

PROFESSIONAL DEVELOPMENT PROGRAMME FOR IMPROVING THE EFFECTIVENESS OF TEACHERS IN NIGERIAN TECHNICAL COLLEGES.

**¹Ike, Joshua O., ²Akpokiniovo, ³Duke E., ⁴Opeyemi, Odewale & ⁵Chikwendu
Chukwunonso**

Department of Industrial Technical Education, University of Nigeria, Nsukka.

Abstract

The study focused on finding out the impact of professional development programme for improving the effectiveness of teachers in Nigerian technical colleges. The study was carried out in some selected Government Technical Colleges in Abia, Enugu and Anambra States. Two purposes of the study were stated to guide the study. The population for the study was 500 automobile/electrical installation trade teachers in the study area. Simple random sampling technique was employed to select 110 teachers of automobile mechanics/electrical installation trades and was used for the study. The instrument for data collection was a questionnaire developed from literature review and was validated by three experts from the Department of Industrial Technical Education, University of Nigeria, Nsukka. The questionnaire was administered on 110 automobile mechanics/electrical installation teachers from Abia, Enugu and Anambra States, and was retrieved and analyzed using mean. The study revealed among others that the developed re-training programme impacted positively on the ICTs usage and enhanced the teachers' technical skills in teaching and learning process. Recommendations were given based on the findings from the study.

Introduction

Teachers are regarded as the major personnel that are saddled with the function of implementing the planned curriculum in formal institution. It is the statutory duty of teachers based on their training to impart knowledge and skills to the learners in the classroom. According to Udofot (2005), teachers hold the key that unlocks the door to national development and progress in a nation. The Federal Republic of Nigeria [FRN, (2013)] as mentioned in the National Policy on Education stated that no education system can rise above the quality of its teachers even at the Technical College level.

Technical college is where different types of Vocational and Technical Education subjects are offered. National Board for Technical Education (NBTE)(2001) described technical colleges as institutions where students are trained to acquire relevant knowledge and skills in different occupations for employment in the world of work. Okoro (2006) explained that these institutions are established to give full vocational training to students. Nwachukwu, Bakare & Jika (2009) added that relevant and adequate knowledge, skills and attitude for employment under the guidance of teachers in a related occupation are provided for students in Technical Colleges.

Technical Colleges are set up to train students by their teachers using available facilities for training.

The goals of technical colleges are to provide trained manpower in the applied sciences, technology and business particularly at craft, advanced craft and technician levels; provide the technical knowledge and vocational skills necessary for agricultural, commercial and economic development; and give training and impart the requisite skills to individual who shall be self- reliant economically. Olaitan (1996) explained that Technical Colleges stimulate technological and industrial development by developing and utilizing technologies for industrial and economic development in the various trades at the technical colleges. The following programmes/trades e.g. woodwork, Metalwork, electrical/electronic, Painting and Decoration, Radio and Television work, Fabrication and welding, Carpentry and joinery, Textile trade, furniture making, printing craft practice, Graphic arts, Building construction, Automobile and Electrical Installation and Maintenance Work trades are offered in Technical Colleges in order to produce skill craftsmen for our economy and national development.

Ike, J.O., Akpokinovo, Duke, E., Opeyemi, O. & Chikwendu, C.

Electrical Installation and Maintenance work is one of the trade courses offered in Technical Colleges in Nigeria. Electrical installation and maintenance work deals with electrical machines, tools devices and systems in which current or a flow of electron takes place through conductors and metals. Electrical installation and maintenance work involves the design and development of high-voltage systems and components such as motors, generators, heaters, electrical power transmission and distribution systems, radio wave and optical systems, converters and control system for operating light and heavy machinery (Tom, 2004).

www.cetvetar.unn.edu.ng cetvetar.unn@unn.edu.ng

Automobile technology is a branch of engineering in which we study all about the automobiles and have practice to propel them. An automobile is a selfpropelled vehicle driven by an internal combustion engine and is used for transportation of passengers and goods on ground (Rajput, 2010). The modern automobile, in general, is essentially a transportation equipment unit. It consists of a frame supporting the body and certain power developing and transmitting units which are further supported by tyres and wheels through springs and axles.

