



UNIVERSITI PUTRA MALAYSIA

***FACTORS CONTRIBUTING TO FEMALE STUDENTS' ENROLMENT IN
TECHNICAL AND VOCATIONAL EDUCATION IN NIGERIA***

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By

ANJILI YAPILAMI

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia,
in Fulfilment of the Requirements for the Degree of Master of Science**

February 2018

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DEDICATION

This work is dedicated to God the Father, Son and Holy Spirit, the helper of my destiny.

For my Late parents who instilled in me the spirit of hard work and whose dream and wish were to see me through the best education possible. My wife and my children for their encouragement, moral and financial support to reach this level



Abstract of a thesis presented to the Senate of Universiti Putra Malaysia in
fulfillment of the requirement for the degree of Master of Science

FACTORS CONTRIBUTING TO FEMALE STUDENTS' ENROLMENT IN TECHNICAL AND VOCATIONAL EDUCATION IN NIGERIA

By

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February 2018

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Technical and Vocational Education and Training (TVET) is recognized as the bedrock for human, economic, and social capital development of any nation. It is a type of education by which an individual can acquire skills to live, learn and work as a productive citizen of a society. In Nigeria where women constitute more than half the total population, the number of women acquiring TVET is not proportional to their population. Research findings show this lop-sidedness right from point of admission into Polytechnics in Nigeria. This study is set to explore different factors contributing to female students' enrolment in North-Eastern Nigeria, specifically to determine the levels and contributions of career awareness, cultural norms and values, vocational interest, and attitudes towards TVET programs among female students' enrolment in TVET and Non-TVET programs. To determine the relationship between selected factors and predictors of female students' enrolment in TVET and Non-TVET programs. The sample population of this study was 6,148 comprising of 3,984 Non-TVET and 2,164 TVET, ND II, female students in 9 Polytechnics of North-Eastern Nigeria. A sample size of 375 female students was selected using a multi-stage sampling technique to participate in the study. The final response rate was 92.5%, which amounted to a sample of 347 students. Quantitative research approach was employed. A structured questionnaire developed by the researcher and was used to collect data for the study. The Cronbach Alpha reliability test was carried out and a reliability coefficient of 0.85 obtained. Frequency, percentage, mean and standard deviation were used for the descriptive analysis, while Binary Multiple Logistic Regression was used to test the alternative hypothesis at 0.05 level of significance. The study found that both TVET and Non-TVET respondents have high level of career awareness, cultural norms and values, and vocational interest, which implied that these factors have a significant influence on female students' enrolment in TVET programs. Therefore, the study found that career awareness, cultural norms and values, and vocational interest have a significant contributions on female students' enrolment among TVET and Non-TVET

programs in Nigeria Polytechnics. On the other hand, attitude towards TVET programs have shown no significant influence neither significant contributions to inadequate female students' enrolment in TVET programs in Nigeria Polytechnics. In view of this, the study has established important factors to be highlighted on female students' enrolment among TVET and Non-TVET programs. Government and other stakeholders in education sector should embark on awareness programmes through workshops and seminars to educate girls, women, parents and the general society on the benefits of TVET programs for women. Increase enlightenment programmes for females to overcome societal cultural norms and values is recommended. It is also recommended that affirmative action on employment of female lecturers in TVET programs employment should be emphasised so that female lecturers will serve as role model and encouragement to the female students. There should be incentives to encourage females to apply for admission into TVET programs especially in the "educationally disadvantaged" areas. The points required for admission into TVET programs should be made lower for females' student than their male counterparts.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Master Sains

