

# Fostering a Functional Electronic Work Skills Acquisitions in Government Technical Colleges for Peaceful Co-Existence in South West, Nigeria

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**Abstract:-** The researcher examined fostering a functional electronic work skills acquisition in Government Technical Colleges (GTC) for peaceful co-existence in South West, Nigeria. Descriptive survey research design was adopted for the study. This is because the items seek for the views, opinions and information of the respondents. Three research questions were raised for the study. The targeted population for the study was hundred and fifty (150) electronic work instructors using stratified and ballot multi sampling technique to select five instructors from five GTCs in each of the state of South West geo-political zone of Nigeria were used for the study. There was no sample technique for the study because of the population small size. The instrument for the data collection was questionnaire tagged fostering a Functional Electronic work Skills Acquisitions in GTCs for Peaceful Coexistence in Nigeria (FFRTEWSAQ). Five Likert rating scale of Very Often= 5, Often=4, Sometimes=3, Rarely =2 and Never=1. The questionnaire was validated by three experts from Electrical/Electronic technology education unit of Technical Education Department of Emmanuel Alayande College of Education, Oyo, and Oyo State using face and content validity. Test retest method was conducted twice in Kwara state's GTCs at an interval of two weeks to determine reliability of the instrument using Spearman Brown formular to obtain 0.70 reliability coefficients indicating that is appropriate and reliable for the study. Mean and Standard Deviation were used to analysis the data from the three research questions at a cutoff point of greater than or equal to 3.0 and 0.50 as Highly required (HR) and less than or equal to 2.49 and 0.49 regarded as deviation Not required (NR) having used SPSS Version 22 for the data analysis. Discussions of findings were made based on outcome of research study and compare with others previous research study Conclusion and recommendations were made among which are: The youths should be encouraged to have interest in technical education where career trades can be chosen on their own comparative advantage of talented skills instead of pursuing courses that cannot offer them self-reliance in future. More of

**the technical colleges should be established and equipped with modern facilities to give rooms for more students who develop interest in career trades in technical colleges.**

**Keywords:** *Fostering, Electronic Work Trades, Skills Acquisitions and Government Technical Colleges.*

## I. INTRODUCTION

Education is the act of imparting or imbibing knowledge and skills relevant to develop the interest of learners for future securing of employable trades' skills and capable of resolving the prevailing problems of unemployment in the society and more importantly confronting the immediate environment. It is the process through which the young acquires knowledge and skills, realizing their potentials and use them for self-actualization (Offorma, 2009). Education, have been categorized into three stages such as primary, secondary and tertiary education, with the aims of having different impart to learners at that very stage of learning development. But in tertiary institutions the skills are developed apart from the knowledge of theory acquired for the learners to be relevant. Although, there are different opinions as to on education; such as Rajaj and Chiv (2009) describes education as an end to itself but a key instrument for bringing about and viewed education changes in knowledge, attitude, the attainment values behaviours and life styles which raise the hope of stability within and outside the countries.

Umoh (2005) is required to achieve for sustainability as a tool for achieving the desired sustainable development and of targeted goal since it is meant for the society and its members. Therefore fostering a functional education through the radio television and electronic work skills acquisitions in Government Technical Colleges (GTCs) stands to be a guarantor for the graduates to be self-employed, create job opportunities employer of labour and self-reliance for peace co-existence in Nigeria. This however, shuns-off and eradicates literacy, hooliganism and all other forms social vices. Fostering is the act of helping to

acquire skills or feeling ideas which can be lasted for a period of time through persistence of learning and encouragement from resource person so that education can be functional, effective, efficient and reach to the grassroots or community level as stated by Ahmed and Oladimeji, (2014), Adetoro (2014), Ejiogu (2015) and Ki-moon (2015). Education in Nigeria is an instrument per excellence, which according to Iyamu (2014) is the aggregate of all processes by which a child or young adult develops the abilities and other forms of behaviours that has positive value to the society in which he or she lives. Therefore a functional education is the type of education that offers positive value to the yarning needs as well providing solution of the societal problem through the skills acquired in educational setup as observed by Ojebode (2004).

