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Facilities for Implementing Entrepreneurship Skills Training in Motor Vehicle Mechanic Work

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Abstract: This study determined facilities for implementing entrepreneurship skills training in Motor Vehicle Mechanic Work. The descriptive survey research study was guided by a research question. The study was carried in Lagos State Nigeria with a population of 230. Facilities for implementing entrepreneurship skills training Questionnaire (FIESTQ) containing 25 items was the instrument developed and used for data collection. It was validated by 3 experts and tested to obtain a reliability coefficient of 0.81 using Cronbach Alpha. The FIESTQ was used for collecting data from 230 respondents. The data collected were analyzed using descriptive statistics of mean and standard deviation to answer the research question and inferential statistics of t-test to test the null hypotheses at 0.05 level of significance. The study found that facilities are essential in the implementation of entrepreneurship skills training in motor vehicle mechanic work. The findings on the hypothesis revealed that there was no significant difference in the mean responses of motor vehicle mechanic work and supervisors in the registered automobile industries. The study recommended that the identified training facilities should be procured by relevant stakeholders to implement entrepreneurship skills training in Motor Vehicle Mechanic Work and that sufficient amount of funds should be deployed by the government to employ requisite manpower in schools.

Keywords: Entrepreneurship, motor vehicle, Vocational education, entrepreneurship training and undergraduates

1. Introduction

Motor vehicle mechanic work is one of the trades that expose learners to skills, knowledge and attitude for employment. In motor vehicle mechanic work, students acquire skills for auto electricity work, repair and servicing of engines of automobiles, maintenance of fuel system, repair and servicing of the braking system. The acquisition of skills acquired by trainees/learners depends on training facilities used during instruction. Training focused on modification of attitude, knowledge and skill as a result of learning experience for optimum performance in given tasks and thus leads to the acquisition of knowledge and skills (Oke & Olakotan, 2017).

Training facilities, according to the National Institute of Building Sciences (NIBS, 2012) are essential features for ensuring effective performance of activities in the training environment, such as buildings, equipment, services, among others. NIBS further advocated that facilities for training adult professionals, such as MVMW, meet the requirements of the fundamental attributes and features designed for adult professionals. Training facilities facilitate the achievement of learning objectives which can only be measured or determined through appropriate evaluation methods. However, any effective training must consider appropriate teaching methods, and necessary facilities.

Facilities are objects and materials used for teaching effectively in institutions in a bid to fulfill a need (Olakotan, 2021; Okwori, 2012). Facilities are those things used for teaching and learning Automobile Technology. These include numerous machines, tools, consumable materials and workshops. The acquisition of skills acquired by trainees/learners depends on the facilities used during training. Gwarzo in Okwori (2012) disclosed that lack of facilities in any training program will make

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trainees not have ample opportunities to see and manipulate them in order to acquire the necessary knowledge and skills while Imarhiagbe in Okwori (2012) further explained that inadequate physical facilities in any training program make the products of such program useless. Facilities are those things used for teaching and learning MVMW. Roblyer & Doering (2007) explained that facilities help trainers to translate abstract ideas to concrete ideas. Similarly, Taiwo (2010) opined that the contributions of using facilities during teaching and learning are as follows: aid in attracting the attention of students and as a result improve their interest level, stimulate students' interest to participate in the teaching and learning activities, help students to picture reality in what has been taught and create an interactive learning environment thereby facilitating effective teaching and learning.

Lemo and Olakotan (2016) averred that functional education cannot be achieved without availability, adequacy and utilization of the facilities. This is because facilities constitute a very important resource in the attainment of educational objectives. Similarly, the duo noted that availability, adequacy and of course utilization of both human and material resources is closely correlated with skill acquisition. Oke and Olakotan (2018) noted skill acquisition in VTE relies on the appropriate utilization of facilities. The importance of facilities in the attainment of VTE goals necessitated the consideration of environmental habit theory for this study. The environmental habit theory as propounded by Prosser and Quigley (1949) stated that vocational education will be efficient in proportion as the environment in which the learner is trained is a replica of the environment in which he must subsequently work. This theory thus substantiates the need for the provision of relevant and adequate facilities for use in motor vehicle mechanic work by students while still in the training institutions in a manner that would also be seen in industries upon graduation so that students would enjoy the necessary familiarities with the facilities and its usage (Mohamad Hassan et al., 2021). When learners are trained without facilities, they find it difficult to practice after graduation. These include numerous equipment, tools, consumable materials and workshops. Facilities in motor vehicle mechanic work are used by teachers/trainers and students/trainees to make teaching and learning more practical and real for the sole aim of acquiring entrepreneurial skills.

