NATIONAL BOARD FOR TECHNICAL EDUCATION
NATIONAL JOURNAL OF TECHNICAL EDUCATION
Volume 24 Nos. 1 2025
ISSN No. 2992-3522

TVET INNOVATION PRACTICES AND EMPLOYMENT SUSTAINABILITY OF INFORMAL SECTOR

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Abstract

The rate of unemployment and absence of gainful employment could be noticed widely among the informal groups in Nigeria. Craftsmen/Artisan are usually displaced out of work with emergent of new Technology, therefore unemployment erupt and poverty noticed on them because new technology of their work. This paper delved into assessing TVET innovation practices and employment sustainability of informal TVET Artisan/Technician. Using NATA members in Ilaro. The population of 82 registered members while 68 respondents of census sampling adopted from structured questionnaires were administered with the following variables. Products service; Ecosystem relationship management. The data analyzed with the SPSS using regression and correlation with P-value of 0.000. Significant level. PC and ERM has potential impact on economic sustainability of Artisan & craftsmen. It's concluded that there were potential TVET innovation practices and Economic Sustainability of Informal TVET group. It was recommended that Tertiary Institution TVET innovation practices should be fully in operation to increase continuous sustainability of employment for this informal TVET groups in their environs of operations.

Keywords: *Employment, Sustainability, Innovation, Ecosystem, Technicians and Tertiary.*

1.0 Introduction

The critical challenges that Africa nations are undergoing are great which Technological innovation progress, employment, underemployment, sustainability, economic growth and development are of great concerns**.** TVET of 21st century should therefore avail Citizenry with continuous upgraded skills, specifically to sustain the emergent needs of industries as well as production process (Kazaure, 2021). The rate of unemployment or absence of gainful employment could also be greatly noticed among the informal sector groups of practioners in Africans but with particular reference to Nigeria artisans made-up 30-35% of the employment population (Oki, etal, 2020). Informal sector contributes a major role as the engine for growth and development in Nigeria which is germane to poverty reduction besides, most jobs are establish in private group of SMEs majorly in the Informal TVET Sector (Kazaure, 2021). Developing economy of African countries requires that the Informal TVET sector must be adequately monitored as a result of it enormous contribution to nation's development. Informal TVET is a training that obeys no rules and may be spontaneous refers to as on the job training of the everyday practice, apprenticeship and continuous learning. Training by mentoring, observations, participation in workshop and training in the crafts. This sector remains most open and is subjected to creativity and innovation. (Kazaure, 2021). Technical/Artisan knowledge is highly required for innovative activities that requires for employment sustainability, which informal TVET is capable of delivery much performance through stakeholder's collaborative efforts.

TVET is being defined as branch of education that has great potential to solve unemployment's, poverty problems through acquisition of skills and sustainable development in many countries of the world. (UNESCO-UNEVCO, 2018) The need of identification of innovative practices in the. learning and teaching produce is specifically germane in TVET system as a result, it aids in preparation of persons for their expertise skills, as well as adaptation to new or diverse jobs and working environments (Boarchen, 2019).

The informal class training is observed as importance to enhance productivity for informal sector activities besides, to put more value to the goods and services in essence which would increase the likely incomes of the person(s) found in those economy sector. (World Bank 2004, King & Palmer, 2007). Family survival and nation o develop all required to check back on the basics, develop the TVET education

system to enhance creativity and innovation (Fadipe, etal, 2021) The gamut numbers of young persons are not in the formal institution and as a results portends the integration of non-learning techniques and the literary and curriculum schemes in national TVET programmes. (African Union, 2007).

1.1 Statement of Problems

The major challenges confronting informal TVET are enormous among which local Craft man /Technician workshop are not well packaged. Absence of Diagnostic equipment to differentiate Technician and Craft-man in the place of operation (Fadipe, etal, 2021). The rate of Technological Progress as it affects different professions, trade and Craft practices, most of the Craft-man/Technician usually find it difficult to upgrade their knowledge to new dictate of technological practice as a result of low level of education and generally illiterate problem. Absence strong Finance to upgrade or to start up a new related craft work are myriad of challenge usually encountered by these craftsmen has thrown many of them out of jobs.

Artisan/Technician are as problematic (Adebowale, 2010; ISife & Akpen-Ade, 2021). Artisan/Technician are deficient of formal training therefore, evaluate at low ebb rating by professional despite the importance of their service to the nation, Hence, they need modern techniques and practice in their exposures for better performance (Isife & Akpe-Ade, 2021).

Craftsman /Artisan do usually displace out of the job with emergent of a new technology, hence, unemployment and poverty noticed in their work activities as a result of a new technology. The apathy to innovative-collaboration is another challenge on the part of Artisan for re-skilling and up-skilling's. Absence of entrepreneurial education orientation on the part of informal Artisans/Technicians practitioners also the bane of challenges of the informal TVET sector. Despite the potential and actual contributions of the informal sector to Nigeria economic development and skills, the education requirement of the sector has not been sufficiently investigated (Kazaure, 2021).

