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AVAILABILITY OF PRACTICAL FACILITIES FOR IMPLEMENTATION  
OF TVET CURRICULUM IN TECHNICAL COLLEGES IN  
AKWA IBOM STATE

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ABSTRACT

*The study assessed availability of practical facilities for implementation of TVET curriculum in Technical Colleges in Akwa Ibom State. Three research questions and Three hypotheses were formulated to guide the study. Simple random sampling technique was used to select 140 teachers from a population of 196 in seven public Technical Colleges in Akwa Ibom State. A 60-item questionnaire of 4-point rating scale was used for data collection. The instrument was face validated by three research experts, while the reliability of the instrument was obtained using Cronbach Alpha statistics which yielded a reliability coefficient of 0.86. Mean and standard deviation were used to answer research questions while the hypotheses were tested using independence t-test at 0.05 level of significance. The study revealed inadequate facilities including hacksaw frame, cold chisel, steel rule scribe, vernier calipers, hammers, try square, benches vices, forging hammers for implementation of TVET curriculum in Technical Colleges in Akwa Ibom State. The findings further revealed the constraint to effective implementation of TVET curriculum as poor funding and partnership with industries, inadequate: internal quality assessment, infrastructure, vocational guidance services and unstable power supply. From the findings of the study, the researchers identified strategies needed for effective implementation of TVET curriculum as effective partnership with industries, utilization of curriculum assessment measures, adequate funding, vocational guidance, employment of competent teachers and stable power supply. The researchers further recommended that curriculum*

*developers should develop curriculum in partnership with TVET stakeholders to reflect what students should learn for self-reliance and employment.*

**KEYWORDS:** TVET, Technical Colleges, Practical Facilities, Curriculum Implementation.

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## INTRODUCTION

Today, developing countries around the world are concerned with the development of technical and vocational education and training (TVET) that produces skilled graduates for self-sufficiency and employment in industries within an economically viable structure. Kehinde and Adewuyi (2015), Ramadan and Chen (2018), Okon (2019), Batchman and Nathaniel (2019), and Law-Obi and Dara (2020), opined that TVET is a means through which the skills needs of learners from different socio-economic backgrounds are responded to, thus preparing them for self-employment and sustainable livelihood. According to the Nigerian National Policy on Education (FRN, 2013), TVET encompasses Technical Colleges, Vocational Enterprise Institutions, and the National Vocational Qualification Framework as a condensed term referring to those aspects of the educational process that include, in addition to general education, the acquisition of practical skills, attitudes, understanding, and knowledge relating to occupations in various sectors of the economic and social life. In pursuant of the goals of TVET, a technical college is a post-basic education institution established for the acquisition of skills for self-reliance and employment (FRN, 2013; Akpan, Utuk, & Essien, 2019). Ifeanyichukwu, Uzoagulu, and Ifeyinwa (2018) stated that practical facilities are tools, equipment, and machines used for practical works that are inevitable in the teaching and learning of TVE subjects. Uwameiye (2016), Ubulom and Enyekit (2017), and Ifeanyichukwu et al. (2018) stated that students are taught with practical facilities that include a hacksaw frame, a cold chisel, a steel rule (300 m) scriber, venire calipers, hammers, a try square, benches vices, forging hammers, blow lamps, soldering bits, an anvil, flat nose pliers, furnaces for heat treatment, a ball pen, and grease gum. Other items include pliers, assorted file, Allen keys, twist drills, tread cutting taps and dies, rubber mallet, tire levers, welding equipment, electric soldering irons, grinding machines, and wheel balancing machines, manual typewriters, electric typewriters, shorthand laboratories, tape recorders, cassette players, and line jacks with headphones, pin cushions, seams, rippers, tracing wheels, measuring tapes, armhole/neckline curves,