FAKTOR PENYUMBANG KEPADA ENROLMEN PELAJAR WANITA DALAM PENDIDIKAN TEKNIK DAN VOKASIONAL DI NIGERIA

Oleh

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Pendidikan dan latihan teknik dan vokasional (TVET) diiktiraf sebagai perkara asas untuk pembangunan modal insan, ekonomi dan sosial sesebuah negara. Ia merupakan sejenis pendidikan bagi seseorang individu memperoleh kemahiran untuk hidup, belajar dan bekerja sebagai warganegara yang produktif bagi sesebuah masyarakat. Di Nigeria, wanita terdiri daripada separuh jumlah populasi, bilangan wanita yang memperoleh TVET adalah tidak seimbang dengan populasi mereka. Dapatan penyelidikan menunjukkan ketidakseimbangan ini bermula dari titik kemasukan ke Politeknik di Nigeria. Kajian ini bertujuan untuk meneliti faktor yang berbeza sebagai penyumbang pada enrolmen pelajar wanita di Utara Timur Nigeria, khususnya untuk menentukan tahap dan sumbangan kesedaran kerjaya, norma dan nilai budaya, minat terhadap vokasional, dan sikap terhadap program TVET dalam kalangan enrolmen pelajar wanita dalam program TVET dan Bukan TVET, di samping bagi menentukan hubungan antara faktor terpilih dan prediktor enrolmen pelajar wanita dalam program TVET dan Bukan TVET. Populasi sampel kajian ini ialah 6,148 yang terdiri daripada 3,984 pelajar wanita dalam program Bukan TVET dan 2,164 pelajar wanita TVET, ND II di 9 Politeknik di Utara Timur Nigeria. Saiz sampel seramai 375 pelajar wanita telah dipilih menggunakan teknik persampelan rawak terlibat dalam kajian ini. Kadar respon akhir ialah 92.5% yang menjadikan jumlah sampel sebanyak 347 pelajar. Pendekatan penyelidikan kuantitatif telah digunakan. Soal selidik berstruktur telah dibentuk oleh penyelidik dan telah digunakan untuk mengumpul data bagi kajian ini. Ujian kebolehpercayaan Alpha Cronbach telah dijalankan dan koefisien kebolehpercayaan 0.85 telah diperoleh. Kekekapan, peratusan, min dan sisihan piawai telah digunakan bagi analisis deskriptif, manakala Regresi Logistik Berganda Binari telah digunakan untuk menguji hipotesis alternatif pada tahap kesignifikanan 0.05. Kajian mendapati bahawa kedua-dua responden bagi program TVET dan Bukan TVET mempunyai tahap kesedaran kerjaya, norma dan nilai budaya tinggi yang memperlihatkan bahawa faktor tersebut mempunyai pengaruh yang signifikan ke atas

enrolmen pelajar wanita dalam program TVET. Oleh sebab itu, kajian ini mendapati bahawa kesedaran kerjaya, nilai dan norma budaya, dan minat vokasional mempunyai sumbangan yang signifikan ke atas enrolmen pelajar wanita dalam program TVET Bukan TVET di Politeknik di Nigeria. Sebaliknya, sikap terhadap program TVET menunjukkan tiada pengaruh yang signifikan sama ada berupa sumbangan yang signifikan terhadap enrolmen pelajar wanita dalam program TVET di Politeknik Nigera. Berdasarkan pandangan tersebut, kajian ini telah dapat memperlihatkan faktor utama yang harus diberikan penekanan mengenai enrolmen pelajar wanita dalam program TVET dan Bukan TVET. Kerajaan dan pihak berkepentingan dalam sektor pendidikan harus memulakan program kesedaran melalui bengkel dan seminar untuk mendidik gadis, wanita, ibu bapa dan masyarakat umumnya tentang manfaat program TVET bagi wanita. Meningkatkan program pencerahan bagi wanita untuk mengatasi nilai dan norma kemasyarakatan merupakan cadangan kajian ini. Kajian ini juga mencadangkan agar tindakan pengesahan ke atas pensyarah wanita dalam program TVET harus diberikan penekanan supaya pensyarah wanita menjadi model peranan serta penggalakan kepada pelajar wanita. Insentif harus juga diadakan bagi menggalakkan wanita untuk memohon kemasukan ke program TVET terutama dalam bidang “educationally disadvantaged”. Markah yang diperlukan untuk kemasukan ke program TVET haruslah rendah bagi pelajar wanita daripada pelajar lelaki.

