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Entrepreneurial Skills Required for Self-Employment among Electrical Installation Students in Technical Colleges in Adamawa State: A Focus on Managerial, Accounting, and Marketing Competencies

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Abstract: This study investigates the entrepreneurial skills required by Electrical Installation and Maintenance Works (EIMW) trade students in Government Science and Technical Colleges in Adamawa State for successful self-employment. Utilizing a descriptive survey research design, data were collected from a sample of 217 respondents, including administrators, teachers, and students, using a structured questionnaire. The findings reveal that students need a total of 20 managerial skills, with particular emphasis on effective planning and resource control. Additionally, the study identifies 22 essential accounting skills, such as determining profit and loss and knowledge of costing, which are crucial for business survival. In terms of marketing, students require 16 key skills, highlighting the importance of customer loyalty retention and effective communication. These findings emphasize the necessity for educational institutions to enhance their curricula by integrating practical entrepreneurial training. The study also recommends collaboration with local businesses to provide students with real-world experiences and continuous professional development for educators to ensure they are equipped to teach relevant skills.

Keywords: Entrepreneurial Skills, EIMW, Self-Employment, Marketing Competencies.

1. INTRODUCTION

The increasing demand for self-reliance and economic sustainability has underscored the importance of entrepreneurship education, particularly for students in vocational and technical fields. In Nigeria, youth unemployment remains a significant challenge, with millions of young people entering the labor market each year without adequate job opportunities. As the unemployment rate rises, it becomes critical for educational institutions to equip students with

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the requisite skills to create their own jobs through entrepreneurship. This has driven a focus on technical and vocational education, particularly in institutions such as Government Science and Technical Colleges (GSTCs), which offer specialized training in various trades, including Electrical Installation and Maintenance Works (EIMW). Students in these institutions, if equipped with entrepreneurial skills, have the potential to become successful entrepreneurs, thereby reducing their dependency on white-collar jobs and contributing to the economy through job creation and self-employment.

Entrepreneurship education plays a pivotal role in fostering innovation, self-reliance, and job creation. According to Olaniyi (2019), technical education must integrate entrepreneurial skills to ensure students are prepared for the challenges of the modern workforce. This is particularly important for students in technical trades like EIMW, where the skills to manage, market, and finance small-scale businesses are essential for success in self-employment. Entrepreneurship education aims to develop an entrepreneurial mindset and provide students with practical skills in business management, financial literacy, and marketing (Eze, 2021). These skills not only enhance the employability of students but also empower them to be creators of employment. Entrepreneurial skills can be categorized into several areas, but three key domains that are critical for self-employment in the electrical installation and maintenance works sector are managerial, accounting, and marketing skills. Managerial skills are essential for effectively running a business. These include the ability to plan, organize, control, and lead business operations. Without strong managerial competencies, even the most technically skilled individual may struggle to manage resources, make strategic decisions, and ensure the longterm sustainability of their business. Studies have shown that entrepreneurs with sound managerial skills are more likely to succeed in establishing and running businesses (Adeola, 2022). For EIMW trade students, managerial skills are necessary for overseeing projects, managing workers, and ensuring efficient service delivery to clients.

Accounting skills are equally important for self-employment. Financial management is at the heart of every successful business, and a lack of proper accounting practices can lead to business failure. Accounting skills involve the ability to keep accurate financial records, manage cash flow, budget, and ensure proper financial reporting. Ogunleye (2020) notes that small business owners who are proficient in financial management tend to have higher success rates because they can track their financial performance and make informed decisions. For EIMW trade students, understanding how to manage costs, price services, and ensure profitability is crucial for sustaining a business in a competitive environment.

Marketing skills are vital for promoting products and services, understanding customer needs, and building a loyal client base. In today's competitive business landscape, having technical expertise in electrical installation and maintenance is not enough; students must also know how to market their services effectively. Marketing involves identifying target markets, understanding customer preferences, pricing strategies, and promoting products or services through various channels. Johnson (2020) emphasizes that small business owners who possess strong marketing skills are better able to reach their target audience, build brand recognition, and gain a competitive edge. EIMW students, therefore, need to develop competencies in marketing to attract customers and maintain a steady flow of business.