From the above definition, it is a clear indication that, a functional education is a life-long process through which an individual develops all his capabilities and becomes useful to self, his fellow being and thus develops the society in which he belongs. Fostering a functional radio, television and electronics work skills acquisitions in GTCs in context is an alternative to this present prevailing economic meltdown involving trouble-shooting of identifiable problems of radio, television and electronics devices, soldering of cold components, removing and replacing components, understanding the circuit diagram in relating to the specific electronic gadgets, repair handsets, lamp tops (National Board for Technical Education, (NBTE, 2010) all these among others required skills to be acquired for a certain period of time in GTCs.

Consequent upon this, skills are set of attributes ranging from physical abilities to cognitive knowledge, interpersonal and attitudes refers to expertise and ability which has an economic value for generating income and employment required for improving desired job performance in a cyclical process of steps in order to identifying a research problem (Ayoola and Busari, 2007, and National Council on Skills Development (NCSDD, 2007) respectively.

However, Technical Colleges (TCs) is one of the post-basic or primary level of institutions where series of several of technical work skills are offered in modules for the students to acquire among which are Electrical Installation and Maintenance Works, Electronic Works; Block-laying, Bricklaying and Concreting; Furniture Making, Animal Husbandry, Refrigeration and Air Conditioning Works; Agricultural Equipment Mechanics works, Auto Electrical Works among others. These subjects are designed in the curriculum for a period of three years of academic programme at Technical Colleges in Nigeria as stated by National Business and Technical Examination Board NABTEB, 2013.

➤ *Statement of the Problem:*

The population of Nigerians' graduates has been on the increase geometrically on daily basis without any corresponding increase on employment rate to justifying the increase. This does not mean that the education engage upon by Nigerian's graduates are not functioning on either literary or pragmatic types of education that Nigeria Government are running but seem that pragmatic education is of highly required this time around when Nigeria economy is at edge of collapsing to meet the needful of Nigerian's graduates as there are no more cottage industries and companies in the country through which the graduates can be engaged upon on the completion of their training acquired.

Therefore, a functional education through radio, television and electronic works skills acquisitions in GTCs would be the way out of addressing the issues of unemployment rates prevailing and dwindling the growth and development of Nigeria economy. The radio, television and electronic works skills acquired in GTCs would not only make graduates to be self-reliance but also engage them to be a creator of jobs for others thereby, resulting to improving the economic situation of individual and the country at large. The electronics works skills which cover the handsets, electronic gadgets, radio, televisions DVD and host of others as stated by Lasisi, Adedeji and Oyedaja (2017) required the application of scientific knowledge and experience through functional education acquired in GTCs.

However, the knowledge and skills acquired during the training programme in TCs through persistent practical work in the workshops with competent personnel as against theory on such various identifications of components, understanding the use of circuit diagrammes, connecting and disconnecting of components for soldering by the uses of soldering iron (NBTE, 2001) would enable them perform maximally thereby fostering a functional education for peaceful co-existence in Nigeria. The idea of embracing and encouraging pragmatic education much more often than literary education would drastically reduce unemployment rates militating against the economy improvement of Nigeria.

It is high time for Nigerian's education to be proactively upright and more functional than ever before most especially on the restructuring contents of the curriculum programme designed upon programmes set aside for the pragmatic education so that enough confidence can be reposed on the programmes task and guaranteed graduates of the GTCs with securing employment and to provide middle level man powers required for the use of industries and as well as capable of being self-reliance in the field of their endeavours. It is against this background that the following questions were raised that: Can pragmatic education have impact on economic development of Nigeria and also aids in providing or creating job-opportunity for the youths?

➤ *Purpose of the Study:*

The main purpose of the study is to examine fostering a functional electronic works skills acquisition in GTCs for peaceful co-existence in Nigeria. Specifically, the study examines the following:

- The skills acquisitions required on electronics works in GTCs that would provide employment for the graduates.
- The benefit associated with graduates of electronic works skills acquired from GTCs as compare with literary education.
- The adequate modern facilities required for the training of graduates of electronic trade works in GTCs' workshops.

