

EVALUATION OF FEMALE ENROLLMENT IN TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING (TVET) IN TECHNICAL COLLEGES IN OGUN STATE NIGERIA

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Abstract

Women constitute a pool of talent for technical and vocational education and training (TVET) but so many factors do steer them towards other training. Identification and addressing these factors will help in fast-tracking socio-economic development in African countries. Female enrollment in Technical Colleges in Ogun state was assessed using multistage sampling technique. A sample of one hundred and forty five respondents comprising of female student and teachers, heads of units and principals of six technical and vocational colleges in Ogun state. A semi-structured questionnaire was used to obtain information on student's enrollment in the last five years, gender enrollment disparity, and factors affecting female participation in TVET. Data collected were subjected to both descriptive statistics and inferential statistics using spss version 20.0. Students' performance in Junior School Certificate examination (44%) was the major consideration in student enrollment while 92% affirmed no special consideration for male over female students during admission. A wide gap was observed between male and female enrollment in almost all the craft. Parental factor was identified to be the major factor affecting female enrollment in TVET with a mean score (14.73±3.56), followed by governmental factors (14.19±3.95), societal factors (13.85±3.84) and school factors (12.49±3.82) and significant difference ($p < 0.005$) was observed between all the factors studied. Female enrollment in TVET in Ogun state is very low and was found to be due to parental influence. Enlightenment targeted at correcting the parental perception and influence towards female enrollment in TVET is recommended.

Keywords: Female Enrollment, Technical and Vocational Education, Training.

Introduction

The term Technical and Vocational Education is a conjoined term made up of Technical Education (TE) and Vocational Education (VE). It is an aspect of educational system that provides room for vocational training, skill acquisition and adequate scientific competence (Micah *et al.*, 2017).

Technical and vocational Education and Training (TVET) is an indispensable aspect of the educational system of Nigeria. This is based on the fact that unlike other forms of education, TVET is aimed at the acquisition of practical and applied skills as well as basic scientific knowledge. In Nigeria, TVET was introduced with the aim of providing the technical knowledge and skills necessary for agricultural, industrial, commercial and socio-economic development of the nation.

It plays an important role in the socio-economic development of the nation. Often, governments both at state and federal level commit huge investments to TVET through establishment of technical schools and provision of qualified teachers in order to realize its intended benefits. Notwithstanding improved access to technical and vocational education, Nigerians do not seem to accord technical and vocational education its deserved attention (Ibeneme 2007) especially for female students. Findings have shown that women's participation and achievement in Science, Technical and Vocational Education and Training is too low and this has made them remain under represented in technical and professional careers in the society (Agu *et al.*, 2013, Ibraheem, 2001, Onokala *et al.*, 2001, Badekale, 2003 and Udeani *et al.*, 2011).

Thus, this paper reports on the present situation of female enrolment in TVET institutions in Ogun State, Nigeria. To this end, this study evaluated female enrollment in TVET, identified the major factors affecting the enrollment and subsequently provided answers to the following research questions.

1. What is the pattern of female enrollment in Technical and Vocational colleges in Ogun state in the last five (5) academic years?
2. What are the admission requirements into Technical and Vocational colleges in Ogun state?
3. What are the major factors affecting female enrollment into Technical and Vocational colleges?

Methodology

Study Area

The study area- Ogun State - is one of the states in the South-West geo-political zone of Nigeria. It was created in the year 1976. It borders Lagos state to the south, Oyo and Osun states to the north, Ondo to the east and the Republic of Benin to the west. The state has a total population of 3, 751,140 residents with Abeokuta, the largest city, as the state capital.

Study Design

The study was cross-sectional and descriptive in nature, and involved one hundred and forty-five (145) respondents consisting of female students, teachers, heads of unit and the Principals of all the selected colleges.

Sampling techniques

Multi-stage sampling technique was used in the selection of respondents. This involved random selection of four (4) science and technical colleges (i.e. Government Science and Technical College Idi Aba Abeokuta, Government Science and Technical College Ajegunle, Government Science and Technical College Ijebu-Igbo, and Government Science and Technical College Ijebu-Ode) and purposive selection of the only Vocational college in the state (Government Vocational Training College Ijeun-Titun, Abeokuta). From all the colleges, a total number of one hundred and twenty (120) female students were selected using systematic random sampling techniques from each of the departments (Trade), followed by random selection of twenty (25) female teachers, Heads of Department (HOD) and all the Principals of the colleges.