Skills refer to overt qualities demonstrated in technical and practical abilities to solve cogent problems that are beneficial to society (Oke & Olakotan, 2017). A skill is a learned ability to carry out a task with pre-determined results often within a given amount of time, energy, or both (Ogbuanya & Ohanu, 2010). Lemo and Olakotan (2016) noted that Skill acquisition is preeminently the cultivation of overt employable skills which tends towards self-reliance in different kinds of occupation and that skill acquisition cannot in anyway be hidden in its recipient, it has to be displayed through manual dexterity and physical habits in manipulating objects for various use and purposes. A skill in the motor vehicle mechanics trade is the learned capacity to carry out pre-determined repairs on vehicles which should results often with minimum outlay of time, energy, or both. Therefore, skills possessed by MWMW students while still in the training institution, would in no doubt equipped them with sound and practical skills capable of making them entrepreneurs upon graduation.

An entrepreneur according to Lidimma (2012) is a giver of employment, provider of infrastructures and valuable services to the community. Adewoye in Bakare (2018) noted that entrepreneurship in Vocational and Technical Education aimed at making the recipients become good and efficient managers of their own businesses/production skills in self-employments. The success of entrepreneurs depends on the entrepreneurial knowledge and skills they acquire to run their businesses (Bakare, 2018; Lemo & Olakotan, 2017). Therefore, entrepreneurship has to do with making a living through working for oneself instead of being employed by others especially in technical occupations and most especially in MVMW. It implies setting up a business enterprise with technical oriented skills by making use of available resources to creatively and innovatively create wealth (Letchmanan & Saad, 2021).

The novelty displayed in setting up ones' automobile maintenance workshop upon graduation in the technical college could be linked to facilities provided by school authorities at various times in training MVMW students while still in the training institutions. Therefore, this study explored facilities for implementing entrepreneurship skills training in motor vehicle mechanic works.

1.1 Problem Statement

Motor vehicle mechanic work exposes students to various skills in motor vehicle maintenance and repairs that can make them self-reliant. This is aimed at reducing unemployment in society. It is expected that graduates of MVMW should be equipped with skills for employment after graduation. However, motor vehicle mechanic work graduates unemployment has reached alarming proportions as a result of obsolete or even absence of facilities for inculcating the entrepreneurial skills in the students while in schools. These graduates lack entrepreneurial skills required for self-employment in motor vehicle mechanic work enterprises. It could be deduced that the inability of MVMW graduates to acquire the relevant entrepreneurship skills is linked to training facilities available in their various institutions. Where facilities are absent, obsolete or inadequate, the desired entrepreneurial skills aimed at putting recipients of MVMW at the fore of self-reliance in the society will be jeopardized if not even dashed. Thus, this study becomes significant.

1.2 Purpose of the Study

This study determined facilities for implementing entrepreneurship skills training in motor vehicle mechanic work. Specifically, the study determined:

- Training facilities required for implementing entrepreneurship skill training in motor vehicle mechanic work.

1.3 Research Question

The following research question guided the study:

- What are the training facilities required for implementing entrepreneurship skill training in motor vehicle mechanic work?

1.4 Hypothesis

The null hypothesis was tested at 0.05 level of significance:

H_{O1}: There is no significant difference between the mean ratings of the responses of motor vehicle mechanic work teachers in the technical colleges and supervisors in registered automobile maintenance industries on the training facilities required for implementing entrepreneurship skill training in motor vehicle mechanic work.

2. Methodology

This study adopted a descriptive survey research design. According to Gall et al. (2007) a survey is a method of data collection using questionnaires or interviews to collect data from a sample that has been selected to represent a population to which the findings of the data analysis can be generalized. The study was carried out in Lagos State. Lagos state is a coastal place where most of the modern vehicles are shipped into the country. In this state, there are a lot of modern vehicles, automobile industries and many unemployed automobile technology graduates who migrate from other parts of the country.

The population for this study consisted of 230 respondents. They are made up of two categories of respondents namely; 26 Motor Vehicle Mechanics (MVM) Work Teachers in the five Technical Colleges in Lagos state offering MVM (Government Technical College: Ado-Soba, Agidingbin, Epe, Ikorodu and Ikotun) and 204 Supervisors from 68 Registered Automobile Maintenance Industries in Lagos State. No sampling techniques was used because the entire 26 motor vehicle mechanic work teachers and 204 supervisors in registered automobile maintenance industries were accessible and manageable.