In the context of Government Science and Technical Colleges in Adamawa State, where the focus is on technical skill acquisition, the integration of entrepreneurship education becomes

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even more critical. The need to prepare students not only to be skilled technicians but also to be self-sufficient entrepreneurs is paramount. Research has shown that vocational training institutions that emphasize entrepreneurship skills tend to produce graduates who are more likely to engage in self-employment (Etim, 2021). For EIMW trade students, this means acquiring a combination of technical skills and business acumen to succeed in the labor market. This study, therefore, aims to examine the specific entrepreneurial skills needed by electrical installation and maintenance works trade students in GSTCs of Adamawa State for self-employment. By focusing on managerial, accounting, and marketing skills, this research seeks to provide insights into how these competencies can be integrated into the existing curriculum to better prepare students for the realities of entrepreneurship. The findings will be useful for educators, policymakers, and curriculum developers in enhancing the entrepreneurial readiness of students in technical and vocational education programs. Moreover, the results will guide students in understanding the key areas they need to focus on to succeed as entrepreneurs in the EIMW sector.

Statement of the Problem

The problem facing graduates of EIMW in GSTCs of Adamawa State is their difficulty in transitioning to successful self-employment, despite possessing strong technical skills. Many lack essential entrepreneurial competencies, particularly in managerial, accounting, and marketing skills, which are crucial for establishing and sustaining their own businesses. This gap in entrepreneurship education limits their ability to effectively manage, finance, and promote their services, contributing to high unemployment or business failure. The study aims to identify these critical entrepreneurial skills and provide recommendations to integrate them into the technical education curriculum, thereby improving self-employment outcomes for EIMW students.

Purpose of the Study

He following are the specific objectives of the study

- The managerial entrepreneurship skills needed by EIMW trade students in GSTCs for selfemployment in Adamawa State.
- The accounting entrepreneurship skills needed by EIMW trade students in GSTCs for self-employment in Adamawa State.
- The marketing entrepreneurship skills needed by EIMW trade students in GSTCs for self-employment in Adamawa State.

Research Questions

The following research question were raised to guide the study:

- What are the managerial entrepreneurship skills needed by EIMW trade students in GSTCs for self-employment in Adamawa State?
- What are the accounting entrepreneurship skills needed by EIMW students in GSTCs for self-employment in Adamawa State?
- What are the marketing entrepreneurship skills needed by EIMW trade students in GSTCs for self-employment in Adamawa State?

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Hypotheses

The following null hypotheses are formulated and was tested at 0.05 level of significance.

HO₁: There is no significant difference among the mean responses of technical colleges' administrators, teachers and students on the managerial entrepreneurship skills needed by EIMW trade students in GSTCs for self-employment in Adamawa State.

HO₂: There is no significant difference among the mean responses of technical colleges' administrators, teachers and students on the accounting entrepreneurship skills needed by EIMW trade students in GSTCs for self-employment in Adamawa State.

HO₃: There is no significant difference among the mean responses of technical colleges' administrators, teachers and students on the marketing entrepreneurship skills needed by EIMW trade students in GSTCs for self-employment in Adamawa State.

2. LITERATURE REVIEW

Entrepreneurship education has become a vital component of technical and vocational training as it equips students with the skills needed for self-employment and job creation. According to Olaniyi (2019), the integration of entrepreneurial skills into technical education is essential for fostering innovation and preparing students for the challenges of the modern labor market. In the context of EIMW, this education should go beyond technical proficiency to include business management, financial literacy, and marketing competencies. Such skills are critical for enabling graduates to not only perform their trade but also manage and grow small businesses successfully.

Entrepreneurship Education in Vocational Training

Entrepreneurship education in vocational training has been recognized as a solution to the high unemployment rates in Nigeria. Etim (2021) highlights that integrating entrepreneurial skills into technical education programs significantly increases the likelihood of students becoming self-employed. In the case of EIMW trade students, such education should focus not only on technical skills but also on the business acumen required to establish and grow a business. Research has shown that students who receive comprehensive entrepreneurship training are better prepared to handle the challenges of starting and sustaining a business (Adeola, 2022). This includes understanding market dynamics, managing resources, and ensuring financial sustainability, all of which are critical for long-term success in self-employment.