Data Collection

Three sets of questionnaires (structured and semi structured) were designed and used for data collection: Student Enrollment Questionnaire (SEQ), Enrolment Criteria Questionnaire (ECQ) and Women Participation in TVET Questionnaire (WPITQ).

Data on student enrollment into the colleges in the last five years was obtained using Student Enrollment Questionnaire (SEQ), while Enrolment Criteria Questionnaire (ECQ) was used to determine the criteria for female enrollment in TVET and Women Participation in TVET (WPIT) questionnaire was used to determine the factors affecting women participation in TVET.

Scoring of the questionnaire

For better interpretation, analysis and identification of the major factor affecting women participation in TVET, scoring of the instrument used in identifying the major factor affecting women participation in TVET (WPIT) was done. The questionnaire was divided into four major sections addressing four factors, which are: Governmental factor, School factors, Societal factor and Parental factor. Each of the sections has five questions which were rated on a five-point likert scale (strongly agree, agree, strongly disagree, disagree and don't know) from 0 (don't know) to 4 (strongly agree) and each section has a total score ranging from 0 to 20.

Statistical Analysis

Data obtained from the study was subjected to statistical analysis (descriptive and inferential statistics) using SPSS v. 20.0. Percentage, frequency, graph, mean and standard deviation were used to describe the data. Also, the data was subjected to correlation analysis in order to make inferences on the effect of the observed factors on enrolment of females in TVET.

Findings

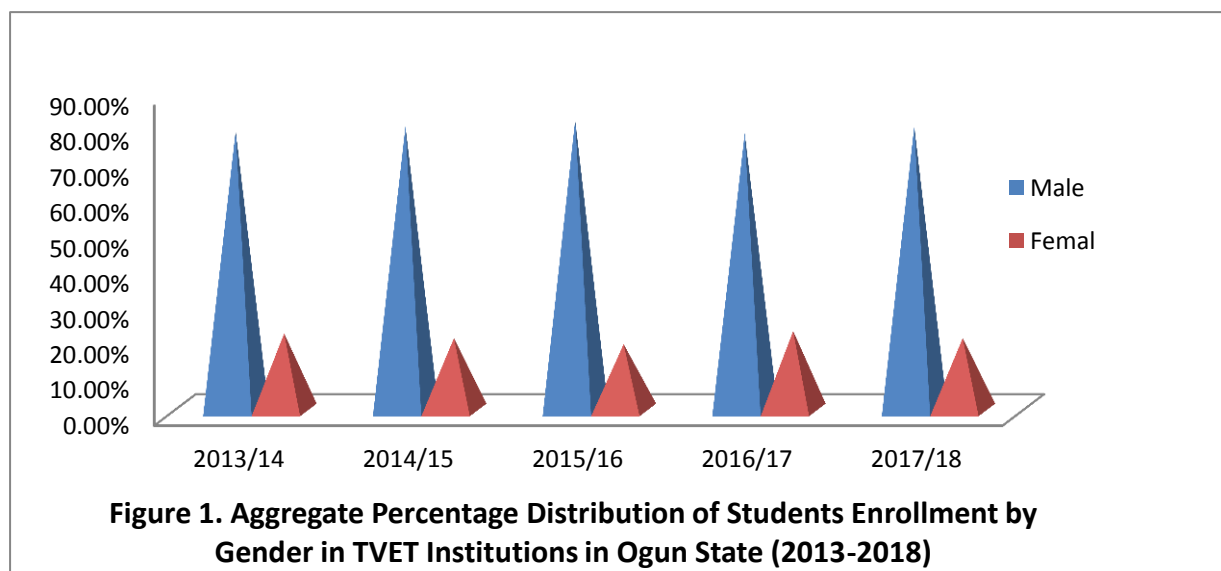
Students' enrollment in the selected TVET Institutions in Ogun State on gender basis between 2013 and 2018 is shown in Table 1. The statistics revealed that the prospective students preferred Government Technical Colleges to the Vocational College with significantly more enrolment in the former than the latter. Generally, female students enrollment was less than a quarter of the total enrollment. Indeed, the enrollment was between 18.50% and 22.2% during

the five-year period. The graphical representation of the aggregate enrollment pattern is shown in Figure 1.