According to Johanson and Adams (2004), Nwokolo and Iwua (2015), and Fidelia and Dara (2020), technical colleges can only achieve their goals if they focus on the actual labor market needs and carefully design and implement curriculum that serves the needs of the production and service sectors, as well as design practices and learning experiences that best serve job requirements. Curriculum, according to Veronica (2011), Isaac, Usoro, and Akpan (2019), can be defined as the learning experiences and intended learning outcomes through which the educational system systematically planned and guided the reconstruction of knowledge of the cognitive, affective, and psychomotor development of the learner as prescribed by society. Similarly, the Technical Vocational Education and Training (TVET) curriculum is the sum total of the activities of educational programs that

prepare students primarily for occupations requiring manipulative skills or non-technical occupations in order to secure confidence and experience by individual students (Isaac, Usoro, & Akpan, 2019; Nwokolo & Iwua, 2020). Isaac, Usoro, and Akpan (2019) noted that no matter how lofty the technical college curriculum is designed, if it is not effectively implemented in accordance with societal needs, the objectives of technical college cannot be achieved. Curriculum implementation, according to Abud (2014), Oluwadare, Omidiji, and Awe (2022), is the task that emerges once the curriculum document is picked up for execution, which is the act of translating the curriculum document into an operating curriculum by the combined efforts of the learners, teachers, and other concerned bodies. Fidelia and Dara (2020) stressed that curriculum implementation is an important stage of the curriculum process, where the learners interact with the curriculum through the learning activities. Edokpolor and Owenubiugie (2017) and Oluwadare et al. (2022) posited that the smooth running of the educational system depends largely on the availability and adequacy of facilities and equipment. In the same vein, Isaac, Usoro, and Akpan (2019), Fidelia, and Dara (2020), maintained that effective curriculum implementation requires adequate provision of equipment and learning materials, human and material resources, physical facilities, and the payment of the salaries of all the personnel involved in the implementation of the curriculum. Okwelle and Owon (2017) noted that the majority of technical colleges study their courses theoretically because of a lack of practical facilities. According to Obunadike (2015), the practical courses that are supposed to expose students to real-world training in order to balance or match the theory learned in the classroom have become numerous.

In Nigeria, the factors responsible for skills mismatch in technical education institutions are insufficient exposure to practical work, weak, dissipated, and obsolete infrastructure, equipment, and facilities, and an inadequate partnership with industries (Usman and Tasmin, 2015; Oviawe, Uwameiye, and Uddin, 2017; Akinyele and Bolarinwa, 2018; Okolie, Igwe, and Elom, 2019). The effect of the challenges facing TVET is that skilled and competent graduates may not be produced, which is the output of curriculum implementation (Boahim & Boahim, 2018; Oluwadare et al., 2022). Similarly, Maxwell, Stephen, Hezekiah, Paul, and Oyafunke-Omoniyi (2018) stated that the failure of the implementation of TVET curricula negatively affects entrepreneurial actions and provides real-life simulations. In Akwa Ibom State, students are taught in seven technical colleges in occupational areas such as carpentry and joinery, furniture and upholstery making, block laying and concrete, plumbing and pipe-fitting, electrical and electronics, automobile engineering craft, welding and fabrication craft, mechanical engineering craft, and business education (Akpan, Utuk & Essien, 2019). Unfortunately, Akpan et al. (2019), Bill and Akpabio (2021), stated that technical colleges in Akwa Ibom State are poorly funded with inadequate training materials and equipment, infrastructure, and competent teachers. From the challenges facing TVET in Nigeria, there is a clear indication that curriculum implementation at the technical colleges in Nigeria has been the opposite of what it is in developed countries. Hence, this study set out to assess the availability of practical facilities, identify challenges, and identify strategies for effective implementation of TVET curriculum in technical colleges in Akwa Ibom State.

## **STATEMENT OF THE PROBLEM**

TVET institutions are neglected in the areas of adequate funding, modern facilities, instructional resources, staff motivation, classrooms and experience personnel to expose the students to practical skills which consequently affect the country economic development negatively (Usman & Tasmin, 2015; Oviawe, Uwameiye, & Uddin, 2017; Brown, 2018; Okolie, Igwe & Elom, 2019; Danladi, Adamu, Usman & Doma, 2020; Elujekwute & Okigbo, 2021; Oluwadare, Omidiji & Awe, 2022). These impediment poses a great challenge to effective curriculum implementation at the Technical Colleges in Nigeria. In the view of Chinda and Bello (2015), and Onwusa (2021), non-acquisition of skills aggravate TVET graduates negative behavior in the society which leads to thuggery, arm robbery, militancy, ethnic-political clashes and other vices in Nigeria. Hence to tackle this menace, it is imperative to assess the availability of practical facilities, challenges and identify strategies for effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State.

