

## **Entrepreneurial Skills Required by Motor Vehicle Mechanic Works Students' in Technical Colleges for Self-employment in Edo and Delta States**

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### **Abstract**

*Study identified entrepreneurial skills required by motor vehicle mechanic works trade students in technical colleges in Edo and Delta States. Nigeria. A descriptive survey research design was adopted for the study. Two research questions guided the study and two null hypotheses were formulated and tested at .05 level of significance. The population for the study consisted of 436 respondents: 364 industry-based motor vehicle mechanic workers and 72 motor vehicle mechanic works teachers in the two States. There was no sampling because of the manageable size of the population. The instrument, ESRMVMWQ was used for data collection and was a 20- item questionnaire from the review of literature that suit the study. Cronbach alpha reliability was used to determine the reliability of the instrument and a reliability coefficient of 0.82 was obtained. The data collected for this study was analyzed using Mean, Standard deviation and t- test. The findings reveal that all the items were required by students for self-employment in Edo and Delta States, Nigeria. Based on the findings of this study, it was recommended that Government should make available the equipment and machines needed to integrate practical teaching into technical colleges in Edo and Delta States among others.*

**Keywords:** Entrepreneurial, Technical colleges, Skills, Motor vehicle mechanic work trade

### **Background of study**

An evaluation of national economies has shown that emphasis placed on students' acquisition of entrepreneurial skills in the economies of both developed and emerging nations is important. But entrepreneurial endeavors need competent skills to succeed. The degree to which motor vehicle mechanic work (MVMW) students are equipped with entrepreneurial skills will ultimately determine their ability to succeed as business owners. An important factor in the creation of business prospects

is the entrepreneur. Okonkwo (2017) stated that an entrepreneur is someone who employs their skills to find untapped business opportunities and capitalizes on them. An entrepreneur is a change agent, an inventor, and a risk-taker who takes advantage of business opportunities in the environment by efficiently employing resources to create new products and services, develop new technologies, and maximize profit while making a substantial contribution to the advancement of society. An entrepreneur's drive to maximize profit and enhance the social and economic well-being of society demonstrates their exceptional organizational skills in the commercial world. Entrepreneurship is the activity or activities of the entrepreneur.

According to Olaseni and Olawale (2016), entrepreneurship is the process of combining management, organization, and creative new ideas with people, money, and resources to meet a need and subsequently create wealth. It is the capacity and willingness of a person to look for investment possibilities, launch them, and successfully manage a business. Entrepreneurship skills are essentially business abilities that people need to be able to operate as self-employed or entrepreneurs in a volatile business environment (Nnodim&Aleru, 2020). The ability to flourish as an entrepreneur is a unique skill. Instead of looking for work where none exist, MVMW trade students lacking the necessary entrepreneurial skills will find the labor market to be extremely unsatisfactory and unfavorable in terms of job creation. Only if students comprehend the true objectives of MVMW trade after graduating from technical college will jobs be produced.

The main way that technical colleges make contribution to national economies is by teaching students various trades. Omeje, Okekpa, and Chukwu (2019) explained that technical colleges are the main vocational schools in Nigeria that offer comprehensive instruction to prepare students for admission into a variety of careers, including electrical/electronic trade, metalwork trade, auto mechanics trade, among others. Upon completing their training at a technical college, graduates will be able to work in the industry or go freelance, hiring other people as they go (FGN, 2015). The focus is now on competency-based learning, teachers at the Technical College level are expected to possess the necessary competencies for imparting technical knowledge and skills to students. Technical teachers, who are seen as curriculum implementers, should recognize the need to improve the teaching of MVMW trade and would have to plan lessons based on good instructional objectives of the program as well as learners' acquisition of practical skills in MVMW trade. Students in MVMW trade are individuals who are available to learn the skill of MVMW trade from a professionally skilled teacher to withstand challenges required by the industry in MVMW trade.

Olayinka (2019), opined that the goal of the MVMW trade is to develop skilled auto mechanics

for Nigeria's economic and technological advancement. The National Board for Technical Education (NBTE) (2016) states that the goal of motor vehicle mechanic work is to train and impart the skills required to produce technicians, craftsmen, and other skilled workers who will be independent and enterprising. As auto mechanic craftsman, MVMW students are intended to gain the abilities necessary to test, diagnose, service, and fully repair any motor vehicle defect in accordance with manufacturer specifications. Fadairo (2015), explained that the MVMW trade components are organized into modules enabling learners to easily assimilate. These components include the steering and braking system, major engine repair work, auto electrical and transmission reconditioning, suspension system, engine maintenance, and service station mechanic.