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This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Master of Science. The members of the Supervisory Committee were as follows:

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LIST OF ABBREVIATIONS

ANBC	Advanced National Business Certificate
ANBTC	Advanced National Technical Certificate
BECE	Basic education Certificate Examination
CTE	Career and Technical education
ETF	Education Trust Fund
FGN	Federal Government of Nigeria
EDA	Exploratory data Analysis
FME	Federal ministry of Education
ERC	Education Resource Centre
IEIs	Innovation enterprise Institutions
HND	Higher National Diploma
ILO	International Labour Organization.
IRC	International Rescue Committee
ITEA	International Technology Education Association
IWPR	Institute for Women's policy Research
NABTEB	National Business and Technical Examination Board
NBS	National Bureau of Statistics
NBTE	National Board for technical Education
NCVER	National Centre for Vocational Education Research- Austria
ND	National Diploma
NBC	National Business Certificate
NTC	National Technical Certificate
NPE	National Policy on Education
STEM	Science, Technology, Engineering and Mathematics
UN	United Nations
UNDP	United Nations development programme
UNESCO	United Nations Education Scientific and Cultural Organization
UNHDR	United Nations Human Development Reports
VEIs	Vocational Enterprise Institutions

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Technical and Vocational Education and Training (TVET) is recognized as the bedrock for human, economic, and social capital development of any nation. Opatoyinbo and Babatunde, (2016) stated that TVET is a known means by which an individual can acquire skills to live, learn and work as a productive citizen of a society. In Nigeria where women constitute more than half the total population, the number of women acquiring TVET is not proportional to their population. The findings by the authors showed this lop-sidedness right from point of admission into Polytechnics in Nigeria. Other studies by show that gender disparities with bias against women are more prevalent at the tertiary level of education particularly in developing countries which Nigeria is one.

Anaele, Isiorhovoja, Dele and Asoluka (2014) stated that TVET offers leverage to improved quality of life and helps individuals to become economically productive, self-reliant, to escape poverty and marginalization in the society. In addition, the authors posits that when peoples' skills are enhanced, they become entrepreneurs, employable, self-sustained and informed citizens thereby contributing to economic development of a nation. Therefore, human resource development through TVET cannot be overemphasized in economic development, job creation and Poverty reduction. According to Adelakun, Oviawe, and Barfa, (2015), it is estimated that women constitute above 50% of the world's population, but paradoxically, earn only a tenth of the world's income. The authors further posit that women own only one-hundredth of the world's property including land though they do two-thirds of the world's work. These inequalities cannot be unconnected with unequal access to training opportunities.

Similarly, a study conducted in Nigeria by Udeani and Ejikeme (2011), found that female participation in TVET and Science, Technology, Engineering and Mathematics (STEM) programs indicate females are still underrepresented and occupy the position of lower and middle cadre, in spite of the recent steady development over time. This is confirmed by Adelakun et al. (2015), who reported that a large number of women are found mainly in poorly paid jobs and several others go into early marriages, prostitution, child labour, drugs abuse and other social vices. On the contrary, Oyitso & Olumukoro (2012), stated that, prior to Nigeria independence in 1960 and some years after, most families in Nigeria laid emphasis on education for their male children rather than female children. The preference for educating men over women was probably inherited from the colonial masters whose aim was to train women as teachers, clerks, nurses, and traders while, disciplines like medicine, politics, engineering, law and environmental studies were skewed in favour of men.