## **PURPOSE OF THE STUDY**

The study sought to determine:

1. the availability of practical facilities for effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State.
2. the constraints that hinder effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State.
3. the strategies needed for effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State.

## **RESEARCH QUESTIONS**

1. What are the practical facilities available for effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State?
2. What are the constraints that hinder effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State?
3. What are the strategies needed for effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State?

## **HYPOTHESES OF THE STUDY**

The following null hypothesis were tested at 0.05 level of significance:

- H0<sup>1</sup>:** There is no significant difference between the mean responses of Male and Female Technical College teachers on practical facilities available for effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State.

- H0<sup>2</sup>:** There is no significant difference between the mean responses of Male and Female Technical College teachers on the constraints that hinder effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State.
- H0<sup>3</sup>:** There is no significant difference between the mean responses of Male and Female Technical College teachers on the strategies needed for effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State.

## **METHODOLOGY**

The study was carried out at seven technical colleges in Akwa Ibom State, Nigeria. The study adopted a descriptive survey research design to elicit information from the respondents. Nworgu (2006) noted that a descriptive survey is a design approach that aims at collecting data and describing, in a systematic manner, the characteristics, features, or facts about a given population. A simple random sampling technique was used to select 140 teachers from a population of 196 in seven public technical colleges in Akwa Ibom State. The researchers developed a 60-item structured questionnaire titled "Availability of Practical Facilities for Implementation of TVET Curriculum in Technical Colleges Questionnaire (APFITCTCQ)" for data collection. The questionnaire has three parts: Part A contains 36 items on the availability of practical facilities; Part B contains 12 items on constraints; and Part C contains 12 items on the strategies needed for effective implementation of the TVET curriculum. Face validation of the instrument was carried out by two experts in the Department of Industrial Technology Education and one in the Department of Tests and Measurement, Faculty of Education, University of Uyo, Akwa Ibom State. In order to ensure the reliability of the instrument, the researchers administered the questionnaire to 20 respondents in the technical colleges who were not part of the study but possessed the same qualities as those used in the study. The Cronbach Alpha technique was used to analyze the collected data, which yielded a reliability coefficient of 0.86. The researchers administered the instrument directly to the respondents in the technical colleges with the help of three assistants who were instructed on what was required. A four-point rating scale with cut-off points for the interpretation of the mean of the respondents' opinion for research question 1 was Adequately Available (AA = 3.50–4.00), Moderately Available (MA = 2.50–3.49), Inadequately Available (IA = 1.50–2.49), and Not Available (NA = 1.00–1.49), while research questions 2 and 3 were: Strongly Agree (SA = 3.50–4.00), Agree (A = 2.50–3.49), Disagree (D = 1.50–2.49), and Strongly Disagree (SD = 1.50–2. The instrument was collected immediately after completion, resulting in a 100% return rate. The research data was collected using Mean and Standard Deviation, and an independent t-test was used to test all null hypotheses at the .05 level of significance. Where the calculated t-value was greater than the tabulated value, the null hypothesis was

rejected; where the calculated t-value was less than the tabulated value, the null hypothesis was upheld.

## PRESENTATION AND ANALYSIS OF DATA

**Research Question One:** What are the practical facilities available for effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State?

**Table 1: Mean ratings of practical facilities available for effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State.**