➤ *Research Questions:*

Three research questions are developed for the study as following:

- What are the skills acquisitions required of electronic works graduates of GTCs that would provide employment?
- What are the benefits that need to be derived by electronic works graduates of GTCs?
- Are there adequate modern facilities required for the training of graduates of electronic works in GTCs workshops?

**II. METHODOLOGY**

The research design adopted for the study was descriptive survey. This is because the items seek for the views, opinions and information of the respondents. The population for the study was one hundred and fifty (150) electronic works instructors using stratified and ballot multi sampling technique to select five instructors from five GTCs in each of the state of South West geo- political zone of Nigeria were used for the study. The states involved are Oyo, Osun, Ondo and Ekiti State all from South West geo-

political zone. Three research questions were raised for the study. The instrument for data collection was questionnaire tagged: Fostering a Functional Electronic Works Skills Acquisition in GTCs for Peaceful Coexistence in Nigeria (FFEWSAQ).

Five Likert scale of Very Often= 5, Often=4, Sometimes=3, Rarely=2 and Never=1. The questionnaire was validated by three experts in Electrical/Electronic technology education unit of Technical Education Department of Emmanuel Alayande College of Education, Oyo, and Oyo State using face and content validity. Test retest method was conducted twice in Kwara state's GTCs as a pilot study at an interval of two weeks to determine reliability of the instrument using Spearman Brown formula to obtain 0.70 reliability coefficients indicating that the study is appropriate and reliable for the study.

Mean and Standard Deviation were used to analysis the data from the three research questions at a cutoff point greater than or equal to 3.00 and 0.50 as Highly required (HR) and less than or equal to 2.49 and 0.49 as Not required (NR) having used SPSS Version 22 for the data analysis. Finding of the study, conclusion and recommendations were made among which are: The youths should be encouraged to develop interest for TCs programmes where career trades can be chosen on their own comparative advantage of talented skills instead of pursuing courses that cannot offer them secured jobs in future. The youths should be encouraged to develop interest for TCs programmes where career trades can be chosen on their own comparative advantage of talented skills instead of pursuing courses that cannot offer them secured jobs in future. More of the TCs should be established and equipped with modern facilities to give more rooms for more students willingly to go for career trades in TCs programmes.

**III. RESULTS AND DISCUSSIONS**

- **Research Question 1:** What are the skills acquisitions required of electronics works graduates of GTCs that would provide employment?

Table 1 Mean Ratings and Standard Deviation Response by the Instructors to the Skills Acquisition Required of Electronic Works Graduates of Gtc's that Would Provide Employment.

| S/N | Items   | Very Often | Often | Sometimes | Rarely | Never | X    | SD   | REMARKS |
|-----|---|------------|-------|-----------|--------|-------|------|------|---------|
| 1   | Understanding the general safety of the school workshops..  | 70         | 45    | 15        | 10     | 10    | 4.00 | 0.65 | HR      |
| 2   | Acknowledged to personal safety while carrying out practical in the school workshops..              | 65         | 40    | 20        | 15     | 10    | 3.85 | 0.63 | HR      |
| 3   | Adherent to the use of tools, equipment machines to safety rules and regulations.                   | 68         | 42    | 18        | 10     | 12    | 3.75 | 0.60 | HR      |
| 4   | General analysis of electronic works circuit diagram  | 60         | 40    | 20        | 18     | 12    | 3.65 | 0.57 | HR      |
| 5   | Identification of electronic works symbols used in circuit drawing for radio, television electronic | 61         | 38    | 22        | 19     | 10    | 4.00 | 0.58 | HR      |

|    | works use.  |    |    |    |    |    |       |      |    |
|----|---|----|----|----|----|----|-------|------|----|
| 6  | Familiar with each of the components functions for the appropriate used   | 75 | 32 | 25 | 12 | 06 | 3.95  | 0.62 | HR |
| 7  | Understand on how to read polarity of the components  | 60 | 40 | 20 | 18 | 12 | 3.86  | 0.58 | HR |
| 8  | Identification of scale used in radio, television and any other electronics works drawing.  | 63 | 42 | 22 | 17 | 06 | 3.55  | 0.50 | HR |
| 9  | Identification of cable rating, maximums loads demand and ambient temperature.  | 66 | 40 | 22 | 18 | 02 | 3.68  | 0.55 | HR |
| 10 | Understand on how to read the value of the components such as the use of radio, television, electronic works through measuring instrument meters. | 68 | 38 | 23 | 18 | 03 | 32.75 | 0.75 | HR |