Skills are the ability of an individual to control specific components of their thought processes, behavior, and emotions in specific contexts and task domains (Oviawe&Anaele, 2020). According to Saue (2020), skills can be classified as general or technical. In contrast to general skills, which are applicable to all professions yet are required for an employee to function effectively, technical skills are those job-readiness abilities that equip students for self-employment in a profession. Edokoplor and Owenvbiugie (2017) define technical skills as industry-specific abilities required for the production of goods and services. The development of skills could improve people's quality of life and possibly result in the creation of jobs. Hence, it is important to identify entrepreneurial skills required by MVMW trade students for self-employment in Ondo and Edo State.

### **Statement of the Problem**

The realization of the United Nation 2030 agenda for Sustainable Development Goals (SDG) in Nigeria is hinged on the implementation of vocational education through entrepreneurial skills development in the various trades in technical colleges. The United Nations (2017) stated that Goal 4 aimed to ensure that every individual have access to quality education and training and opportunity for lifelong learning. It stipulated that the Goals goes beyond school enrolment and looks at proficiency levels. Similarly, the Federal Republic of Nigeria (FRN, 2017) in its sustainable development document stated that goal 4 of the agenda shall be achieved through the acquisition of foundational and higher- order skills, greater and more equitable access to vocational education training throughout life and the knowledge, skills and values needed to function well and contribute to society (p.4)... the FRN (2004) in its education policy document captures the role of Technical and Vocational Education and Training (TVET) to is recipient as human capitals development strategy that leads to the acquisition of applied and practical skills and basic scientific knowledge required for useful living

within the society.

While TVET is crucial for fostering sustainable development, the rates of poverty, underemployment, unemployment, and student dropout are quite high, particularly in Nigeria. There may be a widening gap between the skills taught at technical colleges and the actual abilities required for self-employment in the motor vehicle mechanic work (MVMW) trade, which could be the cause of the alarming rates of these social problems (Oviawe & Uwameiye, 2018). This implies that students at the technical colleges in Nigeria's MVMW trade are lacking a vital element. Hence, it is important to identify entrepreneurial skills required by motor vehicle mechanic work (MVMW) trade students for self-employment in Edo and Delta States.

### **Purpose of the Study**

The general purpose of the study is to identify entrepreneurial skills required by motor vehicle mechanic work (MVMW) trade students in Technical Colleges for self-employment in Edo and Delta States. Specifically, the study determined:

1. the general skills required by MVMW trade students in Technical Colleges for self-employment in Edo and Delta States.
2. the technical skills required by MVMW trade students in Technical College for self-employment in Edo and Delta States.

### **Research Questions**

The following research questions guided the study:

1. What are the general skills required by MVMW trade students of Technical Colleges for self-employment in Edo and Delta States?
2. What are the technical skills required by MVMW trade students of Technical Colleges for self-employment in Edo and Delta States?

### **Hypotheses**

The following null hypotheses were tested at .05 level of significance:

1. There is no significant difference in the mean responses of teachers and industry-based workers of MVMW on the general skills required by MVMW trade students in Technical Colleges for self-employment in Edo and Delta States?
2. There is no significant difference in the mean responses of teachers and industry-based

workers of MVMW on the technical skills required by MVMW trade students in Technical Colleges for self-employment in Edo and Delta States?

### Method of Study

The study adopted the descriptive survey research design. The study was conducted Edo and Delta States, Nigeria comprising of 9 technical colleges. The population for this study consists of 436 respondents made up of 364 industrial- based workers of MVMW from all the 74 auto-technology trade companies registered with the Ministry of Commerce and Industry and 72 MVMW trade teachers from nine NBTE accredited government technical colleges in Edo and Delta States, Nigeria. Due to the manageable size of the population, there was no sampling. The entire population was used in the study. The instrument used for data collection in this study was titled Entrepreneurial skills required by Motor Vehicle Mechanic Work Questionnaire (ESRMVMWQ), 20-item questionnaire was from the review of literature. The questionnaire was structured on a five points Likert type scale of: Very Highly Required (VHR) – 5; Highly Required (HR) – 4; Required (R) -3; Moderately Required (MN) -2; and Not Required (NR) -1. The instrument was subjected to face validation by three experts, two from the Department of Vocational and Technical Education Ambrose Alli University, Ekpoma and one in Measurement and Evaluation University of Benin, Benin City both in Edo State. The suggestions and corrections of the experts were used to produce the final version of the instrument used for this study. Cronbach Alpha was used to establish the internal consistency of the items in the instrument. The reliability index of 0.88 was obtained. The instrument was administered by the researcher and five other research assistants. 432 copies of the questionnaire were duly completed and returned after two weeks. This gave 97.5% return rate. Mean statistic was used to answer the research questions while the t-test was used to test the null hypothesis at 0.05 level of significance. Any item with a mean value of 3.00 and above was regarded as required while any item with a mean value below 3.00 was regarded as not required. Using the t-test statistic, the null hypothesis was rejected when the t-calculated value was greater than the t-critical value but retained when the calculated value is less than t-critical value of 1.96.