All these trade subjects are taught by technical college teachers. Technical College teachers are individuals who have acquired adequate skills and knowledge in an occupational area and fully trained to impart skills and knowledge to others. These teachers may differ in their opinion on the selection of components of a good training programme. Ololube (2011) stated that teachers who are academically qualified and those that are professionally qualified are engaged in carrying out instructional process in schools in Nigeria. Ololube (2011) further stated that academically qualified teachers are non professionals and have academic training as a result of enrolment into an educational institution and obtained qualifications such as HND, B.Sc., B.A, M.A, M.Sc among others. While professionally qualified teachers, are teachers who got academic training that gave them professional knowledge, skills, techniques, attitude as different from the general education (Hardre and Reeve, 2003).

Non professional or academically qualified teachers are mostly found in technical colleges in Nigeria. These teachers only possess various academic qualifications but still lack professional training and competencies (pedagogical and technical skills) for effective teaching of technical courses to their students. These teachers lack competencies for effective teaching and have little knowledge on the application of some modern ICTs facilities such as starboard and projectors for the teaching of technical courses in technical colleges (Hardre and Reeve, 2003). Hestated that less effort have been made to build their capacities.

Lack of professional training and competencies among these teachers may have led to poor performance of students in public examinations such as National Business and Technical Education

Ike, J.O., Akpokiniovo, Duke, E., Opeyemi, O. & Chikwendu, C.

Board (NABTEB). The students' performance in NABTEB result in Technical Colleges in 2014 was poor. National Business and Technical Education Board (2013) reported that a comparative analysis of the results show a 26.12 percent failure, reflecting an increase of 0.30 per cent against 25.85 percent in the previous year 2013. Professional programme development is an ongoing systematic process that one follows as he/she plans, implements and evaluates educational programmes. Momoh (2005) explained that the need for development of programmes in technology education has been recognized worldwide as a means of developing human resources for better technological consumption, efficiency and increased productivity. Anaeke (2000) stated that training gaps create learning opportunities that can be bridged by proper design of manpower professional development training programmes.

Professional development programme therefore is a systematic approach of improving teachers for effective teaching of technical courses in order to produce competent graduates. The Online Business Dictionary (2013) defined professional development as the process of improving and increasing the capabilities of staff through access to education and training opportunities in the workplace, through outside organization or through watching others perform the job. Austin Community College (2013) sees professional development as the continuous process of acquiring new knowledge and skills that relate to ones' profession, job responsibilities or work environment. Content of professional development programme therefore is the list of technical and pedagogical competencies or skills required by teachers for proficiency in the teaching of students in technical colleges. Professional Development Programme (PDP) is a retraining package prepared to build the capacity of teachers in technical colleges especially in automobile trades (Ogunmilade, 2016). Hedeveloped and validated professional development programmes for retraining teachers of automobile trades in technical colleges in Lagos State. The study focused on determining the objectives of professional development programme/contents, identified teaching strategies for implementing professional development programme/relevant facilities as well as determining the evaluation techniques for assessing the professional development programme. This programme was developed as a result of failure of teachers to effectively implement automobile trade subjects in technical colleges in Lagos State.

Ololube (2011) also explained that lack of professional teachers in technical colleges is partly responsible for the inability of graduates of technical colleges to acquire needed technical skills to cope with challenges in modern workplace. The technical teachers in the technical college could be retrained using professional development programme in their various trade areas to improve the present situation. Although series of professional training have been given to technical teachers in Nigeria but unfortunately, these has not made any significant headway (Ogbiji, 2006). The teachers perform crucial roles in any educational sector. According to Uwaifo (2009) education unlocks the door of modernization but it is the teacher who holds the key to the door. Teachers are the hub or pivot on which any successful educational programme revolves and if teachers perform their task dutifully, there will certainly be improvement in technical skill. Ogbiji (2006) stated that teachers should be abreast with the appropriate level of competence required of their trade, and they should be capable of turning out into the society students who have acquired literacy, numerical, manipulative and communicative skills.

Ike, J.O., Akpokiniov, Duke, E., Opeyemi, O. & Chikwendu, C.