S/N	PRACTICAL FACILITIES AVAILABLE FOR EFFECTIVE IMPLEMENTATION OF TVET CURRICULUM	MALE		FEMALE		DEC.
		X	SD	X	SD	
1.	Hacksaw frame	1.64	.81	1.51	.85	IA
2.	Cold chisel	1.96	.68	1.58	.73	IA
3.	Steel rule (300m) scribe	1.74	.74	1.37	.66	IA
4.	Venire calipers	1.80	.55	1.66	.68	IA
5.	Hammers	1.94	.82	1.52	.81	IA
6.	Try square	1.83	.97	1.56	.74	IA
7.	Bench vices	1.87	.67	1.50	.75	IA
8.	Forging hammers	2.31	.84	1.48	.62	IA
9.	Blow lamps	1.92	.71	1.91	.81	IA
10.	Soldering bits	1.86	.68	1.88	.76	IA
11.	Anvil	2.44	.94	1.47	.73	IA
12.	Flat nose pliers	1.60	.85	1.76	.65	IA
13.	Furnaces for heat treatment	1.64	.82	1.92	.79	IA
14.	Punches	1.83	.97	1.66	.87	IA
15.	Ring spanners	1.57	.77	1.50	.72	IA
16.	Socket spanner	2.31	.74	2.48	.89	IA
17.	Ball pen and grease gums	1.72	.81	1.51	.76	IA
18.	Pliers	1.75	.68	1.88	.71	IA
19.	Assorted file	2.31	.84	2.07	.84	IA
20.	Allen keys	1.86	.76	1.86	.61	IA
21.	Twist drills	1.88	.67	1.50	.85	IA
22.	Tread cutting taps and dies	2.36	.84	1.48	.72	IA
23.	Rubber mallet	1.94	.74	1.49	.75	IA
24.	Tire levers	1.77	.63	1.87	.73	IA
25.	Welding equipment	2.43	.96	1.45	.78	IA
26.	Manual typewriter	1.86	.82	1.74	.66	IA
27.	Electric typewriter	1.79	.85	1.93	.74	IA
28.	Shorthand laboratory	1.75	.93	1.68	.68	IA
29.	Tape recorders	1.83	.74	1.56	.74	IA
30.	Cassette player	2.36	.72	2.48	.82	IA
31.	Line jack with headphone	1.87	.86	1.54	.75	IA
32.	Pin cushions	1.78	.64	1.87	.87	IA

33.	Seam Ripper	2.33	.87	2.04	.64	IA
34.	Tracing wheel	1.62	.75	1.88	.83	IA
35.	Measuring Tapes	1.86	.63	1.55	.66	IA
36.	Armhole/neckline curve	1.58	.67	1.89	.74	IA
<b>Grand Mean and Standard Deviation</b>		<b>1.48</b>	<b>.86</b>	<b>1.41</b>	<b>.82</b>	<b>IA</b>

The data presented in Table 1 shows Grand Mean and Standard Deviation of 1.48, 1.41 and .86, .82 for male and female Technical Colleges teachers respectively on the practical facilities available for effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State. The data generated on all the items indicate that the respondents agreed that practical facilities are inadequate for effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State.

**Research Question Two:** What are the constraints that hinder effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State?

**Table 2: Mean ratings of the constraints that hinder effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State.**

S/N	CONSTRAINTS THAT HINDER EFFECTIVE IMPLEMENTATION OF TVET CURRICULUM	MALE		FEMALE		DEC.
		X	SD	X	SD	
1.	Poor partnership with industries.	3.74	.83	3.66	.68	SA
2.	Inadequate internal quality assessment.	3.81	.66	3.73	.63	SA
3.	Lack of electrification to power practical facilities.	3.68	.69	3.61	.76	SA
4.	Inadequate provision of infrastructure.	3.65	.72	3.69	.61	SA
5.	Inadequate vocational guidance services.	3.93	.89	2.56	.74	SA
6.	Poor funding system.	3.85	.55	3.64	.72	SA
7.	Lack of rewards for excellence.	3.71	.78	3.82	.59	SA
8.	Neglect of students needs at curriculum planning level.	3.78	.73	3.79	.64	SA
9.	Inadequate supply of competent and motivated teachers.	3.59	.89	3.68	.62	SA
10.	Overloaded theoretical curriculum content	3.70	.76	3.61	.66	SA
11.	Human resource brain drains and capital flight.	3.88	.81	3.76	.73	SA
12.	Complex and ambiguous curriculum.	3.74	.67	3.59	.44	SA
<b>Grand Mean and Standard Deviation</b>		<b>3.79</b>	<b>.72</b>	<b>3.68</b>	<b>.69</b>	<b>SA</b>

The data presented in Table 2 shows Grand Mean and Standard Deviation of 3.79, 3.68 and .72, .69 for male and female Technical Colleges teachers respectively on the constraints that hinder effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State. The data generated on all the items indicate that the respondents strongly agreed that all the items are constraints that hinder effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State.