Robert, Ab Rahim, Azimi, & Abdullah (2015), acknowledged the importance of women in TVET where they stated, women contribute about 90% towards all households, 75% toward marketing, 75% towards food production, and 60% towards domestic food storage in Nigeria yet their training in TVET still lags far behind that of men. Though there is evidence in Nigeria and other parts of Africa that there are shortages of all kinds of qualified personnel, yet in tertiary institutions, female students' enrolment in the sciences, TVET, and related programs remain low. Collaborating this view with Edu & Edu (2012), who maintained that without women contribution, the economy of any country will continue to maintain their present low level and it will be difficult to meet the target and milestones that are constantly set by the government. Women constitute a large proportion of the national population active in small-scale businesses, agriculture, and entrepreneur activities. As home managers, they are responsible for improving the general conditions of their families by introducing the necessary changes in food habits. Besides, they are responsible for attending to the early education of the children in the families. Despite these important roles women play in the home front and society, the chances of educating women in TVET programs seem very inadequate when compared with those of men. Accordingly, all along the opportunities in education, particularly TVET have been for men, thus creating an imbalance and inferiority complex in women. The disparity is conspicuously in certain areas like low and great inequality in students' enrolment in TVET as very few females enroll in the programs, poverty-alleviation, and unemployment.

Furthermore, Medugu and Bappah (2013), stressed that TVET is the foundation of any sustainable technological development. It helps in the human capital development of any nation and is regarded as workforce education that facilitates the adjustment of the skills and knowledge to the changing demands of the society. It is the type of education that is essential to the world of work and is an effective means of empowering the society to engage in productive and sustainable livelihoods. Unfortunately, Robert, et al. (2015) study revealed that over the past years women participation in TVET programs in institutions of higher learning in Nigeria is limited in numbers, constituting a great concern for the government of the day. Further still, a study by UNESCO (2010) concurs with this by pointing out that male students outnumber the female students in 91% of countries globally, despite increased parity in enrolment in higher education and in STEM disciplines, female students' enrolment in TVET programs in Nigeria or Africa alone; it is a worldwide problem. Huyer, (2003), indicated the percentage of technology qualified females in the USA was 34%; while New Zealand, a female undergraduate in technology account for 20% enrolment. Similarly, Robert et al, (2015), collaborated that Female students account for 31% of STEM graduates in the UK and 33% in the USA.

In line with all these, Nigeria being a developing country needs more technicians to develop her economy. Having that woman constituting over half the population of Nigeria, and when women are marginalized, it leads to the country losing out on the possibility of utilizing the potential of this human and social capital development. It is through education and training that women' horizons are broadened, their skills

improved and their ability to make plans and make decisions for themselves, their families and the nation as a whole is enhanced. Therefore, women must be fully involved and cannot be overlooked in any meaningful development. Thus, the participation of females in TVET programmes becomes indispensable.

Though, there are slight increase in female students' enrolment in the Northern part of Nigeria in the past decade, the National Board for Technical Education (NBTE) statistics show that from 2005 to 2010, increased from 16% to 33%. Yet, this indicates an under-representation of the female group in TVET programs. In support of this observation, Ozioma (2011), opines that the Federal Government of Nigeria has attempted to enforce the implementation of TVET programs in our schools; yet Nigerian schools have paid little attention to the program. Parents, teachers and students alike, particularly female students seem not to understand what it is all about and consequently develop some contempt and dislike for the courses. Hence, a consideration of the existing situation and trends needs more female students' enrolment will help at this stage.

Among other problems encountered by female students' in Polytechnics of Nigeria is the choice of education programme. Amoor and Aliyu (2014), asserts that choice of education program in tertiary institutions is a multifaceted decision-making, needed for students since it determines the kind of vocation or occupation that they intend to pursue in life. This choice of TVET program does not only affect female students but also the entire society, including parents and government since the aim of TVET is to help the students develop skills, abilities, interest, occupational and vocational capabilities that would enable them to make suitable career choices. Thus, the choice of TVET programs in the Polytechnics and other tertiary institutions is always a difficult challenge faced by prospective undergraduates. As a result, female Students across the nations are usually faced with the task of academic and career decision making.