Table 1. Student Enrollment by Gender in TVET Institutions in Ogun State between 2013 and 2018

TVET Institution	Gender	Academic Session				
		2013/14	2014/15	2015/16	2016/17	2017/18
GTC, Ajegunle	Male	451(82.6)*	468(85.7)	513(88.6)	549(84.9)	559(84.8)
	Female	82(15.5)	78(14.3)	66(11.4)	98(15.1)	100(15.2)
GTC, Ijebu-ode	Male	186(77.5)	283(85.0)	283(88.7)	197(84.9)	243(86.5)
	Female	54(22.5)	50(15.0)	36(11.3)	35(15.1)	38(13.5)
GTC, Ijebu- igbo	Male	80(81.6)	46(86.8)	62(76.5)	38(58.5)	50(74.6)
	Female	18(18.4)	7(13.2)	19(23.5)	27(41.5)	17(25.4)
GTC, Idi-aba	Male	528(71.7)	529(71.8)	559(73.3)	567(71.3)	415(70.2)
	Female	208(28.3)	208(28.2)	204(26.7)	228(28.7)	176(29.8)
GVTC, Ijehun-titun	Male	75(97.3)	31(100)	18(100)	5(100)	34(97.1)
	Female	2(2.7)	0(0)	0(0)	0(0)	1(2.9)

*Figures in parenthesis denote percentages.



Perceptions of the heads of departments/trades and the principals of the various colleges on the requirement for admission into the Colleges are shown in Table 2. Major considerations for admission into TVET programmes, according to the respondents were - good Junior School Certificate Examinations' Results (43.8%), pass in entrance examination (22.9%), and readiness and interest to acquire technical and vocational skills (10.4). Least considered criteria (2.1%) were – sex, physical fitness, health status, good conduct and behaviour, and availability of the equipment for training.

Table 2. Opinions of Teachers and Principals of Colleges on Entry Requirements and promotion of female enrollment into Technical and Vocational Colleges in Ogun State

Criteria	Frequency	Percentage
Ability to assimilate theoretical concepts and their practical applications	2	4.2
Ability to handle equipment	2	4.2
Age	2	4.2
Availability of the equipment for training	1	2.1
Good Junior School Certificate Examinations' results	21	43.8
Good conduct and behavior	1	2.1
Health status	1	2.1
Interest of the parent	1	2.1
Pass entrance examination	11	22.9
Physical fitness	1	2.1
Readiness and interest to acquire technical and vocational skills	5	10.4
Sex	1	2.1
Special consideration for male students over female students in offering admission?		
Yes	2	8.0
No	23	92.0
If 'Yes' itemize them		
Strength and ability to engage in practical training	2	8.0
Should Government provide incentives to encourage female enrollment into TVET?		
Yes	19	76.0
No	6	24.0
If yes list them		
Award of scholarship for female students	3	15.7
Empower National Technical Certificate	1	5.2
Include more female-based programmes/course into TVET	7	36.8
Provision of loan facilities to start up the trade/vocation	3	15.9
Provision of tools and equipment	5	26.3

Meanwhile, nearly all (92.0%) the respondents affirmed no special consideration for male students over female students. Those who (8.0%) preferred male to female opined that probably male’s physicality enhances their ability to engage in practical training, and it is a special consideration for admission into TVET institutions.

Furthermore, majority (76.0%) of the respondents were in support of the provision of special incentive by Government for the female students so as to encourage them to enroll in TVET and also suggested inclusion of more female-based programmes or courses into TVET. Such recommended incentives in order of preference include: introduction of more female-based programmes/course into TVET (36.8%); provision of tools and equipment (26.3%); provision of loan facilities to start-up the trade/vocation on completion of the training (15.9%); award of scholarship for female students (15.7%); and empowerment of National Technical Certificate (5.2%).

Table 3 shows the responses on the factors that affect female enrollment in TVET. Various factors grouped under governmental, school, societal and parental factors were studied. Poor provision of infrastructural facilities by Government was identified as the major governmental factor affecting female enrollment in technical and vocational college by 53.3% of the respondents. Half of the respondents (50.0%) agreed that school administration was a major school factor affecting female enrollment in Technical and Vocational colleges. Poor societal attitude towards technical education and inferior status accorded to female technical graduates were found to be the major societal factors affecting female enrollment in technical and vocational colleges as shown by the percentage of respondent (43.3% and 40.0) respectively. Also negative attitude of parents towards female involvement in TVET was agreed by 50.0% of the respondents as the major parental factor affecting female enrollment in TVET.