Field Survey 2022 Key: VO= Very Often, Often=, ST= Sometimes, R=Rarely N=Never, X=Mean ratings, SD= Standard Deviation and HR= Highly Required

Table 1 responses of the skills acquisitions required for radio, television and electronic work skills graduates are ranging from high mean ratings and standard deviation of 4.00 on item 1 and 5 with 0.65 and 0.58 while 3.75 and 0.75 on item 10 but low mean ratings and standard deviation fell between 3.55 and 0.50 on items 8 indicating that all items based on the research study on question 1 are highly required for the skills acquisition required by the graduates of radio, television and electronic work.

➤ **Research Question 2:** What are the benefits that need to be derived by radio, television and electronic work skills graduates of GTCs?

Table 2 Mean Ratings and Standard Deviation Response by the Instructors to the Benefits that Need to be Derived by Radio, Television and Electronic Work Skills Graduates of Gtc's?

| S/N | Items  | Very often | Often | Sometimes | Rarely | Never | X    | SD   | REMARKS |
|-----|--|------------|-------|-----------|--------|-------|------|------|---------|
| 11  | Self-reliance  | 60         | 35    | 30        | 17     | 08    | 4.20 | 0.65 | HR      |
| 12  | Create job opportunity                                 | 62         | 35    | 28        | 28     | 07    | 3.65 | 0.56 | HR      |
| 13  | Employers of labour                                    | 60         | 30    | 28        | 20     | 12    | 3.75 | 0.64 | HR      |
| 14  | Working under good atmosphere                          | 70         | 30    | 20        | 16     | 14    | 3.90 | 0.67 | HR      |
| 15  | Living independent life                                | 60         | 35    | 25        | 20     | 10    | 3.85 | 0.58 | HR      |
| 16  | Possessed financial control for the business operation | 65         | 25    | 20        | 28     | 12    | 3.80 | 0.57 | HR      |
| 17  | Control the whole activities of the establishment      | 63         | 32    | 20        | 25     | 10    | 3.70 | 0.60 | HR      |
| 18  | Ability to develop initiative                          | 68         | 32    | 22        | 18     | 10    | 3.58 | 0.54 | HR      |
| 19  | Enjoying dedication to duty                            | 75         | 33    | 22        | 18     | 02    | 3.73 | 0.62 | HR      |
| 20  | Enjoying more time for work                            | 65         | 33    | 30        | 20     | 12    | 3.66 | 0.60 | HR      |

Field Survey 2022 Key: VO= Very Often, Often=, ST= Sometimes, R=Rarely N=Never X=Mean ratings, SD= Standard Deviation and HR= Highly Required

Table 2 of the highest mean ratings and Standard deviation response by the instructors on the benefits to be derived from radio, television and electronic work skills acquired from GTCs fell between 4.20 on item 1 and 0.65 on item 14 while the lowest mean ratings and standard deviation fell between 3.58 and 0.54 on item 18 indicating that all the items of the instrument are required for the graduates to be effectively functioning in skills of radio, television and electronic' gadgets and appliances.

➤ **Research Question 3:** Are there adequate modern facilities required for the training of graduates of radio, television and electronic work in GTCs' workshops?

Table 3 Mean Value and Standard Deviation Response of the Respondents on the Adequate Modern Facilities Required for the Training of Graduates of Radio, Television and Electronic Works in Gtcs' Workshops.