Teacher must first receive adequate training and retraining in order to enhance his or her competence. Thus, the extent to which the school achieves its aims and objectives is based on the quality of teachers (Ogbiji, 2006). Consequently, to perform successfully as teachers of vocational and technical education, constant training and re-training programme has been on-going to continually keep them abreast with the changing dynamics in teaching and learning modalities, to improve professional competence of technical teachers in Nigeria (Uwaifo, 2009). Therefore, the need to find out the impact of professional development programme on effectiveness of teachers at Technical Colleges in three States of South-East Nigeria.

Purpose of the Study

The purpose of this study is to determine the impact of professional development programme on productivity of technical teachers in Nigeria. Specifically, the study sought to determine: □ The Extent Professional Development Programme for Re-training teachers of automobile trades in Nigeria has enhanced their productivity.

□ The Extent Professional Development

Programme for Re-training teachers of Electrical Installation and Maintenance work in Nigeria has enhanced their productivity.

Methodology

Descriptive survey design was used for the study. Descriptive survey research design according to Eze (2005) is a plan of study that enables the researcher to use reliable techniques to collect data from a well defined population or systematically selected segment of the population for the purpose of determining the attributes for the population. The descriptive survey research aim at identifying the characteristics of the defined population with respect to specific variables, hence, it is appropriate for this study because the study aims at determining the impact of professional development programme on productivity of technical teachers in Nigeria. The study was carried out in some selected Government Technical Colleges in Abia, Enugu and Anambra States. The population for this study is 500 automobile mechanics/electrical installation and maintenance work teachers in South East Nigeria.

Simple random sampling technique was used to sample the respondents from the total population in the study area. The sample size for the study is 110 respondents comprising sixty (60) teachers of automobile mechanics and fifty (50) teachers of electrical installation and maintenance work. The instrument used for data collection was Impact of Professional Development Programme on

Effectiveness of Teachers Questionnaire (IPDPETQ) developed by the researcher. The instrument for data collection was face validated by three experts from the Department of Industrial Technical

Ike, J.O., Akpokiniov, Duke, E., Opeyemi, O. & Chikwendu, C. Education, Faculty of Vocational & Technical Education, University of Nigeria, Nsukka. The questionnaire was administered personally to the respondents, by the researchers with the help of three other research assistants each from the State in the selected study area. The questionnaire was retrieved back immediately. Data collected was analyzed using mean, items that has 3.50 and above were considered agreed while items that has below 3.50 were considered disagreed.

Results

Research Question 1

To what extent does the Professional Development Programme for Re-training Auto Mechanics teachers in Nigeria enhance their productivity?

The data for answering research question 1 is presented in table 1.

Table 1: Impact of professional development programme on effectiveness of teachers.

S/N	Item Statements	Responses	
		Mean(\bar{x})	Remarks
	After using the developed training program, the teachers of Automechanics are able to:		
1	State the steps for developing relevant instructional materials based on the contents of the lesson	4.63	Strongly Agreed
2	State the steps in Setting up projector for teaching automechanics	3.81	Agreed
3	Make use of star board for teaching automechanics in a class	3.55	Agreed
4	Prepare good power point presentation using laptops	4.71	Strongly Agreed
5	Use power point to teach automechanics classes	4.59	Strongly Agreed
6	Apply interactive board for teaching auto mechanics to students in technical colleges	3.51	Agreed
7	Use modern tools and equipment for technical skills in auto mechanics workshop.	4.65	Strongly Agreed
8	Rank students of automechanic in a given test using Microsoft excel or SPSS	3.90	Agreed
	Administer Practical questions to automechanic students via online	3.74	Agreed
10	Assign grades to students of automechanic using ICT facilities	4.82	Strongly Agreed
11	Use data validation computer technique to validate automechanic students' responses	4.90	Strongly Agreed
12	Apply wrap text when grading students in automechanic examination	4.61	Strongly Agreed
13	Collate automechanic students' results using ICTs	4.74	Strongly Agreed
14	Apply conditional formatting when grading students in automobile exam and assignment	3.82	Agreed
15	Present automechanic lesson using video conferencing	3.62	Agreed
16	Apply interactive television to deliver automechanic lessons	3.98	Agreed

Ike, J.O., Akpokiniovo, Duke, E., Opeyemi, O. & Chikwendu, C.