Many researches that had been conducted on TVET but informal TVET sector has not been sufficiently investigated with reference to TVET innovation practices for informal sector employment sustainability in available literatures. Some works undertaken related to this research work are: Boachin (2019) studied policy innovators on competency- Based Training in Ghanaian TVET institutions. The

research was purely theoretical and suggestions were offered as the conclusion of the work.

Fadipe etal (2021) conducted a research on creativity and innovation through technical and vocational education for sustainable family survival Nigeria. The research work was purely theoretical. It was concluded that TVET can reduce unemployment as well recommended among other that Restructure of education system by paying attention to TVET as well as proper funding is essential for TVET schools.

Nyataya (2019) undertaken TVET innovation way out of Future Youth Empowerment and creation of market oriented job opportunities in Rwanda. Purposive sampling employed with sample size of Ninety-one (91) comprised of TVET graduate and trainers determine by use of solvin's Formation. It was found that Entrepreneur.

Obe, etal (n.d) conducted a research on innovation delivery: problems and prospects with population of 303 TVET educators in Enugu State Nigeria. The study finds out that innovation in instructional delivery of technical and vocational education and training (TVET) programme in public universities in Enugu State is a welcome development. it was found that challenges hindering the innovation of TVET instructional delivery was hampered by several factors which in-turns affect skills acquisition in innovative skill and work on their graduation. it was also concluded that digital age brought the increasing need for innovation in TVET instructional delivery. It was recommended that TVET educators should employ innovation in instructional delivery in TVET programmes.

1.2 Lifelong Learning Theory

This research is an anchored on theory of Lifelong Learning Theory propounded by Basil Yeaxlee in 1929.It was later discussed and adopted in detail by UNESCO at a conference in 1960 and later developed also by Ochidy, Gunuz, Odabasi and Kuku in their works. The concept also adopted by National Government of various countries of the world for TVET of development in their domains. This research adopted LLT developed Rus (etal, 2015); Abid etal (2020) Narrated that a grounded theory of Technical and vocational Learning entails acquiring of skill which enables the recipient/enrollee to be economically employed and independent in essence the skill could be acquired going through specific skill acquisition, stages under guidance of professional master either as pupilage interns or apprentices.

Entering stage.

Firstly: the entering stage, preparation which is declared by the applicant/enrollee to acquire a skill in the absence of a specific qualification. **Secondly**, accepting stage; Readiness with intention to conditionally/unconditionally learn/acquire skills. **Thirdly,** adapting stage, adopt; this involve embracement of the enrollee as well as taking to the rule of the game. **Fourthly**, change; this cover the movement in learning from unknown to know person; from amateur to Semi Master. **Fifthly**, Skilling for job stage; this highly grasped of the learning as master of trade to train others, practicing the job for economic sustenance's.

The major defect of this theory is the absence re-training/reskilling which entail the upgrade of the Master Craft man knowledge with modern technology to keep the Master Craft man, on the job as technology dictate as well as work demands changes with time.

On gamut of researches that have been done no and any research has been carried out on TVET innovation practices and employment sustainability of informal TVET. The thrust, broad objective of this research is assessing The Federal Polytechnic Ilaro TVET innovation practices and employment sustainability of informal TVET sector in Ilaro, Yewa South Local Government in Ogun State Nigeria while the specific objectives are:

i. To evaluate product and services dimension on employment sustainability of informal TVET sector.
ii. To assess Ecosystem dimension and employment sustainability of informal TVET sector.

2.0 Literature Review

TVET relates domain of educational activities in addition to general education, the mystery of Technologies, science, acquisition of attitudes, understanding, practical skills and knowledge relating to occupants in various sector of economic and social life (UNESCO & Ilo, 2001).

Within the ambit of informal sector, therefore, training system that address skills requirement and prepared workforce to be self-employed are importantly needed to be given sufficiently for the informal sector (Kazaure, 2021).

Informal TVET which is given by craftsmen/Artisans of diverse trade in the informal economy sector. It general designated as vocational training or experienced centered learning and performed in apprenticeship model. This sector is featured by the absence of tailored curriculum for each trade hence,

the absence of structured methodology of teaching in any sequential. Hence, the master Artisan displayed out his knowledge of the things apprentice should be taught (UNESCO –UNVEOC; 2008 Ayomike, 2016) informal sector also entails mentoring, observation and participation in workshops and training in the crafts subjected to creativity and in notion and orientation (Kazaure, 2021). In the view of the current high level of poverty and unemployment, it is germane to give citizen with important skills that will provide them to have access to employment in the important sectoral of the economy hence most jobs are created in SMEs that falls within the ambit of informal sector, therefore, training system that address skills requirement and prepared workforce to be self-employed are importantly needed to be given sufficiently via the informal sector (Kazaure, 2021).