Managerial Entrepreneurship Skills

Managerial skills are essential for entrepreneurs to effectively plan, organize, lead, and control their businesses. According to Adeola (2022), a lack of managerial competence is one of the major reasons why small businesses fail, particularly in the vocational and technical sectors. For EIMW graduates, the ability to manage workers, resources, and business operations is crucial for ensuring the smooth execution of electrical installation projects and the overall sustainability of their enterprises. Studies by Etim (2021) show that incorporating managerial training into technical curricula helps students develop strategic decision-making skills, which are vital for business growth. Without these competencies, many technically skilled individuals find it difficult to transition into successful entrepreneurship.

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Accounting Entrepreneurship Skills

Financial literacy and accounting skills are equally important for self-employment. According to Ogunleye (2020), small business owners who possess financial management skills are better able to track their expenditures, manage cash flow, and make informed decisions that ensure business profitability. In the case of EIMW students, the ability to price services appropriately, maintain accurate financial records, and understand basic financial principles such as budgeting and cost control is key to running a successful business. Poor financial management is one of the primary reasons that small businesses fail, particularly in the early stages of operation (Ogunleye, 2020). The inclusion of accounting skills in the training of EIMW students will provide them with the financial knowledge necessary to sustain their enterprises.

Marketing Entrepreneurship Skills

Marketing is another critical skill for self-employed individuals in technical trades. As Eze (2021) notes, many technically skilled professionals fail to succeed in self-employment because they lack the marketing skills needed to effectively promote their services and attract customers. Marketing skills include the ability to identify target markets, understand customer needs, and employ effective promotional strategies. For EIMW students, these skills are essential in a competitive market where differentiation and customer satisfaction are key to success. According to Johnson (2020), small business owners who are proficient in marketing are better equipped to gain market share, increase customer retention, and build brand loyalty. The absence of marketing skills often leads to business stagnation or failure, as entrepreneurs struggle to attract a consistent customer base.

3. METHODOLOGY

The study utilized a descriptive survey research design to explore the entrepreneurial skills needed by EIMW trade students for self-employment in Adamawa State. According to Gall et al. (2017), this approach involves collecting data through questionnaires or interviews from a sample selected to represent the larger population, thus enabling the generalization of findings. The research was conducted in Adamawa State, located between latitude 9° 20' North and longitude 12° 30' east. The study population comprised 310 respondents, including 9 administrators (principals and vice principals), 56 EIMW teachers, and 245 students enrolled in NTC levels II and III across three GSTCs in Adamawa state. A sample size of 217 respondents was drawn, consisting of 9 administrators, 56 teachers, and 152 students, selected using simple random sampling techniques. Data collection was executed using a structured questionnaire developed by the researchers, titled the "Entrepreneurial Skills Needs for Self-Employment Questionnaire (ESNSEQ)." This instrument was designed on a 5-point Likert scale, allowing respondents to indicate their level of agreement from Strongly Agree (SA) to Strongly Disagree (SD). To ensure the validity of the instrument, it was reviewed by three experts from the Department of Electrical Technology Education at Modibbo Adama University, Yola. The reliability of the questionnaire was assessed using the Cronbach's alpha method, which yielded a coefficient of 0.88, indicating a high level of internal consistency. Mean statistics were employed to analyze the research questions, while hypotheses were tested using ANOVA at a significance level of 0.05.

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4. RESULTS

Research Question 1: What are the managerial entrepreneurship skills needed by EIMW trade students in GSTCs for self-employment in Adamawa State?

Table 1: Mean and Standard Deviation of Administrators, Teachers and Students on the Managerial Entrepreneurship Skills Needed