It was revealed in table 1 above that the respondents agreed to the items, because they had a mean ranged of 3.51 to 5.00, which is above the cutoff point of 3.50. This indicated that the Professional Development Programme for Re-training Auto Mechanics teachers in Nigeria has effectively enhanced their productivity.

Research Question 2

To what extent does the Professional Development Programme for Re-training Electrical Installation and Maintenance work teachers in Nigeria enhance their productivity?

The data for answering research question 2 is presented in table 2.

Ike, J.O., Akpokiniov, Duke, E., Opeyemi, O. & Chikwendu, C.

Table 2: Impact of professional development programme on effectiveness of teachers.

S/N	Item Statement	Responses	Remarks
	After using the developed training program, the teachers of Mean Electrical Installations are able to:		
1	State the steps for developing relevant instructional materials based on the contents of the lesson	4.61	Strongly Agreed
2	State the steps in Setting up projector for teaching Electrical Installations	5.00	Strongly Agreed
3	Make use of start board for teaching Electrical Installations in a class	4.92	Strongly Agreed
4	Prepare good power point presentation using laptops	4.76	Strongly Agreed
5	Use power point to teach Electrical Installations classes	3.54	Agreed
6	Apply interactive board for teaching Electrical Installations to students in technical colleges	4.69	Strongly Agreed
7	Use modern tools and equipment for technical skills in Electrical Installations workshop.	4.84	Strongly Agreed
8	Rank students of Electrical Installations in a given test using Microsoft excel or SPSS	4.76	Strongly Agreed
9	Administer Practical questions to Electrical Installations students via online	4.85	Strongly Agreed
10	Assign grades to students of Electrical Installations using ICT	4.68	Strongly Agreed facilities
11	Use data validation computer technique to validate Electrical Installations students' responses	4.73	Strongly Agreed
12	Apply wrap text when grading students in Electrical Installations examination	4.93	Strongly Agreed
13	Collate Electrical Installations students' results using ICTs	4.71	Strongly Agreed
14	Apply conditional formatting when grading students in Electrical Installations exam and assignment	4.58	Strongly Agreed
15	Present Electrical Installations lesson using video conferencing	4.87	Strongly Agreed
16	Apply interactive television to deliver Electrical Installations lessons	3.62	Agreed

It was revealed in table 2 above that the respondents agreed to the items, because they had a mean ranged of 3.51 to 5.00, which is above the cutoff point of 3.50. This indicated that the Professional Development Programme for Re-training Electrical Installations teachers in Nigeria has effectively enhanced their productivity.

Discussions

Based on the findings on impact of professional development programme on effectiveness of teachers of automobile trades in Nigerian technical colleges, it was found that the retraining programme impacted positively as the automobile trade teachers were able to: state the steps for developing

Ike, J.O., Akpokiniov, Duke, E., Opeyemi, O. & Chikwendu, C.

relevant instructional materials based on the contents of the lesson, state the steps in setting up projector for teaching automechanics, make use of start board for teaching automechanics in a class, prepare good power point presentation using laptops, use power point to teach automechanics classes, apply interactive board for teaching auto mechanics to students in technical colleges, assign grades to students of automechanic using ICT facilities, collate automechanic students' results using ICTs etc after undergoing the professional development programme for re-training auto mechanics teachers in Nigeria for enhanced productivity. According to Ogbiji, (2006), teachers should be abreast with the appropriate level of competence required of their trade and they should be capable of turning out into the society students who have acquired literacy, numerical, manipulative and communicative skills. Similarly, the findings on impact of professional development programme on effectiveness of teachers of Electrical Installation trades in Nigerian technical colleges found that the retraining programme impacted positively as the Electrical Installation trade teachers were able to: state the steps for developing relevant instructional materials based on the contents of the lesson, state the steps in setting up projector for teaching Electrical Installation, make use of start board for teaching Electrical Installation in a class, prepare good power point presentation using laptops, use power point to teach Electrical Installation classes, apply interactive board for teaching Electrical Installation to students in technical colleges, assign grades to students of

Electrical Installation using ICT facilities, collate Electrical Installation students' results using ICTs. This is in agreement with Uwaifo (2009), he said teachers are the hub of or pivot on which any successful educational programmes revolves and if teachers perform their task dutifully, there will certainly be improvement in their technical skill. Technical Colleges teachers could be retrained using professional development programme in their various trade areas to improve teaching and learning (Ololube, 2011).