**Research Question Three:** What are the strategies needed for effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State?

**Table 3: Mean ratings of the strategies needed for effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State.**

S/N	STRATEGIES NEEDED FOR EFFECTIVE IMPLEMENTATION OF TVET CURRICULUM	MALE		FEMALE		DEC.
		X	SD	X	SD	
1.	Organization of exchange programme with industries to keep the teachers abreast of the modern technology.	3.72	.58	3.64	.61	SA
2.	Utilization of curriculum assessment measures to achieve TVET goals.	3.56	.83	3.61	.54	SA
3.	Provision of adequate power supply	3.69	.74	3.52	.48	SA
4.	Provision of adequate infrastructure	3.51	.85	3.56	.79	SA
5.	Provision of adequate vocational guidance	3.64	.82	3.70	.85	SA
6.	Provision of adequate funding	3.83	.67	3.59	.72	SA
7.	Provision of adequate rewards for excellence	3.77	.77	3.73	.55	SA
8.	Curriculum developers should reflect what students should learn for self-reliance and employment	3.75	.71	3.71	.49	SA
9.	Adequate supply of competent teachers	3.58	.68	3.64	.57	SA
10.	Development of TVET practical oriented curriculum	3.64	.64	3.63	.51	SA
11.	Organization of conferences, workshops and seminars to train the teachers on the utilization on practical facilities.	3.55	.75	3.68	.56	SA
12.	Development of less complex and ambiguous.	3.67	.82	3.51	.73	SA
<b>Grand Mean and Standard Deviation</b>		<b>3.62</b>	<b>.68</b>	<b>3.59</b>	<b>.61</b>	<b>SA</b>

The data presented in Table 3 shows Grand Mean and Standard Deviation of 3.62, 3.59 and .68, .61 for male and female Technical Colleges teachers respectively on the strategies needed for effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State. The data generated on all the items indicate that the respondents strongly agreed that all the items are strategies needed for effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State.

**Hypothesis One:** There is no significant difference between the mean responses of Male and Female Technical College teachers on practical facilities available for effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State.

**Table 4: Independent t-test analysis on practical facilities available for effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State.**

Variable	N	X	SD	df	t-cal.	t-crit.	Decision
Male	73	1.48	0.86	138	0.50	1.67	NS
Female	67	1.41	0.82				

Note NS = Not Significant.

Table 4 shows that the t-cal was 0.50 while the t-crit. was 1.67 hence, since the t-cal at 138 degree of freedom is less than t-crit. thus the null hypothesis of no significant difference



between the mean responses of Technical Colleges teachers on the practical facilities available for effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State was upheld. This implies that practical facilities are inadequate for effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State.

**Hypothesis Two:** There is no significant difference between the mean responses of Male and Female Technical College teachers on the constraints that hinder effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State.

**Table 5: Independent t-test analysis on constraints that hinder effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State.**

Variable	N	X	SD	df	t-cal.	t-crit.	Decision
Male	73	3.79	0.72	138	0.92	1.67	NS
Female	67	3.68	0.69				

Note NS = Not Significant.

Table 5 shows that the t-cal was 0.92 while the t-crit. was 1.67 hence, since the t-cal at 138 degree of freedom is less than t-crit. thus the null hypothesis of no significant difference between the mean responses of Technical Colleges teachers on the constraints that hinder effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State was upheld. This implies that the items are constraints that hinder effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State.

**Hypothesis Three:** There is no significant difference between the mean responses of Male and Female Technical College teachers on the strategies needed for effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State.

**Table 6: Independent t-test analysis on the strategies needed for effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State.**

Variable	N	X	SD	df	t-cal.	t-crit.	Decision
Male	73	3.62	0.68	138	0.27	1.67	NS
Female	67	3.59	0.66				

Note NS = Not Significant.

Table 6 shows that the t-cal was 0.27 while the t-crit. was 1.67 hence, since the t-cal at 138 degree of freedom is less than t-crit. thus the null hypothesis of no significant difference between the mean responses of Technical Colleges teachers on the strategies needed for effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State was upheld. This implies that the strategies are needed for effective implementation of TVET curriculum in Technical Colleges in Akwa Ibom State.