	$N_A = 9 N_T = 56 N_S = 152 N = 217$					217	
S/No	ITEMS	$\bar{\mathbf{x}}_{\mathbf{A}}$	$\bar{\mathbf{x}}_{\mathbf{T}}$	$\bar{\mathbf{x}}_{\mathbf{S}}$	$\bar{\mathbf{x}}_{\mathbf{G}}$	δ	Remark
1.	Ability to determine personnel salaries	3.78	3.63	3.99		0.56	N
2.	Knowledge of employee's growth and development	3.67	3.68	3.98	3.89	0.64	N
3.	Knowledge of good human relationship	4.11	4.09	4.01	4.03	0.18	N
4.	Ability to conduct personal evaluation	4.22	4.20	4.01	4.07	0.25	N
5.	Ability to manage time and meet job schedule	4.33	4.29	4.02	4.10	0.30	N
6.	Possession of the knowledge of supervisory skills	3.78	3.75	3.99	3.92	0.43	N
7.	Knowledge of inventory control and turnover	3.56	3.55	3.97	3.85	0.64	N
8.	Ability to communicate effectively	3.67	3.63	3.98	3.88	0.55	N
9.	Ability to maintain good human relation skills	3.44	3.43	3.97	3.81	0.72	N
10.	Ability to scheduling job based on priority	3.33	3.30	3.96	3.76	0.81	N
11.	Ability to carry out effective inventory supervisory	3.89	3.86	3.99	3.95	0.28	N
12.	Possession of knowledge in factor involved in overhead control	4.56	4.52	4.03	4.18	0.38	N
13.	Ability to purchase goods, tools and equipment	3.78	3.75	3.99	3.92	0.43	N
14.	Ability to coordinate activities within the industry	4.11	4.09	4.01	4.03	0.18	N
15.	Ability to effective direct task within the industry	3.78	3.75	3.99	3.92	0.46	N
16.	Set appropriate duration for all activities within the industry	3.67	3.52	3.98	3.85	0.59	N
17.	Managing a cordial relationship between management and other	4.44	4.29	4.03	4.11	0.31	N

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	members of staff in the industry for						
	the realization of industry objectives						
18.	Ability to communicate using both oral and written skills	3.89	3.66	3.99	3.90	0.50	N
19.	Knowledge of method of conducting meetings within the firm	3.33	3.46	3.96	3.81	0.74	N
20.	Ability to identify all needed tools equipment	3.56	3.55	3.97	3.85	0.62	N
21.	Ability to carry out effective planning	4.00	3.98	4.94	4.65	1.07	HN
22.	Ability to control both human and material resources	4.56	4.50	4.97	4.83	0.80	HN
	Cumulative Grand Mean				4.01	0.52	

 \bar{x}_T = Mean of Teachers, \bar{x}_A = Mean of Administrators, \bar{x}_S = Mean of Students, \bar{x}_G = Grand Mean, δ = Standard deviation, N_T = Number of Teachers, N_A = Number of Administrators, N_S = Number of Students, N_S = Total Number of Respondents, N_S = Highly Needed, N_S = Needed Table 1 shows the managerial entrepreneurship skills needed by EIMW trade students in GSTCs for self-employment in Adamawa State. With the cumulative grand mean of 4.01 and supportive standard deviation of 0.52, the respondents showed that all the items listed in Table 1 are managerial entrepreneurship skills needed by EIMW trade students in GSTCs for self-employment in Adamawa State.

Research Question 2: What are the accounting entrepreneurship skills needed by EIMW trade students in GSTCs for self-employment in Adamawa State?

Table 2: Mean and Standard Deviation of Administrators, Teachers and Students on the Accounting Entrepreneurship Skills Needed

		$N_A = 9 N_T = 56 N_S = 152 N = 217$		217			
S/No.	ITEMS	$\bar{\mathbf{x}}_{\mathbf{A}}$	$\bar{\mathbf{x}}_{\mathbf{T}}$	$\bar{\mathbf{x}}_{\mathbf{S}}$	$\bar{\mathbf{x}}_{\mathbf{G}}$	δ	Remark
1.	Ability to differentiate between revenue and expenditure accounts	3.89	3.82	3.99	3.94	0.37	Needed
2.	Ability to determine profit and loss of the business	4.89	4.84	4.99	4.95	0.40	HN
3.	Ability to identify the sources of funds	4.44	4.07	4.03	4.06	0.23	Needed
4.	Ability to identify which account to debit and which to credit in the ledger	3.89	3.82	3.99	3.94	0.37	Needed
5.	Ability to know gross and net profit	3.67	3.63	3.98	3.88	0.60	Needed
6.	Ability to know how to obtain loans	3.78	3.75	3.99	3.92	0.46	Needed