| S/N | Items  | Very often | Often | Sometimes | Rarely | Never | X    | SD   | REMARKS |
|-----|--|------------|-------|-----------|--------|-------|------|------|---------|
| 21  | Provision of modern schools' workshop for radio, television and any other electronic works.                      | 60         | 40    | 22        | 18     | 10    | 3.54 | 0.52 | HR      |
| 22  | The school electronic workshop are equipped with modern tools for skill development                              | 65         | 33    | 32        | 20     | 10    | 3.65 | 0.56 | HR      |
| 23  | Provision of all the necessary materials for the radio, television electronic works skills development           | 60         | 34    | 26        | 16     | 14    | 3.60 | 0.55 | HR      |
| 24  | Provision of modern communications to facilitate radio, television and electronic works skills development.      | 60         | 36    | 23        | 17     | 14    | 3.58 | 0.54 | HR      |
| 25  | Provision of adequate supply of electricity for the needs of skills development                                  | 60         | 35    | 30        | 27     | 18    | 3.57 | 0.53 | HR      |
| 26  | Provision of radio, television and electronic machines for skills development                                    | 68         | 42    | 20        | 10     | 10    | 3.75 | 0.64 | HR      |
| 27  | Provision of electronic equipment for the use of skills development  | 66         | 32    | 22        | 18     | 12    | 3.65 | 0.56 | HR      |
| 28  | Provision of net-work roads to facilitate skills development in radio, television and any other electronic works | 64         | 36    | 20        | 20     | 10    | 3.55 | 0.50 | HR      |
| 29  | Provision of automatic gear switch for shifting to main power source   | 62         | 38    | 22        | 18     | 10    | 3.85 | 0.58 | HR      |
| 30  | Adequate provision of automatic generators as alternative to main power failure                                  | 63         | 35    | 22        | 10     | 10    | 3.65 | 0.56 | HR      |

Key: VO= Very Often, Often=, ST= Sometimes, R=Rarely N=Never, X=Mean ratings, SD= Standard Deviation and HR= Highly Required

Table 3 of the highest mean ratings and standard deviation response by the instructors on the adequate facilities required for the training of graduates of radio television and electronic work trades repairs' skills fell between 3.85 on item 29 and 0.64 on the item 26 while the lowest mean ratings and standard deviation fall between 3.54 on item 21 and 0.50 on the item 28 showing that adequate provisions of facilities are needed for the effective and adequate training of graduates before functional education on repair of electronic can be meaningful to the need of society as all the respondents have indicated above.

#### IV. DISCUSSION OF FINDINGS

Table 1 of mean ratings and standard deviation have recorded the highest of 4.00 on items 1 and 5 respectively, and 0.75 while the lowest of mean ratings and standard deviation fell between level 3.55 and 0.55 all were above the cut off points of 2.50 and 0.50 of highly required indicating that all the items must be thoroughly observed for the trade repairs skills development on graduates electronics works repairs as really emphasized by NABTE (2001) and

NABTEB, (2013) respective on minimum standard for technical certificate.

Table 2 of mean ratings and standard deviation also have the highest of 4.20 of item 1 and 0.67 of item 14 while the lowest mean ratings and standard deviation fell between 3.58 and 0.54 on item 18 but all items were above the cut off points indicating highly required for benefits awaiting graduates of electronics trade works repairs as stated by Lasisi, Adedeji and Oyedoja (2017) in their research findings on electronics works skills acquisition in Government Technical Colleges: An impetus towards entrepreneurship for poverty alleviation and sustainable development in Oyo State. Finally table 3 of mean ratings and standard deviation of adequate modern infrastructural facilities have the highest between 3.85 on item 29 and 0.64 on item 26 respective while the lowest mean ratings and standard deviation fell between 3.54 on item 21 and 0.52 on item 28 showing that infrastructural facilities were highly required for graduates to be training with for effective functioning of education on radio, television and electronic work skills acquisition in GTCs as supported by the research work of Lasisi, Adedeji and Oyedoja (2017) on electronics works skills acquisition in GTCs: An impetus towards entrepreneurship for poverty alleviation and sustainable development in Oyo State

## V. CONCLUSION

Conclusively, all the items instrument responded to by the respondents on graduates of radio, television and electronics works skills acquisitions in GTCs. The students must be trained within the hand bit of modern day of infrastructural facilities before any meaningful skills development can be achieved and also be regarded as functional education which the country now deserves this time around before much more benefits can be derived by individual and citizens.