## DISCUSSION OF FINDINGS

Table 1 displays a grand mean and standard deviation of 1.48, 1.41, and .86, .82 for male and female technical college teachers, respectively, on the practical facilities available

for effective implementation of TVET curriculum in Akwa Ibom State technical colleges. The data generated on all items show that respondents strongly agreed that practical facilities are insufficient for effective implementation of TVET curriculum in Akwa Ibom State technical colleges. The study's findings are consistent with those of Uwameiye (2016), Ubulom and Enyekit (2017), and Ifeanyichukwu et al. (2018), who noted that students are taught with practical facilities such as a hacksaw frame, a cold chisel, a steel rule (300 m) scriber, venire calipers, hammers, a try square, benches vices, forging hammers, blow lamps

Table 4 shows that  $t$ -cal was 0.50 and  $t$ -crit was 1.67; hence, since the  $t$ -cal at 138 degrees of freedom is less than  $t$ -crit, the null hypothesis of no significant difference between the mean responses of technical college teachers on the practical facilities available for effective implementation of TVET curriculum in technical colleges in Akwa Ibom State was upheld. This implies that practical facilities are insufficient for the effective implementation of TVET curriculum in Akwa Ibom State technical colleges.

Table 2 shows a grand mean and standard deviation of 3.79, 3.68, and .72, .69 for male and female technical college teachers, respectively, on the constraints that impede effective implementation of TVET curriculum in Akwa Ibom State technical colleges. The data generated on all of the items show that the respondents strongly agreed that all of the items are constraints that impede effective implementation of TVET curriculum in Akwa Ibom State technical colleges. The study's findings are consistent with those of Usman and Tasmin (2015), Oviawe, Uwameiye, and Uddin (2017), Brown (2018), Okolie, Igwe, and Elom (2019), Danladi, Adamu, Usman, and Doma (2020), Elujekwute and Okigbo (2021), Oluwadare, Omidiji, and Awe (2022), who stated that TVET institutions are neglected in

Table 5 shows that  $t$ -cal was 0.92 and  $t$ -crit was 1.67; hence, since the  $t$ -cal at 138 degrees of freedom is less than  $t$ -crit, the null hypothesis of no significant difference between the mean responses of technical college teachers on the constraints that hinder effective implementation of TVET curriculum in technical colleges in Akwa Ibom State was upheld. This implies that the items are constraints that hinder the effective implementation of TVET curriculum in technical colleges in Akwa Ibom State.

Table 3 shows a grand mean and standard deviation of 3.62, 3.59, and .68 and .61 for male and female technical college teachers, respectively, on the strategies required for effective implementation of TVET curriculum in Akwa Ibom State technical colleges. According to the data generated on all of the items, respondents strongly agreed that all of the items are strategies required for the effective implementation of TVET curriculum in technical colleges in Akwa Ibom State. The finding of the study is in support of the study carried out by Isaac, Usoro, and Akpan (2019), Fidelia, and Dara (2020), who stated that effective curriculum implementation requires adequate provision of equipment and learning materials, human and material resources, physical facilities, and the payment of salaries of all the personnel, both teaching and non-teaching, concerned with the implementation of curriculum.

Table 6 shows that  $t$ -cal was 0.27 while  $t$ -crit was 1.67; hence, since the  $t$ -cal at 138 degrees of freedom is less than  $t$ -crit, the null hypothesis of no significant difference

between the mean responses of technical college teachers on the strategies needed for effective implementation of TVET curriculum in technical colleges in Akwa Ibom State was upheld. This implies that strategies are required for the effective implementation of TVET curriculum in Akwa Ibom State technical colleges.

## **CONCLUSION**

Technical education is a professional activity that requires intensive knowledge. Trainees in the program require tools, equipment, and environments for the acquisition of skills for employment and self-reliance. Recognizing the goals of TVET, this study assessed the availability of practical facilities and identified challenges facing curriculum implementation in technical colleges in Akwa Ibom State as poor collaboration with industries, inadequate internal quality assessment, poor funding, unstable power supply, lack of rewards for excellence, inadequate provision of infrastructure, lack of competent teachers, overloaded theoretical curriculum content, neglect of students' needs at various levels of curriculum planning and development, human resource-related problems such as brain drain and human capital flight, and a complex and ambiguous curriculum. Hence, the researchers recommend strategies for effective implementation of TVET curricula in technical colleges in Akwa Ibom State.