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	A 1 *1*						
7.	Ability to prepare the trading account	3.78	3.75	3.99	3.92	0.43	Needed
8.	Ability to record money paid into the bank by customers	3.78	3.73	3.99	3.91	0.47	Needed
9.	Ability to record sums drawn from bank with cheques in the cash book	3.33	3.30	3.96	3.76	0.81	Needed
10.	Ability to understand payroll and various deductions	3.67	3.66	3.98	3.88	0.52	Needed
11.	Awareness of existence and use of professional like lawyers, bankers, advertisement, and agents	4.22	4.04	4.01	4.03	0.16	Needed
12.	Awareness of manufacturing method	3.89	3.88	3.99	3.96	0.31	Needed
13.	Deduct return inwards from the sales for the period	4.11	4.02	4.01	4.01	0.12	Needed
14.	Determine the trading status of the business	4.33	4.05	4.02	4.04	0.20	Needed
15.	Have a good understanding that bank charges increases balance in the cash book and reduce balance in the bank	4.44	4.07	4.03	4.06	0.23	Needed
16.	Having a knowledge of posting all expenses accounts effectively in the ledger	4.22	4.04	4.01	4.03	0.16	Needed
17.	Knowledge of site of business	4.11	4.02	4.01	4.01	0.12	Needed
18.	Knowledge of account	3.89	3.79	3.99	3.94	0.41	Needed
19.	Knowledge of business laws	3.78	3.75	3.99	3.92	0.43	Needed
20.	Knowledge of costing	4.67	4.63	4.98	4.88	0.55	HN
21.	Knowledge of factors involved in decision to grant loan by financial house	3.78	3.75	3.99	3.92	0.46	Needed
22.	Knowledge of federal, state, and local government levies, taxes, and regulations	3.56	3.52	3.97	3.84	0.65	Needed
23.	Knowledge of safety rules involved in a particular business	4.78	4.75	4.74	4.74	0.79	HN
24.	Knowledge of use of insurance	3.44	3.41	3.55	3.51	1.07	Needed
25.	Knowledge to interpret financial statement	4.22	4.04	4.01	4.03	0.16	Needed
	Cumulative Grand Mean				3.96	0.42	Needed

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 \bar{x}_T = Mean of Teachers, \bar{x}_A = Mean of Administrators, \bar{x}_S = Mean of Students, \bar{x}_G = Grand Mean, δ = Standard deviation, N_T = Number of Teachers, N_A = Number of Administrators, N_S = Number of Students, N = Total Number of Respondents, N = Highly Needed

Table 2 shows the accounting entrepreneurship skills needed by EIMW trade students in GSTCs for self-employment in Adamawa State. With the cumulative grand mean of 3.96 and standard deviation of 0.42, the respondents showed that all the items listed in Table 2 are accounting entrepreneurship skills needed by EIMW trade students in GSTCs for self-employment in Adamawa State.

Research Question 3: What are the marketing entrepreneurship skills needed by EIMW trade students in GSTCs for self-employment in Adamawa State?

Table 3: Mean and Standard Deviation of Administrators, Teachers and Students on the Marketing Entrepreneurship Skills Needed

		$N_A = 9$	N _T =56	Ns=152	N=	217	
S/No.	ITEMS	$\bar{\mathbf{x}}_{\mathbf{A}}$	$\bar{\mathbf{x}}_{\mathbf{T}}$	$\bar{\mathbf{x}}_{\mathbf{S}}$	$\bar{\mathbf{x}}_{\mathbf{G}}$	δ	Remark
1.	Ability to determine availability of goods/ raw material for production and storage of finished goods	3.78	3.71	3.68	3.69	0.86	Needed
2.	Ability to acquire effective sales techniques	3.67	3.63	3.58	3.59	1.00	Needed
3.	Ability to budget and forecast	3.44	3.38	3.31	3.33	1.21	MN
4.	Ability to capture the attention of customers	4.11	4.02	4.01	4.01	0.12	Needed
5.	Ability to carry out effective marketing/information research	4.56	4.34	4.03	4.13	0.34	Needed
6.	Ability to choose appropriate advertising technique for goods and services	4.00	3.96	3.95	3.95	0.32	Needed
7.	Ability to communicate orally effectives	4.00	3.98	3.96	3.97	0.29	Needed
8.	Ability to communicate with individuals with various depths of knowledge capabilities	3.67	3.95	3.92	3.92	0.43	Needed
9.	Ability to communicate with others using electronic communication	4.44	4.07	4.03	4.06	0.23	Needed
10.	Ability to convey to others a message without commanding	3.44	3.43	3.38	3.39	1.19	MN
11.	Ability to determine and interpret factors which indicate extent and strength of competition	3.89	3.82	3.74	3.77	0.79	Needed

