	0.34	*Inadequate*

The teachers' mean responses on all the items on adequacy of workshop attendants and instructional materials in Technical colleges were rated below 3.50.The highest were 2.74, that is qualified technologists and workshop attendants who assist during practical lessons. While item number 3 has the least mean rating of 2.19 revealing lack of practical textbooks for teachers' use to teach practical lessons.

Table 3: Technical Teachers Mean Responses on Teacher – related Factors that affect the Teaching of Practical Skill in Technical Colleges N=41

S No	*Factor*	*X*	*SD*	*Remarks*
1	Qualified teachers for trade courses are available in colleges.	3.71	1.07	*Agreed*
2	Teachers have training required to teach practical skills.	3.76	1.02	*Agreed*
3	Quality of instruction in practical skill is adequate.	3.48	1.10	*Disagree*
4	Trade teachers have interest in teaching practical lessons.	4.67	1.27	*Agreed*
5	Teaching methods used by teachers support skill learning.	3.52	0.93	*Agreed*
6	Trade teachers are well motivated towards practical lessons.	2.94	1.10	*Disagree*
7	Trade teachers are busy with other duties in the college.	2.97	1.24	*Disagree*

ISSN: 2307-3721, eISSN: 2307-3713

Table 3, technical teachers mean responses on teacher-related factors items 1, 2, 4 and 5 were positively rated. It means these factors do not affect practical skill acquisition negatively. The teachers' mean responses on the remaining items on Table 3 were negative, having a mean below 3.50. The negatively rated factors were considered to affect practical skill acquisition among Technical College students negatively.

Table 4: Technical Teachers Mean Responses on Technical College Students' Disposition N=41

S/No	*Factor*	*X*	*SD*	*Remarks*
1	Good number of students attend technical drawing lessons	3.21	1.13	*Unsatisfactory*
2	Students attend practical lessons in their areas	3.38	1.14	*Unsatisfactory*
3	Students are punctual to practical lesson classes	3.06	1.18	*Unsatisfactory*
4	Students show much interest in their practical lessons	3.42	1.10	*Unsatisfactory*
5	Students dread practical aspects of their courses	2.88	0.95	*Unsatisfactory*
6	Students are intellectually prepared for practical in their areas	3.19	1.07	*Unsatisfactory*
7	Students are physically prepared for practical lessons	3.45	1.18	*Unsatisfactory*

The responses of technical teachers on Table 4 showed that the Technical College students' disposition affect their practical skill acquisition negatively, since the mean ratings were all below 3.50.

MAJOR FINDINGS OF THE STUDY

The major findings of the study are:

a. Technical College teachers rated the availability of infrastructure that support practical lessons in their colleges such as workshops, power source, Library and conducive classroom unsatisfactory because the facilities are not available in Schools; thus, affect students' practical skill acquisition negatively.

b. The teachers rated the adequacy of tools and equipment, libraries, qualified technologists, workshop attendants and instructional materials for practical unsatisfactory because all the items considered were inadequate and these affect students' practical skill acquisition negatively.

c. The teachers rated the factors related to teachers like quality of practical lessons, motivation to teach practical lessons and co-curricular activities in the College unsatisfactory while related factors like teacher qualification, training, adequacy, interest and teaching methods were rated satisfactory.

d. All items raised for students' disposition for this study were rated unsatisfactory for practical lesson by the teachers. Thus, the dispositions of the students affect their skill acquisition negatively.

DISCUSSION OF THE FINDINGS

The results indicated that Technical College graduates in Adamawa State pass through the Technical College without having the needed practical experience since the Colleges do not have the required infrastructures and other related tools and equipment for

ISSN: 2307-3721, eISSN: 2307-3713

Colleges do not have the required infrastructures and other related tools and equipment for the teaching and learning of the practical skills. This is not in line with the conclusion of the International Labour Organization (ILO) Conference of 2008 which stated that, nations must integrate skill development into national and sector development strategies (ILO, 2008).

Students' lack of interest in practical lessons as revealed by this study may be attributed to the lack of conducive atmosphere for practical lessons in the schools. The basic idea behind Technical College training is to develop in students' manipulative skills, creativity, etc, the finding revealed this objective could not be attained due to lack of basic adequate facilities for training. This finding is also in line with Ibeneme and Eze (2010), who reported that the major factors hindering the growth of technical and vocational education in Nigeria are: lack of adequate qualified personnel, inadequate facilities, more theoretical training given to students, etc among others. Thus, the placement of technical vocational education as a programme which will lead to the acquisition of practical skill (FRN, 2004) as well as the realization of the vision 2020 through technical vocational education will continue to be a mirage (Ibeneme and Eze, 2010) except the status quo is corrected and improved.

The responses of the technical teachers in this study indicated that they have the training required to impart practical skill to their students, but they also agreed that the qualities of their practical instructions are unsatisfactory. This could be as a result of many factors as found out by this study. The extent to which facilities are provided will determine, to a large extent, the attainable quality of education, training and graduates to be produced. The inability to provide facilities can force the introduction of undesirable alternative measures that will undermine the standard of the overall set goals. This implies the need for provision of relevant and adequate training facilities, personnel and infrastructures to achieve the objectives of technical and vocational education can not be over emphasized.

CONCLUSION

This study has identified gross inadequacy of infrastructural facilities, tools, equipment, workshop attendants and appropriate students' disposition. Lack of these has caused the dearth of practical skills in technical college graduates. Quality teachers produce quality graduates and it enhances better performance. Technical College is certainly a place where practical skill in the various trade should begin, hence the teaching of these trades demands workshop, tools and equipment.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations were made:

1. Adamawa State government should take a decisive measure towards the provision of functional workshops for all the trade courses in all Technical Colleges.
2. The government should consider merging the newly established Technical Training Services (TTS) Institutions with the existing Technical Colleges so as to enable the technical teachers and workshop attendants in the technical colleges have a better practical experience from foreign counter parts in the TTS Institutions
3. The current Technical Teacher Training Programme (TTTP) in Nigeria Schools is mostly theoretical, the development of training programme whereby teachers of Technical Vocational Education subjects can be trained in their specific skill area practically should be considered.

ISSN: 2307-3721, eISSN: 2307-3713

REFERENCES

[1] Adebayo, A. A.,&Tukur, A. I. (1991). *Adamawa in Map.*Yola: Paraclete Publishers.

[2] Ammani, A. A.,& Ogunyinka, A. A.(2011). Sustainable Development, Formal Education and Skill Acquisition: The Case of Agricultural Science in Kaduna Metropolis. *Journal of Sustainable Development in Africa*, 13 (4): 363 – 367.

[3] Asika, A. (1991). *Research Methodology in Behavioural Science*s. Lagos: Longman Nigeria.

[4] Federal Republic of Nigeria (FRN) (2004). *National Policy on Education.* Lagos: NERDC.

[5] Ibeneme, O. T., &Eze, C. P. (2010). Revitalizing technical and vocational education for the achievement of Vision 2020 in Nigeria. *Nigeria Journal of Curriculum and Instruction*, 17(1): 1 – 5.

[6] International Labour Organization (ILO) (2008). *Conclusion on skills for improved productivity, employment Growth and development.* Geneva: International Labour Office.

[7] Okoro, O. M. (1999). *Principles and methods in vocational and technical education.* Nsukka: University Trust

[8] Ubong, B.,& Ogusor, N. S. (2007). Vocational education and development of adult learners in Nigeria through skills acquisition schemes. Journal of Science and Education Policy, 1 (1); 263 – 275.

ISSN: 2307-3721, eISSN: 2307-3713