Further still, The Institute for Women's Policy Research (IWPR, 2013), reported that females are under-represented in career and Technical Education (CTE) programs that prepare students for a career in high-paying careers like STEM, the skilled trades, and other careers traditionally done by men. Thus, a study conducted by Plateau, (1999), point out that youth, particularly females, opt-out from TVET based programs because they view TVET as a male domain, in addition to their apprehension and low anticipation of TVET programs.

Other obvious problems of female student's enrolment in TVET are issues of school access, family and school resources, coupled with cultural norms and values and attitudes towards TVET education. School attendance in northern Nigeria is hampered by the increasing extremism of Boko Haram, an Islamist militant group that targets girls in particular. The April 2014 kidnapping of 217 school girls of Government Girls' secondary, Chibok in Borno state by Boko Haram affirms the magnitude of risk that girls and young women bear when they attend school. This security challenge is a

setback to educational development in most parts of Northern Nigeria, where the female school net attendance is far lower in comparison to southern states of Nigeria.

Furthermore, previous studies through evidence available suggest that females, seem to be inadequately enrolled into TVET programs, despite the government policy which encourages equal educational opportunities for both male and female students in TVET programs. National Bureau of Statistics (2016), indicate that the percentage of male students' enrolment in the Polytechnics stood at 55.8%, while that female student was found to be 44.2%. This figure was confirmed in 2015 statistical report on women and men in Nigeria in collaboration with Education Sector Analysis (2005), of which the enrolment in technology and art ratio in Polytechnics stood at 46.5% as against policy prescription of 70:30 by the government. The 70% allocated to TVET programmes has always revealed a shortfall of female applicants paving way for male dominance in the enrolment trend. Unfortunately, the 30% allocation for art and social science courses has witnessed a continuous surge of female enrolment, creating a wide gap in the enrolment trend of TVET programs in Polytechnics, Nigeria.

Table 1.1 : Students Enrolment in Polytechnics by Year and Sex; 2010 – 2015

Year	Male		Female	
	Enrolment	Percentage %	Enrolment	Percentage %
2010	52470	57.8	36761	42.2
2011	52596	57.9	38237	42.1
2012	65994	59.5	44911	40.5
2013	40828	59.6	27711	40.4
2014	59104	57.3	44018	42.7
2015	69759	55.8	55217	44.2

(Source: National Bureau of Statistics 2016)

The analyses above indicate an under-representation of the female group which suggests that male group will continue to dominate most areas of TVET programs. Egun and Tibi (2010), indicate that societal stereotype on female gender role and the conflict between work and family duty, custom, attitudes and other behavioral decisions which play a significant role in the cultural practices in Nigeria, this has contributed hugely in the obstruction of women career choice in TVET program.

Therefore, there is a strong desire to change the state of affairs related to female enrolment in TVET programs in the Polytechnics. As such, this study was set to make recommendations to guide stakeholders to develop a framework conducive for improving access to TVET for all, with the accent being put on increasing the participation of females in TVET fields that have been dominated by males.

Apparently, previous studies reviewed indicate an under-representation of the female in technical programs in Nigeria. In order to formulate ways to overcome this stereotype, it would be interesting to examine why females in TVET option continue to lag behind in enrolment trend in Nigeria Polytechnics, despite the importance and benefits accruable to TVET programs. Hence, this study seeks to determine factors that contribute to female students' enrolment in TVET programs in Polytechnics of North-Eastern Nigeria. The study is examining these variables; career Awareness (CA), Cultural norms and Value (CNV), Vocational Interest (VI), and attitude towards TVET (ATT) programs on female students' enrolment, which may help to stem this trend.

