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Perception of Technical and Vocational Education and Training (Tvet) Teachers' Usage of Modern Technology For Teaching.

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Abstract
Regardless of the fact that the Federal Government of Nigeria is taking proactive measures to provide various types of modern technology for effective professional practices, technical and vocational education and training (TVET) teachers do not seem to perceive these technologies for use in their teaching activities. The major objective of the study reported here was to examine selected variables as determinant of TVET teachers' perception of modern technology usage in teaching. The survey design was used and a population of 200 TVET teachers (130 males and 70 females) selected from three technical oriented institutions in Delta State, using the simple random sampling technique, while a 15-item questionnaire titled TVET Teachers Inventory (TVETTI) was also used. Mean scores and t-test statistic were used to answer research questions and test the hypotheses at 0.05 level of significant. The study revealed among others, that sex of TVET teacher does not affect their perception of modern technology usage in teaching. Based on the findings, it was recommended among others, that the sex of TVET teachers should not be taken into consideration when employing TVET teachers in educational institution/establishment.

Keywords: *Technical and Vocational Education and Training, modern technology, determinant, teaching, perception.*

Introduction

Teachers are the pivot of the educational process. Ukeje (1991), cited in Taofik (2012) reiterated this fact when he stressed that in developing nations, such as Nigeria teaching is a complex activity which unites together processes such as instructing and training by the overall intention of getting students to acquire knowledge, skills and acceptable mode of conduct. Hence it is the competence and art of the teacher that gives life and substance to any educational process. Presumably, the National Policy on Education recognizes the critical importance of TVET teachers as it declares that "no education system can rise above the level of its teachers" (FGN, 2004).

The Concept of TVET

Technical and vocational education and training (TVET) according to National Policy on Education (2013) 6th edition, asserted that it refers to those aspects of the educational processes involving, in addition to general education, the study of technologies and related sciences and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of the economic and social life. These forms of education are vital in the production manpower whose professional knowledge and skills are diverted into the provision of products and services in all sectors of the economy and the nation in general.

Ikenga (2015) emphasized that TVET does not only prepare an individual for employment opportunities but can be seen as a precursor of skills, knowledge and attitudes necessary for effective employment in specific occupations. TVET is currently an eminent issue in Nigeria today because this aspect of education does not only imply the ability to learn how to read and write but a process which emphases greatly on the continuous development of Nigerian in vocational, mentally and economically. TVET is also regarded as the bedrock of any national development and the issue of modern technology application in teaching and learning is considered a priority for other resource areas to be tapped. Okoli (2012) asserted that any education in this rapidly changing and competitiveness environment cannot be relevant without effective preparation of the new generation - both teacher and students – to make effective use of modern technology in their professional practices.

Modern Technology

Modern technology is referred to electronic and electromechanical devices, machines, gadgets, accessory and equipment. Modern technology has become a veritable tool in almost every work place, economy, education and in lives of individuals. Globally, there has been an exponential growth in the use of modern technology which has made pervasive impact in education (Okonigbo, Tugbokorowei and Idigun, 2015). It is therefore not surprising to find increasing attention, interest and huge investment being put into the use of modern technology in education all over the world. According to Gibson (2013), in an effort to use modern technology to improve educational implementation, a number of master plans on technological education have been produced in many countries such as, United States of America, England, Korea, Poland and many others. Such plans revealed that global education innovations in modern technology have been increasingly embedded within a broader framework of education that aimed to develop teachers' abilities and student's capabilities for self-learning, problem-solving, information seeking, critical thinking and analysis, as well as the ability to collaborate, communicate and learn.

The benefits of using modern technology in TVET according to Ezoem, (2015) include the fact that they offer new approaches to learning and making knowledge more accessible than ever before. For instance, computer-based learning education such as tele-learning, e-learning and tele-tutoring are key concepts in the new world of learning that promise to become stable pillars of our networked knowledge society. The most important innovations about the use of modern technology in TVET are the interaction and the visualization of course content, combined with freedom for fixing teaching times and locations. These new forms of teaching practices according to Daniel (2012) cover a board spectrum from computer-Based Training (CBT) that involves storing interactive study modules through the internet. Another modern technology innovation entails making video recordings of lecturers that can be down loaded from the internet at any time. These can be supplemented by explanatory animations that take students deeper into the subject with the help of a hyperlink. This also brings visual seminars which enable students who will never meet in reality to work together on specific subjects or projects. In the process they will perhaps receive feedback from the teacher via e-mail or question their lecturers in a chartroom. Hawkridge (2011) summed modern technology aided instruction as a way for human capacity to be expanded, built up, nourished and liberated by giving people access to tools and technology to enhance their wellbeing.

Statement of the Problem

Irrespective of the fact that the Federal Government of Nigeria (FGN) has taken giant steps to introduce modern technology in the education system, a lot of TVET teachers and students may not have the skill to operate and utilize these technologies. The non-usage of the available modern technologies for the classroom teaching has led to speculations that most TVET teachers may not have the technical know-how to utilize them. The researcher also discovered that various aspect of modern technology facilities are in educational institutions which are used for administrative purpose and not for teaching students. What has not been found is whether the sex of TVET teachers accounts for their interest in the use of modern technology for teaching. Rather could the age of TVET teachers be accountable for their non-usage of modern technology in teaching?

Purpose of the Study

The purpose of the present study was to examine the perception of TVET teachers' usage of modern technology for teaching. Specifically, the study was aimed at finding out whether:

1. Sex of the TVET teachers affects their modern technology usage in teaching.
2. Age of the TVET teachers affect their modern technology usage in teaching.