Table 3. Respondents’ opinions on factors affecting female enrollment in TVET

	Strongly agree	Agree	Strongly disagree	Disagree	Don’t know
GOVERNMENTAL FACTORS					
Government policy related factors	47(39.2)*	56(46.7)	7(5.8)	6(5.0)	4(3.3)
Poor provision of infrastructural facilities	35(29.2)	64(53.3)	13(10.8)	4(3.3)	4(4)
Poor provision of TVET staff	32(26.7)	44(36.7)	26(21.7)	16(13.3)	2(1.7)
Poor funding of TVET education	35(29.2)	38(31.7)	15(12.5)	21(17.5)	11(9.2)
Lack of incentive for female students	31(25.8)	58(48.3)	15(12.5)	10(8.3)	6(5.0)
SCHOOL FACTORS					
Poor curriculum delivery	40(33.3)	42(35.0)	16(13.3)	15(12.5)	7(5.8)
School administration	33(27.5)	60(50.0)	10(8.3)	13(10.8)	4(3.3)
Gender bias	14(11.7)	55(45.8)	21(17.5)	18(15.0)	12(10.0)
Absence of female role models/mentors	24(20.0)	30(25.0)	27(22.5)	30(25.0)	9(7.5)
Peer pressure/intimidation	14(11.7)	50(41.7)	17(14.2)	20(16.7)	19(15.8)

SOCIETAL FACTORS

Discriminatory labour market practices	30(25.0)	59(49.2)	10(8.3)	16(13.3)	5(4.2)
Discrimination against technical college graduate	38(31.7)	47(39.2)	12(10.0)	16(13.3)	7(5.8)
Poor societal attitude towards technical education	41(43.2)	52(43.3)	12(10.0)	12(10.0)	3(2.5)
Societal perception that technical education is for males	26(21.7)	43(35.8)	21(17.5)	21(17.5)	9(7.5)
Inferior status accorded to female technical graduates	36(30.0)	48(40.0)	16(13.3)	9(7.5)	11(9.2)

PARENTAL FACTORS

Economic status and educational attainment of the parents	45(37.5)	58(48.3)	11(9.2)	2(1.7)	4(3.3)
Poor perception of the benefit of TVET by parents	44(36.7)	50(41.7)	13(10.8)	9(7.5)	4(3.3)
Negative attitude of parents towards female involvement in TVET	37(30.8)	60(50.0)	14(3.3)	4(3.3)	5(4.2)
Religious and socio-cultural traditions	23(19.2)	40(33.3)	36(30.0)	13(10.8)	8(6.7)
Involvement in domestic chores and education of male siblings	29(24.2)	58(48.3)	8(6.7)	17(14.2)	8(6.7)

***Figures in parenthesis denote percentages.**

Table 4 shows the correlation coefficient of the various factors believed by respondents to be affecting female enrollment in the TVET Institutions studied. The results show that all the effects of the factors on female enrollment were positively correlated to varying degrees. All associations of factors excepting those of parental factors versus governmental factors and parental factors versus societal factors have low positive correlations. Whereas parental factors and governmental factors have little correlation, parental factors have moderate correlation with societal factors. The results thus seem to suggest that interaction between parental factors and societal factors plays a significant role in the choice of TVET for female students. Furthermore, interaction of school factors and governmental factors is the next more important determinant factor for the participation of the female gender in TVET.

Table 4: Association between Governmental factors, School factors, Societal factors and Parental factors

	Governmental factors	School factors	Societal factors	Parental factors
Governmental factors	1			
p-value				
School factors	0.494	1		
p-value	0.000**			
Societal factors	0.376	0.430	1	
p-value	0.000**	0.000**		
Parental factors	0.179	0.346	0.541	1
p-value	0.050	0.000**	0.000**	

**** Correlation is significant at $p < 0.01$ (2 tailed)**

Discussions and Conclusion

The study was aimed at evaluating female enrollment into technical and vocational education and training (TVET) in technical colleges in Ogun state, Nigeria and identification of the major factors affecting it. It is revealed that there is great gender disparity in student enrollment; with males dominating in the last five years. This finding corroborates the findings of Margaret *et al.*, (2017), in a study on female participation in TVET in Kenya which indicated that disparity in enrolment between males and females is more pronounced in the technical courses which involve workshop practices like plumbing, fabrication/welding and engineering. It also agrees with the findings of Oni (2006) and Abdu-Raheem (2012) who noted that the female gender is grossly underrepresented in TVET related courses in technical colleges, polytechnics and universities of technology. This under-representation can be traced to early indoctrination of females that skill jobs such as electronics, mechanical and architectural design and other TVET related skills are only for males as indicated by Ajayi *et al.*, (2011). It is important to note that this great gender disparity in female enrollment in TVET signifies low empowerment of the right group of people that are needed for national development.