**Research Question 1:** What are the general skills required by motor vehicle mechanic work (MVMW) trade students of Technical Colleges for self-employment in Edo and Delta States?

## Results

Table 1: Mean Ratings and t-test of Responses of Teachers and Industry-Based Workers of MVMW Trade on the General Skills Required for Self-employment.

S/N	General Skills	$\bar{X}_1$	SD <sub>1</sub>	$\bar{X}_2$	SD <sub>2</sub>	$\bar{X}_t$	SD <sub>t</sub>	t-cal	Sig(2-Railed Rmks)	RQ	Ho
	Ability to:										
1.	Intuitively solved problem	4.58	.71	4.37	.0	4.37	.67	.48	.64	HR	NS
2	Initiate new ideas	4.46	.84	4.56	.92	4.48	.87	.47	.61	HR	NS
3	Motivate others for assign task	4.57	.58	4.78	.60	4.56	.60	.70	.98	HR	NS
4	Solve task timely	4.47	.75	4.58	.76	4.39	.74	.29	.94	HR	NS
5	Achieve goal timely	4.52	.86	4.43	.97	4.38	.86	.38	.75	HR	NS
6.	Evaluate ideas	4.62	.68	4.63	.79	4.48	.62	.28	.69	HR	NS
7	Seek others opinion	4.39	.74	4.73	.74	4.37	.74	0.7	.93	HR	NS
8	Learn new things	4.41	.66	4.42	.66	4.31	.67	.23	.81	HR	NS
9	Study in details	4.52	.51	4.22	.69	4.48	.51	.50	.61	HR	NS
10	Use material aptly	4.37	.57	4.57	.67	4.38	.75	.36	.59	HR	NS

**Note:**  $\bar{X}_1$  = mean of teachers; SD<sub>1</sub>= Standard deviation of teachers;  $\bar{X}_2$  = Mean of industry-based workers; SD<sub>2</sub> =Standard deviation of industry- based workers;  $\bar{X}_t$  =Total mean; SD<sub>t</sub>= Standard deviation total; N<sub>1</sub> = Number of teachers (72); N<sub>2</sub> = Number of industry workers (364).

**Table 1** reveals that all the 10 items had their mean values ranging from 4.31 to 4.48, which were above the criterion mean of 3.00 indicated that the respondents agreed that all the 10 items are general skills required by MVMW trade students of Technical Colleges for self-employment . The skills in all of the items were perceived as highly required by MVMW trade students of Technical College for self-employment in Edo and Delta States. The t-calculated values of all the items ranged .23 to .50 were lower than the t-critical value of 1.96 at an alpha level of .05. It therefore means that there is no significant difference in the mean responses of teachers and industry-based workers of MVMW on the general skills required by MVMW trade students in Technical Colleges for self-employment in Edo and Delta States.

**Research Question 2.**What are the technical skills required by motor vehicle mechanic work (MVMW) trade students of Technical Colleges for self-employment in Edo and Delta States?

## Results:

**Table 2: Mean Ratings and t-test of Responses of Teachers and Industry-Based Workers of MVMW on the Technical Skills Required for Self-employment**