2.1 TVET Innovations and Information TVET

Innovation networks have diverse types: it could be intra-organizational or inter-organizational; they could be either global, regional and local based; the pattern of communication could either be cooperation or physical meeting or via electronic (virtual), collaborations. Besides, innovation networks do assemble gamut range of persons from diverse backgrounds through which different expertise knowledge and skill that could be an added dimension to innovation process. (Ruth & Deitmer, n.d).

It was also reported that major breakthrough innovation in history were not developed by Engineers and scientists rather but by technicians and high skilled craftsmen, as in example of steam engine which was designed and made by technicians or skilled work that deployed through the knowledge from practice but not from science (Mokyr, 2012, Rolt, 1986 Ruth & Deitmer, n.d). Informal TVET sector is still mostly open and is based on high innovation and creativity (Kazaure, 2021).

2.1.1 TVET Innovation and Informal Sector Employment Sustainability

TVET is genuinely the branch of education the learners are adequately equipped for rewarding gainful employment (Nyataya, 2019; Pongo, Effah, Osei-owasu, Obininim & Sam 2014). TVET institutions are germane great providers of clientele of labour forces) that would be in fore-front of engaging with sustainable issues. (Paryono, 2017) There is higher notation of the advantages in self-employment in the informal economics than the formal

economies in the developing countries that trainings are important ways for the individuals in an informal economy (International Labour Organisation, 1998, Bhurtel, 2015). TVET stands for diverse types of significance. It is noted as one of the strategies to solve the unskilled labour forces and unemployment (Bhurtel, 2016). Higher county expenditure in TVET scheme has higher potency to supply the uneducated and the poor to have a skill-building opportunity based on investment of the government (Asadullah, 2019). It is shown that changes in skills are needed almost always in which part of our evolution as humans, besides change is a constant necessity for learning new skills, acquiring knowledge usage of new acquire know-how that bring about new technology, moreover, former skill needed to be upgraded with new skill to keep pace of work going (Lunch & Spohrer, 2012; Badawi & Dragoicea, 2023).

2.2 TVET Innovation Practices Balanced Scorecard Dimensions.

TVET innovation practices Balance Scorecards Dimension comprises: (1) Strategy and Management; (2) Ecosystem Relationship and Management; (3) Teaching and Learning; (4) Product and services. According to (UNESCO - UNEVECO, 2020)

2.2.1 Product and Service Dimension

The degree and accelerated development in economy of the labour market and society occasioned brought about job reform and digital orientation for more sustainable business models. This could be done by TVET innovating institution by conducting innovative research and development. Besides, provision of facilities and trainings business gestations or incubators; registrations of business. In addition, TVET institutions to develop and deploy innovative services for learners and collaborations via innovative skills programme; recognition of pre-learning and adaptation of work based learning apprenticeship and career counseling to prepare for the change needs of the workforce, market dictate for the changing, society and individual at large.

2.2.2 Ecosystem Relationship Management Dimension

A Germaine problem for TVET institutions has always been in effective, efficient relationship with players in the ecosystem that surrounds the institution. The development in communication like in social media and digital media give a new advocacy opportunity to increase the value of TVET as a career option against the return general secondary on Tertiary education, which provide platform for ecosystem partnership and individual

ecosystem through partnership with individual ecosystem. This could be done through the following measures not limited to the capacity of the institution to monitor development in the ecosystem and identify demand for new skill. Delivering, learning, product and service centered on ability to monitor as well as to deliver needed teaching, learning, Product and services depends on an institution's ability to monitor evolving needs opportunities in the employment market and in the society. Institution should be able to quickly convert these needs into effective organization practice, training, products and service that can greatly improves innovation capacity in the ecosystem. Hence, institution's engagement in international linkages of competition of skills.

3.0 Methodology

This research employed survey research design using questionnaire to obtain information of all registered/ Association of informal TVET groups of Nigeria Automobile and Technician Association in Ilaro township as the headquarters of Yewa South Local Government which formed the population of this study that was 82 which 48 members were actually registered and attended bi-monthly meeting of the association as obtained from their minutes of meetings held in the last 4months. While 24 other members were the craftsmen operating in the Ilaro Township as non-registered member. The questionnaire were read to cluster of people in Native language which was interpreted to respondent in native language to fill the questionnaire based on the likert 4 scale ratings, SD=4, A=3, DS-2 and SD =1. NATA has six groups under its umbrella: (1) automobile Auto Body (panel beater) Rewire (Mechatronics) Painting/Welding (Iron Benders) and interior upholstery Maker. Finally, 68 questionnaires were administered, hence Census sampling was adopted for this study with 68 respondents administered questionnaires.