Conclusions

Based on the data analysis and major findings, the following conclusions are drawn. The automobile trade teachers agreed that professional development programme on effectiveness of teachers of automobile trades in Nigerian technical colleges impacted positively on their ICTs usage in the course of teaching and learning. The Electrical Installation trade teachers agreed that professional development programme on effectiveness of teachers of Electrical Installation trades in Nigerian Technical Colleges greatly enhanced their productivity and impacted their usage of ICT in teaching and learning.

Recommendations

- Nigerian Technical Colleges should ensure constant organization of workshops/ seminars/ capacity building for the automobile/electrical installation trades teachers to teach them about professional development programme for improving the effectiveness of teachers in Nigerian Technical Colleges.
- Government, NGOs, Banks and individuals should come to the aid of the automobile/Electrical Installation trade by establishing their workshops to meet the standard of a modern day automobile/Electrical Installation workshop.

Ike, J.O., Akpokiniov, Duke, E., Opeyemi, O. & Chikwendu, C.

References

- Anaekwe, M. C. (2000). Information Technology: A Tool for Sustainable Development in Science Education. *Global Communicator*, 1(1): 32.
- Hardre, P. L., and Reeve, J. (2003). A Motivational Model of Rural Students' Intentions to Persist In, Versus Drop Out, of High School. *Journal of Educational Psychology*, 95 (2) 347-356.
- Momoh, O. A. (2005). *Assessment of quality technical and vocational education in Nigerian polytechnics. Paper presented at the 31st annual conference of international association of educational assessment (IAEA) on the theme: Assessment and the future of schooling and learning held at Abuja, Nigeria, 4-9.*
- National Board for Technical education (NBTE, 2001). *Revised National Technical Certificate (NTC) program radio, television and electronic servicing work curriculum and coursespecification.* NBTE Press.
- National Business and Technical Examination Board (NABTEB) (2013). *May/June 2007NTC/NBC examinations Report.* Benin City: Festa printing press.
- Nwachukwu, C.E., Bakare, J. A. &Jika, F. O. (2009). Effective Laboratory Safety Practice Skills Required By Electrical and Electronics Students of Technical Colleges in Ekiti State. *APaper presented at the Annual Conference of Nigerian Vocational Association at Faculty of Education, University of Nigeria, Nsukka, November 22 – 25.*
- Ogbiji, J. (2006). *Educational Administration in the Classroom.* Cross River State Train the Trainer Workshop, Calabar.
- Ogunmilade, J. O. (2016). Professional Development ProgrammeFor Re-Training Auto Mechanics Teachers In Technical Colleges In Lagos State. Ph.D thesis, University of Nigeria, Nsukka.
- Okoro, O. M. (2006). *Principles and methods in vocational and technical education.* Nsukka: University Trust Publishers.
- Olaitan, S. O. (1996). *Vocational and Technical Education in Nigeria: Issues and Analysis* Onitsha: Noble Graphic Press.
- Ololube, N. P. (2011). *Benchmarking the Motivational Competencies of Academically Qualified Teachers and Professionally Qualified teachers in Nigerian Secondary Schools.* Department of Applied Sciences of Education, faculty of behavioural Sciences, University of Helsinki, Finland.
- Rajput, R.K. (2010). *A textbook of automobile engineering.* New Delhi: Laxmi Publications (p) Limited.
- Stockel, M. W. and Stockel, M. T. (1984). *Auto service and Repair.* Illinois: The Goodheart – WillcoxCompany, Inc.

Ike, J.O., Akpokiniovo, Duke, E., Opeyemi, O. & Chikwendu, C.
Uwaifo, V. O. (2009). Industrializing the Nigerian society through creative skill acquisition vocational
and technical education programme. *International NGO Journal Vol. 4 (4), 142-*
145.