## **RECOMMENDATIONS**

Based on the findings of the study, the following recommendations were provided;

1. Government at all levels and NGOs should organize exchange programme with industries to keep the teachers abreast of the modern technology.
2. Government at all levels should provide adequate funding, infrastructure, competent teachers, stable electricity to power practical facilities.
3. Vocational guidance for both parent and students should be provided by stakeholders in TVET.
4. Development of TVET practical oriented curriculum in partnership with TVET stakeholders to reflect what students should learn for self-reliance and employment.
5. Organization of conferences, workshops and seminars to train the teachers on the utilization on practical facilities.



## REFERENCES

- Abud, B. (2014). *Assessment of the implementation of Mathematics Curriculum selected secondary school in Kano State*. Retrieved from Kubanmu.abu.edu.ng>jspui>bitstream.
- Akinyele, T. A. & Bolarinwa, F. B. (2018). Prospects, issues and challenges of technical and vocational education and training (TVET) in revamping Nigeria depressed economy. *International Journal of Vocational and Technical Education Research*, 4(1) Pp 1-18.
- Akpan, N., Utuk, I. & Essien, E. (2019). Technical College administration in Akwa Ibom State: Afunctional approach on the structure and leadership styles. *Academic Journal of Global Who is Who in Academia*, 2(2):11-21.
- Batchman, E. I. & Nathaniel, N. U. (2019). Head teachers' accountability for effective administration in technical colleges in Akwa Ibom State. *Niger Delta Journal of Vocational and Business Education*, 3(1):18-31.
- Bill, U. & Akpabio, I. (2021). School Factors and Utilization of Instructional Materials for Teaching Government in Secondary Schools in North East Senatorial District of Akwa Ibom State, Nigeria. *African Journal of Educational Assessors*, 8(2):100-109.
- Boahim, P & Boahim, P. (2016). Competency Based Curriculum: A framework for bridging the gap in Teaching, Assessment and World of Work. *International Journal of Vocational and Technical Research*, 4(2):1-5.
- Brown, P.B. (2018) *Why everyone will have to become an entrepreneur (Crowd Sourced Version)* retrieved on February 2, 2023 from <https://www.forbes.com/sites/actiontrups/everyone/2018/11/03/why-will-have-to-become-an-entrepreneur-crowd-sourced-version>
- Clinda, P. & Bello, H. (2015) Toward a sustainable TVET: Policies and challenges. *Journal of Nigeria Association of Teachers of Technology*, 2(5):6-74
- Danladi, J., Adamu, A., Usman, N. & Doma, S. (2020). Challenges and opportunities in technical and vocational education (TVET) in Nigeria. *Capital Journal of Educational Studies*, 6(1):71-82.
- Edokpolor, J. E. & Owenvbiugie, R. O. (2017). Technical and Vocational Education and Training skills: An antidote for job creation and sustainable development of Nigerian economy. *Journal of Problems of Education in the 21st century*, 75(6):535-549.
- Federal Republic of Nigeria (FRN, 2013). *National Policy on Education* (6<sup>th</sup> edition) Lagos. NERDC Press.
- Fidelia, N. L. & Dara, A. O. (2020). Development and Implementation of Education Policy on TVET Curriculum for Students' Relevance in Industries. *Vocational and Technical Education Journal*, 2(1):38-46.