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12. Ability to determine current and future trends in sales of products 3.67 3.63 3.62 3.62 0.98 Needed 13. Ability to determine demand and supply situation 3.33 3.30 3.33 3.32 1.26 MN 14. Ability to determine the extent to which product will sell 4.22 4.04 4.01 4.03 0.16 Needed 15. Ability to determine the extent to which products will sell 4.11 4.02 4.01 4.01 0.12 Needed 16. Ability to determine the needs of customers 4.33 4.05 4.02 4.04 0.20 Needed 17. Ability to develop good negotiation skills 3.00 2.98 3.07 3.05 1.40 MN 18. Ability to identify new trends in the marketing environment 2.89 2.88 3.07 3.01 1.40 MN 19. Ability to make goods and services available to customers 4.67 4.63 4.50 4.54 1.24 HN 20. Ability to retain the loyalty of customers 4.78 4.75 4.67 4.70 1.00 HN 21. Ability to understand the needs of customers 4.78 4.59 4.57 4.58 1.16 HN 22. Accept feedback from others 4.44 4.36 4.42 4.41 1.37 Needed 23. Familiarity with various aspects of sales and salesmen 3.67 3.64 3.53 3.56 1.91 Needed 24. Knowledge of advertisement 4.56 4.52 4.50 4.51 1.30 HN 25. Knowledge of seasonal fluctuation of goods 3.33 3.36 3.66 3.72 1.85 Needed 26. Provide specific details about company's product or services 3.89 3.86 3.66 3.72 1.85 Needed Cumulative Grand Mean 3.85 0.90 Needed						,	,	
Ability to determine demand and supply situation 3.33 3.30 3.33 3.32 1.26 MN	12.		3.67	3.63	3.62	3.62	0.98	Needed
14. which product will sell 4.22 4.04 4.01 4.03 0.16 Needed 15. Ability to determine the extent to which products will sell 4.11 4.02 4.01 4.01 0.12 Needed 16. Ability to determine the needs of customers 4.33 4.05 4.02 4.04 0.20 Needed 17. Ability to develop good negotiation skills 3.00 2.98 3.07 3.05 1.40 MN 18. Ability to identify new trends in the marketing environment 2.89 2.88 3.07 3.01 1.40 MN 19. Ability to make goods and services available to customers 4.67 4.63 4.50 4.54 1.24 HN 20. Ability to retain the loyalty of customers 4.78 4.75 4.67 4.70 1.00 HN 21. Ability to understand the needs of customers 4.78 4.59 4.57 4.58 1.16 HN 22. Accept feedback from others 4.44 4.36 4.42 4.41 </td <td>13.</td> <td>Ability to determine demand and</td> <td>3.33</td> <td>3.30</td> <td>3.33</td> <td>3.32</td> <td>1.26</td> <td>MN</td>	13.	Ability to determine demand and	3.33	3.30	3.33	3.32	1.26	MN
13. which products will sell 4.11 4.02 4.01 4.01 4.01 0.12 Needed	14.	-	4.22	4.04	4.01	4.03	0.16	Needed
16. customers 4.33 4.05 4.02 4.04 0.20 Needed 17. Ability to develop good negotiation skills 3.00 2.98 3.07 3.05 1.40 MN 18. Ability to identify new trends in the marketing environment 2.89 2.88 3.07 3.01 1.40 MN 19. Ability to make goods and services available to customers 4.67 4.63 4.50 4.54 1.24 HN 20. Ability to retain the loyalty of customers 4.78 4.75 4.67 4.70 1.00 HN 21. Ability to understand the needs of customers 4.78 4.59 4.57 4.58 1.16 HN 22. Accept feedback from others 4.44 4.36 4.42 4.41 1.37 Needed 23. Familiarity with various aspects of sales and salesmen 3.67 3.64 3.53 3.56 1.91 Needed 24. Knowledge of seasonal fluctuation of goods 3.33 3.30 3.31 3.31 1.27	15.	•	4.11	4.02	4.01	4.01	0.12	Needed