## RECOMMENDATIONS

- *The Following Recommendations Were Made with the Respect to Outcome of the Research Work Thus:*
- The youths should be encouraged to develop interest for TCs programmes where career trades can be chosen on their own comparative advantage of talented skills instead of pursuing courses that cannot offer them secured jobs in future.
- More of the TCs should be established and equipped with modern facilities to give more rooms for more students willingly to go for career trades in TCs programmes.
- Government at every level, Locals, States and Federal should collaborate with Industries to give the needful training that can make the graduates of nowadays stands the test of the day.
- The philanthropists should also assist the Government at every level by providing infrastructural facilities required by TCs programmes to boost the functionality of career chosen trades

## REFERENCES

- [1]. Adetoro, R.A. (2014). *Inclusive education in Nigeria- A myth or reality Creative Education, 5, 1777-1781*. Retrieved from <http://dx.doi.org/10.4236?ce> 2014. 520198.21/5/16 Africa ROA: Technical Repor.
- [2]. Ahmed, M. T & Oladimeji, T. A (2016). *Community Models as tools for Sustainable Development in Nigeria: Filling the Gap NIPSS Monograph v Series N0.7 Anan ,K In Kofi Anan* <http://www.brainyquote.com/quotes/quotes/k/kofianan399822.html>.
- [3]. Ayoola, A. A. & Busari, R. S. (2007). Towards Effective Skill Acquisition and Skill Development in Vocational and Technical Education. *Journal of Professional Teacher Trainers (JOPTET)*, 8 (1&2). 204-216.
- [4]. Ejiogun, N. (2015). *Inclusive education in Nigeria: A legal perspective. African Herald Express, September 10*. Retrieved from <http://africanheraldexpress.com/blog> & 8/09/2015 inclusive-education-a-legal-perspective 21/5/16. Environment programme, Nirobi
- [5]. Iyamu, E. D. S (2014). Curriculum issue and National Transformation Beyond the 21st Century in Nigeria. A key note address presented on February 17th-20th at 3rd National Conference of Pacesetter *Journal, Emmanuel Alayande College of Education, Oyo, Oyo State*.
- [6]. Ki-moon, B. (2015). Preface in United Nation on the Millennium Development Goals Report United Nations, New YORK. Retrieved from [http://www.un.org/millenniumgoals/2015 MDG. Report/pdf/ MDG%20rev%20\(July%201\).pdf](http://www.un.org/millenniumgoals/2015%20MDG%20Report/pdf/MDG%20rev%20(July%201).pdf) 5/6/16.
- [7]. Lasisi, B. T Adedeji, S. A & Oyedoja, K. O (2017). Electronics works skills Acquisitions in Government Technical Colleges: An impetus towards Entrepreneurship for Poverty Alleviation and Sustainable Development in Oyo State. *Empire Journal of Vocational and Technical Education. 7* (1), 122-133.
- [8]. National Board for Technical Education (2001). *Higher National Diploma and National Diploma in Electrical and Electronics Technology Curriculum and Course Specifications* Kaduna. Nigeria.
- [9]. National Business and Technical Examination Board (NABTEB)(2013). *Higher National Diploma and National Diploma in Electrical and Electronics Technology Curriculum and Course Specifications* Kaduna. Nigeria.
- [10]. National Council on Skills Development (NCSD), (2007). E-Skill Development, Adviser to the Prime Minister. National Council on Skill Development 9th Floor, NOCC II. New Delhi 110001. Farlex, A (2014). The free dictionary. Com.
- [11]. Offorma, B. M. (2009). *Sustaining the culture of National reform in Nigeria: Implications for curriculum change* 23rd Distinguished lecture series. Adeniran Ogunsanya College of Education, Otto/Ijanikin, Lagos.

- [12]. Ojebode J. A (2004). Functional Education; a weapon for poverty alleviation, self-reliance and sustainable development in Nigeria. *A Journal of education for sustainable development in Nigeria*, 3(1), 80-92.
- [13]. Rajaj, M. K & Chiv N. J (2009). *Education for sustainable Development as peace Education* .A Paper Presented at peace History Society, Peace and Justice Study Association, Ibadan, Nigeria. *Science, Technology and Human Values* 26(4) 399-408.
- [14]. Umoh, T. (2005). The effect of the interaction of various oil types with different culture. Media on Biomass Production of *Psathyrella Atrounborata* Pegler. *African Journal of Bototechnology*.4 (11), 1285-1289.