- Ifeanyichukwu, O.A., Uzoagulu, A.E. and Ifeyinwa, O.C. (2018). Availability and Adequacy of Workshop Facilities for Skill Acquisition among Undergraduates in Technology Vocational Education in Universities in South East Nigeria. *International Journal of Scientific and Research Publications*, 8(6):159-174.
- Isaac, B., Usoro, N. & Akpan, U. (2019). Technical Teachers Role in the Effective Implementation of Technical College Curriculum. *Intercontinental Journal of Education, Science and Technology*, 4(1):53-60.
- Johanson, N. & Adams, H. (2004). Skill Development in Sub-Saharan Africa, Washington DC. The World Bank.
- Kehinde, T.M. and Adewuyi, L.A. (2015). Vocational and Technical Education: A Viable Tool for Transformation of the Nigerian Economy. *Journal European Centre for Research Training and Development*. (2),22-31, Retrieved on December 24, 2022 from www.eajournals.org.
- Law-Obi, F. N. & Dara, A. O. (2020) Development and Implementation of Education Policy on TVET Curriculum for Students' Relevance in Industries. *Vocational and Technical Education Journal*, 2(1):38-46.
- Maxwell, O., Stephen, I., Hezekiah, F., Paul, S. & Oyafunke-Omoniyi, C. (2018). Entrepreneurship curriculum contents and entrepreneurial development of university students in Nigeria. *International Journal of Entrepreneurship*, 22 (1):44-56.
- Nwokolo, J. & Iwua, G. (2015). A discourse on curriculum planning, implementation and development in vocational and technical education (VTE) in Nigeria beyond 2020. *An International Journal*, 8(1):1-11.
- Nworgu, B. G. (2006). Educational Research: Basic Issues and Methodology (2<sup>nd</sup> Edition) Enugu: University Trust Publishers Nsukka.
- Obunadike, J. C. (2015). Vocational and technical education: A tool for National development in Nigeria. In R. Okoye, J. E. O. Otuka & S. Iheonunekwu (Eds). Vocational and technical education in Nigeria: Trends and Prospects. Onitsha: *Global Academic Group Online Academic Resources*.
- Okolie, U., Igwe, P. & Elom, E. (2019). Improving graduate outcomes for Technical Colleges in Nigeria. *Australian Journal of Career Development*, 28(1):21-30.
- Okon, E. (2019). Vocationalisation of TVET through institution industry collaboration: bridging the skill gap Nigerian. *Journal of Business Education*, 6(2) 421-443
- Okwelle, P. C. & Owo, O. T. (2017). Skills Acquisition in Technical and Vocational Education and Training (TVET) tool for sustainable Entrepreneurship Development. Electrical/Electronic Students in Polytechnic. *Rivers State Science and Industrial Technology Education Journal*, 5 (2):73-83.

- Oluwadare, A., Omidiji, S. & Awe, O. (2022). Business education curriculum development and implementation in Nigeria: problems and prospects. *Nigerian Journal of Business Education*, 9(2):123-130.
- Onwusa, S. C. (2021). The Issues, Challenges and Strategies to Strengthen Technical, Vocational Education and Training in Nigeria. *International Journal of Research and Innovation in Social Science*, 5(5):48-59.
- Oviawe, J.I., Uwameiye, R., & Uddin, P.S.O. (2017). Bridging skill gap to meet technical vocational education and training school workplace collaboration in the 21st Century. *International Journal of Vocational Education and Training Research*, 3(1):7-14.
- Ramadan, A., Chen, X., & Hudson, L.L. (2018). Teachers' Skills and ICT Integration in Technical and Vocational Education and Training TVET: A Case of Khartoum State-Sudan. *World Journal of Education*, 8(3):31-43.
- Udom, G. I. (2013). *Fundamentals of Curriculum and Instruction for Tertiary Institutions and Educational Practitioners*. Abuja: Joson-Sam Modern Printers.
- Usman, A. & Tasmin, R. (2015). Entrepreneurial skills development strategies through the mandatory students' industrial work experience scheme in Nigeria. *Journal of Social and Behavioral Sciences*, 204(1):254-258.
- Veronica, N. D. (2011). *Curriculum Studies. Concept, Development and implementation*. Avan Global Publications 73 Christ Church Road, Owerri.
- Ubulom, W. J. & Enyekit, E. O. (2017). Evaluation of facilities utilized for the implementation of business education programmes in tertiary institutions in Rivers State. *International Journal of Innovative Education Research*, 5(3):68-76.
- Uwameiye, B.E. (2016). Availability and Utilization of Tools and Equipment for Teaching and Learning Garment Making Trade in the Senior Secondary Schools in Edo State. *International Journal of Humanities Social Sciences and Education*, 3(3):12-18.