17. negotiation skills 3.00 2.98 3.07 3.03 1.40 MIN 18. Ability to identify new trends in the marketing environment 2.89 2.88 3.07 3.01 1.40 MN 19. Ability to make goods and services available to customers 4.67 4.63 4.50 4.54 1.24 HN 20. Ability to retain the loyalty of customers 4.78 4.75 4.67 4.70 1.00 HN 21. Ability to understand the needs of customers 4.78 4.59 4.57 4.58 1.16 HN 22. Accept feedback from others 4.44 4.36 4.42 4.41 1.37 Needed 23. Familiarity with various aspects of sales and salesmen 3.67 3.64 3.53 3.56 1.91 Needed 24. Knowledge of advertisement 4.56 4.52 4.50 4.51 1.30 HN 25. Environment 4.56 4.52 4.50 4.51 1.30 HN <	16.		4.33	4.05	4.02	4.04	0.20	Needed
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19. services available to customers 4.87 4.83 4.30 4.34 1.24 HN 20. Ability to retain the loyalty of customers 4.78 4.75 4.67 4.70 1.00 HN 21. Ability to understand the needs of customers 4.78 4.59 4.57 4.58 1.16 HN 22. Accept feedback from others 4.44 4.36 4.42 4.41 1.37 Needed 23. Familiarity with various aspects of sales and salesmen 3.67 3.64 3.53 3.56 1.91 Needed 24. Knowledge of advertisement 4.56 4.52 4.50 4.51 1.30 HN 25. Knowledge of seasonal fluctuation of goods 3.33 3.30 3.31 3.31 1.27 MN 26. Provide specific details about company's product or services 3.89 3.86 3.66 3.72 1.85 Needed	18.		2.89	2.88	3.07	3.01	1.40	MN
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23. Familiarity with various aspects of sales and salesmen 3.67 3.64 3.53 3.56 1.91 Needed 24. Knowledge of advertisement 4.56 4.52 4.50 4.51 1.30 HN 25. Knowledge of seasonal fluctuation of goods 3.33 3.30 3.31 3.31 1.27 MN 26. Provide specific details about company's product or services 3.89 3.86 3.66 3.72 1.85 Needed	21.	-	4.78	4.59	4.57	4.58	1.16	HN
23. of sales and salesmen 3.67 3.64 3.53 3.50 1.91 Needed 24. Knowledge of advertisement 4.56 4.52 4.50 4.51 1.30 HN 25. Knowledge of seasonal fluctuation of goods 3.33 3.30 3.31 3.31 1.27 MN 26. Provide specific details about company's product or services 3.89 3.86 3.66 3.72 1.85 Needed	22.	Accept feedback from others	4.44	4.36	4.42	4.41	1.37	Needed
25. Knowledge of seasonal fluctuation of goods 26. Provide specific details about company's product or services 3.33 3.30 3.31 3.31 1.27 MN 3.89 3.86 3.66 3.72 1.85 Needed	23.		3.67	3.64	3.53	3.56	1.91	Needed
25. Knowledge of seasonal fluctuation of goods 26. Provide specific details about company's product or services 3.33 3.30 3.31 3.31 1.27 MN 3.89 3.86 3.66 3.72 1.85 Needed	24.	Knowledge of advertisement	4.56	4.52	4.50	4.51	1.30	HN
company's product or services 3.89 3.86 3.66 3.72 1.85 Needed	25.	Knowledge of seasonal	3.33	3.30	3.31	3.31	1.27	MN
Cumulative Grand Mean 3.85 0.90 Needed	26.	-	3.89	3.86	3.66	3.72	1.85	Needed
		Cumulative Grand Mean				3.85	0.90	Needed