A self-developed instrument entitled "Facilities for implementing entrepreneurship skills training Questionnaire" (FIESTQ) was used for the study. The FIESTQ containing 25 items was based on an adapted Likert Scale rating of: Highly Required (HR) – 4, Required (R) – 3, Partially Required (PR)-2 and Not Required (NR) -1. The face and content validation of the instrument was ascertained by three experts, while the reliability of the instrument was ensured using Cronbach Alpha and a coefficient of 0.83 was obtained.

The instrument was administered on the respondents with the help of five research assistants in which out of the 230 copies distributed to Motor Vehicle Mechanics (MVM) Work Teachers and supervisors in registered automobile maintenance industries 201 copies were duly returned representing 87.39% return rate.

Mean and standard deviation were used to answer the research question, while t-test was used to test the null hypotheses at 0.05 level of significance. Any item with a Mean rating of 2.50 or above was regarded as required, while any item with a Mean rating less than 2.50 was regarded as not required. The decisions on testing the hypothesis was based on comparing the significant values with 0.05 level of significance. The hypothesis of no significant difference was upheld for any item whose significant value is greater than 0.05 level of significance.

3. Results

3.1 Research Question 1: What are the training facilities required for implementing entrepreneurship skill training in motor vehicle mechanic work?

Data for answering research question one are presented in Table 1.

Table 1: Mean responses of teachers and supervisors on the training facilities for implementing entrepreneurship skill training in motor vehicle mechanic work (N = 201)

S/N	Training facilities	$\overline{X}$	S. D	Remarks
1	Live engine (Petrol)	3.47	0.60	Required
2	Live engine (Diesel)	3.35	0.60	Required
3	Open end wrenches	3.45	0.62	Required
4	Oil filter wrenches	3.44	0.63	Required
5	Ratchet drivers	3.10	0.86	Required
6	Repair manuals	3.14	0.77	Required
7	Faults analyzers	3.40	0.84	Required
8	Diagnostic scanning tools OBD II	3.45	0.63	Required
9	Air compressor	3.41	0.61	Required
10	Digital wheel balancing machine	3.29	0.70	Required
11	Pneumatic brake fluid extractor	3.57	0.61	Required
12	Wheel charger	3.31	0.67	Required
13	Fire extinguishers	3.51	0.58	Required
14	Oil spill collectors	3.54	0.63	Required
15	Digital wheel alignment machine	3.52	0.61	Required
16	Line wrenches	3.37	0.74	Required
17	Pairs of pliers	3.29	0.68	Required
18	Torque wrenches	3.48	0.65	Required
19	Multimeters	3.32	0.59	Required
20	Wire strippers	3.47	0.63	Required
21	Engine lift	3.48	0.58	Required
22	Circuit testers	3.40	0.67	Required
23	Plug cleaner machine	3.38	0.72	Required
24	Crimping tools	3.45	0.63	Required
25	Battery charger	3.43	0.62	Required

Keys: *X = Mean of Respondents, SD = Standard Deviation, N = Number of the Respondents*

Data in Table 1 revealed that all the items had their mean values ranged from 3.10 to 3.57 and were above the cutoff point of 2.50. This indicated that all the 25 training facilities were required for the implementation of entrepreneurship skill training modules in motor vehicle mechanic for enhancing self-employability of technical college graduates in Lagos State. The 25 training facilities had their standard deviation ranged from 0.58 to 0.86. This indicated that the respondents were not too far from the mean and from one another in their responses.

3.2 Hypothesis One

There is no significant difference between the mean ratings of the responses of motor vehicle mechanic work teachers in the technical colleges and supervisors in registered automobile maintenance industries on the training facilities required for implementing entrepreneurship skill training in motor vehicle mechanic work. The data required for testing the above hypothesis are presented in Table 2.

Table 2: t-test analysis of the mean responses of teachers and supervisors on the training facilities required implementing entrepreneurship skill training in motor vehicle mechanic work