Research Questions

1. Does the sex of the TVET teachers affect their modern technology usage in teaching?
2. To what extent does the age of the TVET teachers affect their modern technology usage in teaching.

Hypotheses

Sex and age of TVET teachers do not differ significantly in their perception of modern technology usage in teaching.

Method

The descriptive survey design was used for the study. The population of the study comprised 200 of TVET teachers selected from three technical oriented institutions in Delta State (Federal College of Education (Technical) Asaba, Technical College, Issele-uku and Delta State Polytechnic, Ogwashi-uku) using the simple random sampling techniques. They were made up of one hundred and thirty (130) males and seventy (70) females. A 15 item questionnaire titled TVET Teachers' Inventory (TVETTI) was used. The questionnaire was validated by experts in education. The items were also given further test by a pilot study in another school from nearby state (Federal College of Education (Technical), Umunze in Anambra State). The test re-test method of reliability was used. The coefficient of 0.85 was derived with the Pearson product moment correlation. The scoring rate was Strongly Agree (SD), Agree (A), Disagree (D) and Strongly Disagree (SD) with the decision point of 2.50 made.

The instrument was administered directly by the researcher and collected from the respondents the same day it was given. All the instruments were returned and found to be usable. Simple mean score was used to answer the research questions while the t-test was used to test the hypothesis. The level of significant was fixed at 0.05.

Analysis

Table 1: Sex as a factor in TVET teachers' perception of modern technology usage in teaching.

Sex	N	$\overline{X}$	STD
Males	130	2.30	4.28
Females	70	2.66	3.55

From the table above, the sex of TVET teachers appear not to affect their perception of modern technology usage. The male TVET teachers recorded mean score of 2.70 does not differ significantly from the mean score of the female 2.66. The two groups appear to perceive modern technology usage in teaching.

Table 2: TVET teachers' perception of modern technologies usage in relation to age

Age	N	$\overline{X}$	STD
Under 40 years	137	3.05	2.50
Above 40 years	63	1.90	3.90

The above table indicates that the age of the TVET teaches affect their perception of modern technology usage in teaching. The younger TVET teachers that are under 40 years, with mean score of 3.05 are more inclined to use modern technology in teaching, than the older ones with a mean score of 1.90.

Hypotheses

Table 3, $H0_1$: There is no significant difference between TVET teachers' sex and their perception of modern technology usage in teaching.

Sex	N	$\overline{X}$	std	df	t-cal	t-crit
Males	130	2.70	4.28	488	0.11	1.549
Females	70	2.66	3.55			

From the above table, the calculated t-value of 0.11 is less than the critical t-value of 1.549. This indicates that the hypothesis between TVET teachers' sex and their perception of modern technology usage is accepted.

Table 4, $H0_2$: There is no significant difference between TVET teachers' age and their perception of modern technology usage in teaching.

Sex	N	$\bar{X}$	std	df	t-cal	t-crit
Under 40 years	137	3.05	2.50	488	5.00	1.549
Above 40 years	63	1.90	3.90			

From the above analysis, the calculated t-value of 5.00 is greater than the critical t-value of 1.549. Therefore $H0_2$ that there is no significant difference between TVET teachers' age and their perception of modern technology usage is rejected.

Discussion

The findings of this study reveals that sex of the TVET teachers do not affect their perception of modern technology usage in teaching. Tables 1 and 3 showed that there is no significant difference in the perception of TVET male and female teachers' modern technology usage. The sex therefore did not play any part in their perception. The finding contradicts earlier studies by Okonigbo, Tugbokorowei and Idigun (2015) who maintained that female basic technology teachers significantly experience more problems than male in using ICT elements for instructions. However, this study supports the findings of Nnamani (2012) that female lecturers like their male counterparts, shown enhance interest in the use of computer, electronic and electrical skills in instruction delivery.

The age of the TVET teachers on the other hand affect their perception of modern technology usage, as indicate on tables 2 and 4. The younger TVET teachers seem to perceive modern technology usage with a mean score of 3.05 as against the mean score of 1.90 for those above 40 years. This goes to show that the younger TVET teaches are more adventurous and eager to explore the world of modern technology usage which include internet, CD Rom, digital image, video conferencing to mention a few. With the modern technologies abound, Ogboka (2014) stated that it is expected that within a space of time, there should be great improvement in

technology teaching and learning and the TVET teachers are expected to implement such innovations. Finally, the findings support Adugbo (1989) who maintained that age of a worker affects the worker's output.

Conclusion

From the finding of this study, the following conclusions were drawn:

Despite the often held view of male superiority in electronic and electrical skills, there was no significant gender-based difference revealed by the study. This may be as a result of enhanced interest shown by the female TVET teachers like their male counterparts in the use of modern technology as they cannot afford to lag behind in this technological era.

The younger TVET teachers perceived modern technology usage in teaching than the older ones. This implies that more TVET teachers perceive modern technology use for teaching because most of our technological institutions are populated by TVET teachers in the category of under 40 years. This means that TVET teachers will continue to perceive the use of modern technology in teaching delivery.

Recommendations

For the promotion of effective teaching delivery by TVET teachers, and based on the findings of this study, the following recommendations are made:

1. Sex should not be considered in the employment of TVET teaches in any level of educational institution/establishment.
2. TVET teachers should be given the opportunity to go for in-service training and workshops on the use of modern technology for instruction delivery.
3. Older TVET teachers should be made to take refresher courses in the use of modern technology facilities for teaching which will be organized from time to time in their institutions.
4. Power supply should be provided always to avoid the frustration of not

utilizing available modern technology facilities for teaching.

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