1.2 Statement of the Problem

Nationally, the need for an increase of female students' enrolment in TVET programs continue to suffer and has become an issue that needs to be addressed, despite successive governments' efforts directed at improving TVET programs at all levels of education in Nigeria regardless of gender and to make it more appealing, especially to females. Studies show that majority of female students prefer to study general education (Non-TVET) programs to TVET programs in Nigeria Polytechnics. This consequently affects the number of female students enrolling into STEM with the latter having a relatively terrible sponsorship (Wataka 2016). Although exact percentage across Polytechnics are difficult to come by, Nigeria studies reflect a similar trend, with the lowest proportion of female students in higher education found within the field of TVET and science related programs (Rebort et al. 2015).

Studies show the new global economy increasingly demands more high- skilled and better educated workers than ever before. The economic and social capital of Nigeria depends on fully utilizing the skill and contribution of all citizens including women. Labour supply in Nigeria nowadays is categorised by profusion of unemployed and underemployed workers, most in the agricultural, small-scale businesses, entrepreneur activities, and informal sectors, low productivity, and by serious shortage of skilled workers and technicians in the industrial and service sectors (Rebort et al. (2015). Therefore, women participation in TVET programs becomes imperative.

United Nations, (UN, 2012), disclosed that in many developing countries, females are more likely to be unemployed than male counterpart. The marginalization of women in employment and skills training is a relevant issue all over the world given the potential impact on human capital development, particularly in those countries in which women constitute over 50% of the population like Nigeria. Overcoming this inequality between female and male in employment and skill training seems a long way off. The author went on and stressed that gender stereotypes "linking men with high technology" whereas women are "thought to be insufficiently professional and technically-oriented" remain to persist in almost all part of the world. Women "tend" to concentrate on a small range of mostly "typically female" or female dominated"

occupations. Even in new skilled jobs in the information and communication technologies the gender gap is prevailing phenomenon.

In the past decade, the National Board for Technical Education (NBTE) statistics (2012) show that from 2005 to 2010, the Applied Science programs in the Federal Polytechnics in the Northern part of Nigeria has increased from 27% to 35% female intake. The HND in Architecture has increased from 11% in 2005 to 38% in 2010 in terms of female representation. Electrical Engineering has increased from 13% to 31% and Mechanical engineering 16% to 32% in the past five years. Civil Engineering has increased from 17% in 2005 to 31% in 2010; Science Laboratory Technology (SLT) and Computer science are at 31% female intakes whereas Technology programs have increased from 14% to 33%. These analyses indicate an under-representation of the female group in TVET programs. Thus, (Egun and Tibi 2010), disclose that TVET programs in Nigeria as in other part of the world have always been male dominated. The role of women in economic development of a nation cannot be overlooked and it is therefore significant to understand why female students' enrolment in TVET programs persist to be low in this field. It is important to promote and encourage female students to take advantage of the global demand for skilled labour, internationally competitive research and industries to participate in TVET programs.

Past studies reviewed show that several studies have been conducted having similar phenomena in developing countries as in Nigeria Polytechnics. Amina (2012), conducted a study in North-west zone, Nigeria, used Socio- cultural values,

Government support policies, Parental attitudes towards female technology education, and locational factors. Rebert et al. (2014) conducted a study in north-central zone, Nigeria used Mathematics/science phobia, Perceived social support, contextual roles, role model, Lack of career awareness, balancing family and work, Low career prestige, and Employment marginalization due to gender sensitive.

Ayonmike (2014) conducted a study in south-south zone of Nigeria used societal factors, school factors, inadequate infrastructural facilities, and government factors. Rebert et al. (2015) conducted a study in North-Central zone, Nigeria used physical program ability, Lecturer preferential treatment of male students over female, Sexual Harassment, Inadequate Instructional Facilities, Masculine Image, Stereotyping, Dearth of Women in Administrative Position, and Gender Deprivation by Male Counterparts. While, Wataka (2016), conducted a study in Bungoma County, Kenya used outcomes expectation, social economic factors, female students' attitudes, and instructional materials available.

Generally these authors Amina (2012) used socio-cultural values, Ammor (2014), used vocational interest, Rebert et al. (2014), used lack of career awareness, and Wataka (2016), used Attitude towards TVET and sciences programs, who used different constructs in their studies at different locations was suitable in that context.