As opined by Ali Idris (2013), acquisition of technical and vocational skill is the prime mover of economic and social development of any nation. Therefore, it is very important to encourage involvement and participation of female students in TVET as the world is moving towards technological changes in all aspects of life. Also, Egun *et al.*, (2010) stated that involvement of female in TVET harnesses their potentials thus bringing about positive attitude to life and improvement of economic status (invariably in family income), health of the individual and the country at large.

This study also looked at admission requirements into the technical colleges in Ogun state. It was discovered that good Junior Secondary School Examination result is the major entry requirement and no special consideration for male students over female students seeking admission into the colleges. This indicates that both male and female candidates seeking admission into technical colleges in the state have equal chances of being admitted.

Also, it is discovered that parental influence is the major factor responsible for the great gender disparity observed in student enrollment into TVET. This is in line with the findings of Ayonmike (2010) where it was shown that low participation of females in TVET was largely due to parental factors. Egun *et al.*, (2010) also indicated that traditional domestic roles which are usually assigned by the parents like attending to household chores are one of the factors that affect their enrollment in school. He stated further that, sex-stereotyped occupation has also reinforced the notion of most parents that it is a taboo for a female to venture into an occupation seen as an exclusive preserve of the males. Due to this identified factor, most of the females that ought to have contributed their quota to nation building are being deprived of this right.

In World Bank (1996) Cost-Benefit Analysis, investment in female education by Government at all levels has the highest rate of return than any other type of investment in the economic growth and development of a nation. The present study identified poor provision of infrastructural facilities by the Government as the major governmental factor contributing to greater gender disparity in technical and vocational colleges. This implies that adequate infrastructural facilities which are needed for effective and productive training that can invariably encourage female enrollment in the technical colleges are lacking in the state. This finding agrees with Ayonmike (2014) in a similar study conducted in Delta state where poor provision of infrastructural facilities such as library, classroom blocks, workshops, laboratories, recreational facilities and poor funding of technical education was identified as one of the governmental factors affecting female enrollment in TVET. This finding gives credence to Edigbonya (2012) who opined that, inadequacy in provision of facilities/infrastructural material, as well as qualified teachers will have a great negative impact on female participation in TVET.

Other researchers like Ayonmike (2014), Edu and Edu (2012), Ayonmike (2010), Wallace-Bruce (2010), and IRC (2009) have identified various school factors found to have a significant effect on female enrollment in TVET. In this study, school administration was identified as a major school factor that affects female enrollment in TVET. Such administrative issues like insensitivity to the female gender in carrying out tasks, hostel arrangements, sanctions and punishments, inadequate handling of reported cases of sexual harassment, as well as improper security measures for the school (particularly the females) would have a negative impact on female enrollment.

Gap/imbalance between male and female education arose from a lot of cultural practices in the society. In this study, poor societal attitude towards technical education and inferior status

accorded to female technical graduates were found to be the major societal factors affecting female enrollment in TVET. This implies that society has accorded no value to technical education and it has been seen as an aspect of education meant for children from low socio-economic status. This is in agreement with the findings of Ayonmike (2014) which supports the fact that Nigeria does not accord technical and vocational education its deserved attention. Egun and Tibi (2010) also opined that, societal stereotype on female gender role and the conflict between work and family responsibility, customs, attitudes and other behavioral decisions which play a significant role in the cultural practices in Nigeria has contributed immensely to the obstruction of female career choice in technical and vocational education.

Conclusion

In conclusion, this study reveals that female enrollment into TVET Institutions is very low in Ogun State. Interplay of parental and societal factors is believed to play a major role in the decision of female students to enroll for TVET in the State. Additionally, inadequacy of infrastructural facilities in the TVET Institutions coupled with inadequacy of government policy to enhance female enrollment in the Institutions is also identified. Enlightenment targeted at correcting the parental perception and influence towards female enrollment in TVET is recommended. Government at all levels must also put in place strategies which will enhance female enrollment in TVET; and understand that gender disparity in TVET is a very vital and significant issue because the key to every nation's economic growth and development lies in the optimal participation of the citizenry in nation building.

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