S/N	Training Facilities	$\overline{X}_T$	S_1^2T	$\overline{X}_S$	S_2^2S	t-cal	P-values	Remarks
1	Live engine (Petrol)	3.52	0.61	3.47	0.60	0.37	0.71	**NS**
2	Live engine (Diesel)	3.15	0.50	3.37	0.60	1.53	0.12	**NS**
3	Open end wrenches	3.47	0.69	3.45	0.61	0.15	0.87	**NS**
4	Oil filter wrenches	3.42	0.50	3.44	0.65	0.15	0.87	**NS**
5	Ratchet drivers	3.05	0.91	3.10	0.85	0.27	0.78	**NS**
6	Repair manuals	3.15	0.76	3.14	0.78	0.05	0.96	**NS**
7	Faults analyzers	3.63	0.76	3.38	0.85	1.21	0.22	**NS**
8	Diagnostic scanning tools OBD II	3.31	0.82	3.47	0.61	1.02	0.30	**NS**
9	Air compressor	3.63	0.49	3.39	0.62	1.62	0.10	**NS**
10	Digital wheel balancing machine	3.42	0.69	3.28	0.70	0.80	0.42	**NS**
11	Pneumatic brake fluid extractor	3.78	0.41	3.54	0.62	1.63	0.10	**NS**
12	Wheel charger	3.36	0.59	3.31	0.68	0.33	0.73	**NS**
13	Fire extinguishers	3.52	0.51	3.51	0.59	0.07	0.94	**NS**
14	Oil spill collectors	3.52	0.69	3.54	0.62	0.15	0.88	**NS**
15	Digital wheel alignment machine	3.63	0.49	3.51	0.62	0.77	0.44	**NS**
16	Line wrenches	3.31	0.74	3.37	0.74	0.35	0.72	**NS**
17	Pairs of pliers	3.21	0.71	3.30	0.68	0.58	0.55	**NS**
18	Torque wrenches	3.63	0.49	3.46	0.67	1.04	0.30	**NS**
19	Multimeters	3.31	0.47	3.32	0.60	0.09	0.92	**NS**
20	Wire strippers	3.47	0.61	3.47	0.63	0.00	0.99	**NS**
21	Engine lift	3.47	0.61	3.48	0.58	0.07	0.94	**NS**
22	Circuit testers	3.42	0.60	3.40	0.68	0.12	0.90	**NS**
23	Plug cleaner machine	3.47	0.61	3.37	0.73	0.54	0.58	**NS**
24	Crimping tools	3.31	0.82	3.47	0.61	1.01	0.31	**NS**
25	Battery charger	3.26	0.80	3.45	0.60	1.23	0.21	**NS**

Key: *$\overline{X}_T$ =Mean of Teachers; $\overline{X}_S$ = Mean of Supervisors; S_1^2T=Variance of Teachers; S_2^2S= Variance of Supervisors; N= No of Respondents; NS=No Significant; Degree of Freedom 199; P-value < 0.05.*

Data presented in Table 2 revealed that twenty five facilities had their P-values ranged from 0.12 to 0.99 and were greater than 0.05 at 199 degree of freedom. This indicated that there was no significant difference between the mean ratings of the responses of motor vehicle mechanic work teachers in the technical colleges and supervisors in registered automobile maintenance industries on the training facilities required implementing entrepreneurship skill training in motor vehicle mechanic work.

Therefore, the null hypothesis of no significant different was upheld for all the 25 training facilities required implementing entrepreneurship skill training in motor vehicle mechanic work.

4. Discussion

Facilities are essential in the implementation of entrepreneurship skills training in motor vehicle mechanic work. The findings of the study revealed 25 facilities for the implementation of the entrepreneurship skills training in Motor Vehicle mechanic Work. Among the facilities are: live engine (Petrol), live engine (Diesel, open end wrenches, oil filter wrenches, ratchet drivers, repair manuals, faults analyzers, diagnostic scanning tools OBD II, air compressor, digital wheel balancing machine, pneumatic brake fluid extractor, wheel charger, fire extinguishers, oil spill collectors, digital wheel alignment machine and line wrenches. The findings were in agreement with the opinion of Taiwo (2010) who noted that training facilities are responsible for helping trainers translate abstract ideas to concrete ones. Gwarzo in Okwori (2012) disclosed that lack of

facilities in any training program will make trainees not to have ample opportunities to see and manipulate them in order to acquire the necessary knowledge and skills while Imarhiagbe in Okwori (2012) further explained that inadequate physical facilities in any training program make the products of such program useless. The positions of Olakotan (2021) and Okwori (2012) also buttressed the findings of the study as the duo posited that facilities are objects and materials used for teaching effectively in institutions in a bid to fulfill a need. Also, Oke & Olakotan (2018) noted skill acquisition in VTE relies on appropriate utilization of facilities.