The current study adopted the constructs from them which is relevant in the current context in the study. In view of this, the current study is using the four (4) constructs affirmation by the different authors which will bring out the different scenarios to explain the study better to come out with the needed result. Hence, an academic gap which distinct this current study from the authors.

In North-Eastern Nigeria, limited studies have so far examined the factors contributing to female students' enrolment in TVET programs. Hence, finding out how female students generally enrol in TVET programs in North-Eastern Nigeria's higher institution is probably not sufficient, in the sense that this information yields little understanding of the possible consequences of the different factors that affect female students' enrolment in TVET programs. This gap in knowledge could affect the adaptability and implementation of possible solutions to women enrolment in TVET programs in Nigeria.

Thus, this study using quantitative approach to find out why female students' enrolment in TVET programs continue to lag behind in enrolment trend in Nigeria Polytechnics, despite the importance and benefits of TVET programs accruable to women from the economic and social perspectives. Hence, the current study used quantitative study technique using; career Awareness, Cultural norms and Values, Vocational Interest and attitude of female students towards TVET programs on female students' enrolment, which may help to stem this trend.

1.3 Main Objectives of the Study

The purpose of the study is to determine the factors contributing to female students' enrolment in TVET programs of the North-Eastern geopolitical zone of Nigeria.

1.4 Specific Objective of the Study:

The specific objectives of the study:

1. To determine the level of Career Awareness (CA), Cultural Norms and Values (CNV) Vocational Interest (VI), and Attitudes towards TVET (ATT) on female students' enrolment in TVET and Non-TVET programs.
2. To determine the contribution of Career Awareness (CA), Cultural Norms and Values (CNV), Vocational Interest (VI), and Attitudes towards TVET (ATT) on female students' enrolment in TVET and Non-TVET programs.

1.5 Research Questions

The following research question is formulated to guide the study:

1. What are the levels of career awareness (CA), Cultural Norms and Values (CNV), Vocational Interest (VI), and Attitudes towards TVET (ATT) among female students in TVET and Non-TVET programs?
2. What are the contributions of Career Awareness (CA), Cultural Norms and Values (CNV), Vocational Interest (VI), and Attitudes towards TVET (ATT) on female students' enrolment in TVET and Non-TVET programs?

1.6 Hypothesis

The following alternative hypothesis were formulated:

1. **H_{A1}:** There is a relationship between enrolment in TVET and Non-TVET programs and Career Awareness (CA), Cultural Norms and Values (CNV), Vocational Interest (VI), and Attitudes towards TVET (ATT) among female students.

1.7 Assumption of the Study

For the purpose of this study, the following basic assumptions are made: -

1. Career awareness contributes to female students' choice of TVET programs in Polytechnics of the North-Eastern geopolitical zone of Nigeria.
2. Cultural norms and Value systems contribute to female students' choice of TVET programs in Polytechnics of the North-Eastern geopolitical zone of Nigeria.
3. Vocational interest contributes to female students' choice of TVET programs in Polytechnics of the North-Eastern geopolitical zone of Nigeria.
4. Female student's attitude towards TVET programs is a factor contributing to female students' choice of TVET programs in Polytechnics of the North-Eastern geopolitical zone of Nigeria.

1.8 Significance of the study

The findings of this study will have both theoretical and practical benefits to areas of research studies in female students' choice of TVET programs in Polytechnics. Theoretically, the findings will add to the existing body of knowledge in female students' choice of TVET programs in the Polytechnics. Practically, the findings will

benefit all the stakeholders and future researchers in technical vocational education and training, particularly, TVET programs in Nigeria in the following ways:

1. The findings of the study will raise female students', parents and society's awareness on the importance and benefits of technical and vocational education and training (TVET) programs in the Polytechnics in the North-eastern geopolitical zone of Nigeria.
2. The findings will be helpful as the society understand and appreciates TVET programs, and many parents may be convinced to counsel their daughters to enroll in the TVET programs in the polytechnic institutions.
3. The findings will be helpful to female students as they value TVET on their career prospects and lucrativeness of the program in the world of work.
4. The findings will help female students to develop an interest in the TVET programs and indirectly address the enrolment problem among the female students, by creating awareness and importance of TVET in skill training and development.
5. The findings will help female students to develop positive attitudes towards TVET programs in order to increase enrolment in the Polytechnics of the North-Eastern geopolitical zone of Nigeria.
6. The findings of the study will subsequently boost the enrolment demands of Polytechnics, Colleges of Education (Technical) and universities of Technology in Nigeria to have an adequate number of female students for TVET programs.

1.9 Scope and Limitation of the Study

The study focuses on factors contributing to female students' choice of TVET programs in Polytechnics of the North-Eastern geopolitical zone of Nigeria. The study is limited to factors such as career awareness, cultural norms and value systems, vocational interest and female students' attitude TVET programs in Polytechnics of the North-Eastern geopolitical zone of Nigeria. Also, the study is limited to three (3) Polytechnics out of the nine (9) polytechnics in North-Eastern geopolitical zone of Nigeria; specifically, the study was carried out in Ramat Polytechnic, Maiduguri, Federal Polytechnic, Bauchi and Taraba State Polytechnic, Jalingo because some of the Polytechnics cannot be accessible due to the activities of the dreaded Boko Haram sect a terrorists group in the areas.

1.10 Definition of Operational terms:

- a). **Career awareness:** -The state of knowing the occupation, vocational choice in life or expanding one knowledge of possible career paths and job opportunities, as well as what's required to be successful in TVET career paths. These involve knowing oneself concept, abilities, interest, satisfaction, preferred work environment, and development needs.

- b). **Cultural norms and value system:** - what keeps people moving in a similar direction. Set of beliefs within the societies and the behaviors that support them, are then taught by formal or informal (schools or families). The beliefs are often referred to as values, and the behaviors that support these values are referred to as norms.
- c). **Vocational Interest:** -Means interest in the occupation or vocation as a whole; interest to perform a trade or of deriving pleasure in occupation (vocation) with optimum satisfaction. These require female students to have abilities, skills, interests, personal style, family influence, and values.
- d). **Attitude towards TVET:** - Attitude is a way of thinking, feeling, belief, or opinion of approval or disapproval towards something. Therefore, the Opinions or feelings of female students towards registering or enrolling in TVET programs or course of study.
- e). **TVET Education:** - Type of academic or non-academic education that provides courses and skill training programs related to vocations/occupations with a view to enable individual acquire skills to live, learn and work as a productive citizen, employable, self-reliant in different sectors of life.
- f). **Non TVET Education:** - Refers to general education design to bring about learning and training interventions with the sole aim to achieve mastery of performance in specific task. On the other hand, part of education to enabling individuals to realise their potentials across a wide range valued human development.

1.11 Summary

Females in the framework of this study mean girls and women, and there may be used interchangeably. Generally, there are inadequate enrolment of female students in Technical Vocational Education and Training (TVET) programs in the Polytechnics of the North-Eastern geopolitical zone of Nigeria. These may be attributed to gender disparity against females, less access to educational opportunities, customs and tradition, strengthened by religious beliefs, societal stereotype on female gender role and the conflict between work and family duty, custom, attitudes and other behavioral decisions which play a significant role in the cultural practices in Nigeria. Therefore, this study was set to determine the possible factors responsible for the female students' choice of TVET programs in Polytechnics of the North-Eastern geopolitical zone of Nigeria. Also the study was set to make recommendations to the government and stakeholders in education sectors to addressing the situation. The researcher concluded that more still needs to be done to promote gender equality in access to TVET programs so that female student will enroll in greater number which may prepare women for skill training, high-wage occupations, market labour demand, and job security which are critical economic development of the nation.

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