S/n	Technical Skills: Ability to:	$\bar{X}_1$	SD <sub>1</sub>	$\bar{X}_2$	SD <sub>2</sub>	$\bar{X}_t$	SD <sub>t</sub>	t-cal	Sig(2-Tailed Rmks)	RQ	Ho
1	Identify faulty engine	4.78	.61	4.41	.43	4.76	.43	.31	.41	HR	NS
2	Interpret faulty engine	4.44	.72	4.43	.84	4.72	.52	.35	.46	HR	NS
3	Carryout engine assembly for fuel and oil leakage	4.56	.63	4.51	.62	4.53	.71	.37	.49	HR	NS
4	Identify engine noise and vibrations	4.41	.75	4.58	.71	4.62	.77	.41	.52	HR	NS
5	Carryout engine vacuum test	4.62	.81	4.72	.87	4.72	.83	.38	.50	HR	NS
6	Install valve stem seals on an assembled engine	4.51	.65	4.31	.75	4.41	.67	.42	.53	HR	NS
7	Identify and interpret brake system concern	4.42	.76	4.38	.73	4.42	.72	.26	.35	HR	NS
8	Check brake pad wear indicator system operation	4.61	.80	4.72	.79	4.37	.81	.31	.41	HR	NS
9	Check master cylinder for internal/externals leakage	4.37	.64	4.83	.82	4.52	.69	.38	.50	HR	NS
10	Inspect and test fuel injectors	4.38	.65	4.74	.83	4.46	.74	.43	.53	HR	NS

**Table 2** reveals that all the 10 items had their mean values ranging from 4.37 to 4.76, which were above the criterion mean of 3.00 indicated that the respondents agreed that all the 10 items are technical skills required by MVMW trade students of Technical Colleges for self-employment. The skills in all of the items were perceived as highly required by MVMW trade students of Technical College for self-employment. The t-calculated values of all the items ranged .23 to .50 were lower than the t-critical value of 1.96 at an alpha level of .05. It therefore means that there is no significant difference in the mean responses of teachers and industry-based workers of MVMW on the technical skills required by MVMW trade students in Technical Colleges for self-employment in Edo and Delta States.

## Discussion of the Findings

Finding from the study revealed that For MVMW trade students at Technical College to work for themselves, they must possess the following general skills: the ability to solve problems



intuitively; the ability to start new projects; the ability to inspire others to take on tasks; the ability to evaluate ideas; the ability to seek feedback from others; the capacity to learn new things; the ability to study carefully and use materials appropriately; and so on. These are non-technical, or employable, skills that are necessary in any field for both employment and self-employment.

The study's conclusion is in line with Olaitan and Ikeh's (2015) conclusion that all general skills are marketable and necessary for self-employment. The employability of general abilities, sometimes referred to as non-technical skills and competences, is greatly influenced by their potential to help people participate successfully and effectively in the modern workplace (Common Wealth of Australia, 2006).

The study's examination of the hypothesis revealed that there was no significant difference between the mean response of industry-based workers MVMW and MVMW trade teachers about the general skills required for MVMW trade students of Technical College for self-employment. This is due to the fact that every student needs these general skills for efficient MVMW trade in the workplace.

According to research on the technical skills needed for self-employment by MVMW trade students at Technical College, it was found that: Recognize malfunctioning engines, Decipher malfunctioning engines, Conduct an engine vacuum test, check the engine assembly for leaks of fuel and oil, and identify any noises or vibrations in the engine. The auto mechanic's skills to install valve stem seals on an assembled engine are crucial to their work. All of these are technical skills needed to meet the demands of the field. The results are consistent with Nnodim and Aleru's (2020) findings that the automotive skills needed by technical college students for the development of their entrepreneurship include the capacity to identify malfunctioning machine parts, knowledge of machine designs and applications, and the ability to diagnose incorrect parts in motor engines.

From the test of hypothesis, there was no significant difference between the mean responses of industry-based workers of MVMW and MVMW trade teachers about the technical skills required for MVMW trade students of Technical College for self-employment. This is due to the fact that every student needs the technical skills for efficient MVMW trade in the workplace.

## Conclusion

The study came to the conclusion that in a dynamic and competitive environment such as Nigeria, students enrolled in MVMW trade need to be equipped with skills that will improve their chances of becoming self-employed. The competency and proficiency of students in the MVMW



trade increases their chances of pursuing careers as motor vehicle mechanics.

## Recommendations

Based on the findings of the study, the following recommendations were made:

1. The equipment and machinery required to incorporate practical instruction into technical colleges in the states of Edo and Delta should be made available by the government. Schools will be able to use this to help students improve their MVMW trade skills.
2. To give students practical practice operating motor vehicles, there should be provisions for mechanized equipment.
3. Real-world scenarios should serve as the foundation for teaching and learning, allowing students to experience learning by doing. With the aid of this approach, students would be able to acquire the necessary technical skills to become self-employed and contribute to their community.

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