Findings on the hypothesis revealed that there was no significant difference between the mean ratings of the responses of motor vehicle mechanic work teachers in the technical colleges and supervisors in registered automobile maintenance industries on all the training facilities required in implementing entrepreneurship skill training in motor vehicle mechanic work. The implication of the above findings was that the work experience of the supervisors working with graduates of technical colleges in registered automobile industries and professional experience of the Teachers of motor vehicle mechanic work in the school did not significantly influence their responses on all the training facilities for implementing entrepreneurship skill training in motor vehicle mechanic work. The findings helped to authenticate the responses of the two groups of respondents on the 25 facilities.

5. Conclusions

In this study, the importance of facilities in the implementation of entrepreneurship skills training in motor vehicle mechanic work has been stressed. The study affirmed positions of authors and researchers alike on the need for facilities to be in right proportion with students demand in training institutions. These and many other positions of researchers substantiated the claims of the findings of this study. Based on the findings of this study, the study recommended inter alia:

- The identified training facilities should be procured by relevant stakeholders to implement entrepreneurship skills training in Motor Vehicle Mechanic Work.
- Sufficient amount of funds should be deployed by government to employ requisite manpower and constantly develop their skills, upgrade infrastructures, procure modern equipment and develop curricula.

References

Bakare, J. (2018). Development of appropriate local contents for widening the occupational opportunities of electrical/electronic technology graduates of Nigerian universities to cope with world of change. *Apas journals*, 2(1), 12-21.

Gall, M.D., Gall, J.P. & Borg, W.R. (2007). Educational research: an introduction (8. utg.). AE Burvikovs, Red.) USA: Pearson.

Lemo, O.O. & Olakotan, O.O. (2017). Entrepreneurial awareness and skills in mechanicaltechnology among technical education students in Tai Solarin University of Education. *Makarere Journal of Higher Education MAJOHE*, 9(1):65-73.

Lemo, O.O. & Olakotan, O.O. (2016). Availability and Utilization of Facilities as Correlate of Skill Acquisition in Welding and Fabrication Engineering Craft Practice. *African Journal of Education and Behavioural Sciences (AJEBS)* 1(1): 182-188.

Letchmanan, C. & Saad, A. (2021). Keberkesanan bengkel dalam meningkatkan kemahiran teknologi maklumat dan motivasi guru terhadap proses penilaian dalam talian. *Muallim Journal of Social Sciences and Humanities*, 5(2), 137-149. https://doi.org/10.33306/mjssh/127.

Lidimma, B. G. (2012). Entrepreneurial competencies required by technical college drafting graduates for establishing small and medium scale enterprises in Pateau state. *Unpublished M.Ed Thesis, University of Nigeria, Nsukka.*

Mohamad Hassan, H., Fathil, N.F. & Mamat Zambi, N. (2021). Employer's Perspective Towards Industrial Training Students of Commerce Department, Polytechnic Sultanah Tuanku Bahiyah. *ANP Journal of Social Science and Humanities.*, 2(2), 19-25. https://doi.org/10.53797/anpjssh.v2i2.3.2021

NIBS, U. (2012). *National Building Information Model Standard*, Version 2.0.

Ogbuanya, T.C. & Ohanu, I.B. (2010). Entry level Skills Required by Technical College Electrical Graduates in Electrical Installation Trade. *Nigerian Vocational Association Journal*. 15(1): 342-352.

Oke, J.O. & Olakotan, O.O. (2018). Towards equipping metal workshops in technical and vocational education and training institutions in Nigeria. *International Journal of Research and Design in Technical Vocational Education and* Training *(TVET-IJORAD)* 2(1): 266-272.

Oke, J.O. & Olakotan, O.O. (2017). Training needs of Technical Education Pre-service Teachers for Employment and Sustainable Development in Ogun State. *International Journal of Educational Foundations and Management IJEFAM* 11(1): 39-44.

Okwori, R.O. (2012). An assessment of facilities used for teaching woodwork technology at federal college of education, Pankshin, Plateau State, Nigeria. *Universal Journal of Education and General Studies* 1(5), 113-118.

Olakotan, O.O. (2021). Development of employability skills module in aluminium fabrication and glazing work for technical colleges in Nigeria. *Unpublished Ph.D Thesis, Ekiti State University, Ado-Ekiti.*

Prosser, C.A. & Quigley, T.H. (1949). *Vocational Education in a Democracy*. American Technical Society. Chicago, Illinois.

Roblyer, M. & Doering, A.H. (2007). Integrating educational technology into teaching. USA: Pearson, 2007.

Taiwo, A.S. (2010). The influence of work environment on workers productivity: A case of selected oil and gas industry in Lagos, Nigeria. *African journal of business management*, 4(3), 299-307.