Table I.
Reliability table

Cronbach's	
Alpha	No. of items.
0.74	20

This table signifies that the instrument engaged has high reliability potency that address the major questions relating to subject of this research work. Hence it could be used to predict reliable results.

Table II

		Ps	ERM	ES.
Ps	Pearson correlation	1	633	59
	Sig. 2		.000	.000
	N			
		68		68
			68	
ERM	Pearson correlation.	633	1	752
	Sig. (2-tailed)			
	N	.000		.000
		68	68	68
ES	Pearson correlation.	.599	752	1
	Sig. (2-tailed)			
	N	.000	.000	
		68	68	68

Correlation significant at the. 0.002 (2-tailed)

The table above explains the Pearson correlation of product and services which was 0.633 and the P-value 0.000 was significant. Ecosystem Relationship Management ERM correlate at 0.725 with related valued p= 0.0000 level of significant. Correlation established versus. PS and ERM and Employment sustainability were 0.59 and 0.725 respectively at p=0.000 significant value.

Table III

Model summary[b]										
Model 1	**R**	**R SQ**	**Adj R SQ**	**Std. Error of the Estimate**	**R Square change**	**F change**	**df1**	**df2**	**Sig. change**	**Durbin watson**
1	0.747[a]	0.559	0.545	2.11857	0.559	41.135	2	65	0.000	1.828

a. Predictors: (constant). PS, ERM
b. Dependent ES

The table above reveals that mode of fitness R square .545 that product and services with positive correlation among variable of product and service, Ecosystem relationship management on employment sustainability. R_2 squared adjusted value which of moderate changes to 54.5% reveal dependent variable could be narrated by (PS, ERM). The balance of 45.5% could be explained by other reasons outside ambit of this research work.

Table IV ANOVA[a]

Mode		Sum of squares	DF	Mean square	F	Sg
1	Regression	369.259	2	184.629	41.135	.000[b]
	Residual	291.741	65	4.488		
	Total	661.000	67			

A Dependent Variable: ES
b. Predictors : PS, ERM

Above table 4 depict of the joint interaction of PS & ERM variance. The model was fit and significant with F-ratio. [f(2/65)=41.135 p<0.05] less than 5%. And the result is reliable. Besides, there was positive correlation of PS and ERM of the significant level of 0.000[b] in the table. The null hypothesis is rejected and the alternative hypothesis accepted at 95% interval confidence.

Table V

Coefficient correlation[a]

Model		B	Std. error	Beta	T	Sig
1	(constant)	7.124	2.125		3.353	.001
	PS	.237	.108	.234	2.200	.001
	ERM	.674	.124	.577	5.419	.000

a. Dependent variable: -

The table above explained as the Beta coefficient of the study model PS and ERM with B2= 0.237 and B3 =0.674 holding the variables constant. Employment sustainability would be 7.124, unit rise in PS when holding other factors constant will be 0.237, a unit rises in ERM will be 0.674. The regression equation could be demonstrated as, Y=7.124 + 0.237 X_1 + 0.647 X_2 where X 1= the product and service (PS); X_2 = Ecosystem relationship management ERM TVET innovation practices

Hypothesis: **H_1:** Product and service, dimension has effect on sustainability Employment of informal TVET.

H_2: Ecosystem relationship management dimension has effect on sustainability employment of informal TVET.

4.0 Discussion

This research reveals that there was weak positive and statistically significant relationship between product and service and Employment sustainability at P=value of 0.001. product and service which entails ranges of students or clients of students usually turn out by the institution in the name of performing statutory function in which Artisan/ Technician skilled upgrade training should be added for equitable societies in of their TVET innovation practices to sustain employment of this categories of purple in the Informal Sector. This is consistent with Assadullah (2019) that gave explanation of empirical studies that exhibited the positive association between vocational certificate and employment in many Europeans Nations. this also in line with learning and re-training principle that address the imbalance of artisans which can elevate them to better performance, status, upgrades and better income generation as in line with (Isife; & Akpen-Ade, 2021).

The study also reveals that there was a positive correlation/association between Ecosystem management and Employment sustainability at 0.001 less 0.005. This means that the stakeholders and other environment factors should be considered as along with other factors in ecosystem relationship management. This is constant with Fadipe etal, (2019) that asserted that for nation and family survival, we should go back to the basics, that is, informal sector and develop the TVET system as to encourage creativity and innovation to produce quality tradesmen and professionals.

4.1 Conclusion

This research work shown that there is potential innovation practices of product and service on Employment sustainability of informal TVET sector, Artisan/. Technicians to the NATA Ilaro zone from the Federal Polytechnic, Ilaro, Interaction.

The study also concluded that there is also potential TVET innovation practices of Ecosystem Relationship Management on the Informal TVET group to NATA, Ilaro zone from the Federal Polytechnic, Ilaro Interaction.

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