 \bar{x}_T = Mean of Teachers, \bar{x}_A = Mean of Administrators, \bar{x}_S = Mean of Students, \bar{x}_G = Grand Mean, δ = Standard deviation, N_T = Number of Teachers, N_A = Number of Administrators, N_S = Number of Students, N_S = Total Number of Respondents, N_S = Highly Needed, N_S = Moderately Needed Table 3 shows the marketing entrepreneurship skills needed by EIMW trade students in GSTCs for self-employment in Adamawa State. With the cumulative grand mean of 3.85 and supportive standard deviation of 0.90, the respondents showed that all the items listed in Table 3 are marketing entrepreneurship skills needed by EIMW trade students in GSTCs for self-employment in Adamawa State.

Hypothesis 1: There is no significant difference among the mean responses of technical college's administrators, teachers and students on the managerial entrepreneurship skills needed by EIMW trade students in GSTCs self-employment in Adamawa State.

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Table 4: ANOVA on the Managerial Entrepreneurship Skills Needed by EIMW Trade Students

	Sum of Squares	Mean Square	df	F	p	Remark
Between Groups	2.491	1.246	2			
				19.984	.000	Rejected
Within Groups	13.339	.062	214			

Table 4 shows the result of testing hypothesis one. The result revealed that F(2, 214) = 19.984, p-value = 0.000 tested at 0.05 level of significance. Since the p- value is less than the level of significance, therefore, the null hypothesis is rejected.

Hypothesis 2: There is no significant difference among the mean responses of technical colleges' administrators, teachers and students on the accounting entrepreneurship skills needed by EIMW trade students in GSTCs for self-employment in Adamawa State.

Table 5: ANOVA on the Accounting Entrepreneurship Skills Needed by EIMW Trade Students

	Sum of Squares	Mean Square	df	F	р	Remark
Between Groups	1.092	.546	2			
				9.791	.000	Rejected
Within Groups	11.937	.056	214			

Table 5shows the result of testing hypothesis two. The result revealed that F(2, 214) = 9.791, p-value = 0.000 tested at 0.05 level of significance. Since the p- value is less than the level of significance, therefore, the null hypothesis is rejected.

Hypothesis 3: There is no significant difference among the mean responses of technical college administrators, teachers and students on the marketing entrepreneurship skills needed by EIMW trade students in GSTCs for self-employment in Adamawa State.

Table 6: ANOVA on the Marketing Entrepreneurship Skills Needed by EIMW Trade Students

	Sum of Squares	Mean Square	df	F	р	Remark
Between Groups	.138	.069	2			
				.153	.859	Accepted
Within Groups	97.151	.454	214			

Table 6 shows the result of testing hypothesis three. The result revealed that F(2, 214) = 0.153, p-value = 0.859 tested at 0.05 level of significance. Since the p- value is greater than the level of significance, therefore, the null hypothesis is accepted.

Discussion of Findings

The findings of the study revealed that Electrical Installation and Maintenance Works (EIMW) trade students required 20 managerial skills, with a particular emphasis on the ability to execute

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effective planning and control both human and material resources. This aligns with the work of Ohanu and Shodipe (2021) and Eze, et al. (2018), who suggested that to succeed within the stringent confines of the industry, entrepreneurs must possess essential managerial skills such as clear and direct communication, active listening, delegation, coaching and mentoring, effective praise, conflict resolution, and flexibility. Additionally, Nwibe and Bakare (2022) and Eze, et al. (2021) emphasized that managers must be adept at relationship management, planning, prioritization, critical thinking, industry knowledge, effective communication, inventory supervision, prioritization of jobs, maintenance of positive human relations, and coordination of activities within the industry. This comprehensive skill set is crucial for effectively directing tasks, setting appropriate timelines, and fostering cordial relationships between management and staff to achieve industry objectives.

In terms of accounting skills, the study indicated that EIMW trade students identified a need for skills such as determining profit and loss, knowledge of costing, and understanding the safety rules relevant to their business, in addition to 22 other accounting skills. These findings are supported by Olarewaju and Msomi (2021) and Olajide (2021), who noted that no business can thrive without well-prepared financial records. The authors argued that entrepreneurs must be able to evaluate cash flow, analyze financial data, forecast future earnings and expenses, understand contract provisions, manage contracts, implement compliance policies, secure financial management systems, and apply advanced mathematical skills. Furthermore, Ibidapo (2022) and Ohagwu, et al. (2021) highlighted the importance of accounting skills for identifying accounts to debit or credit in the ledger, recording withdrawals, deducting returns from sales, determining the trading status of the business, preparing trading accounts, and understanding the impact of bank charges on cash flow.

Regarding marketing skills, the study revealed that students required 16 essential marketing skills, with a moderate need for an additional 6. Notably, EIMW students identified a strong need for skills such as customer loyalty retention, availability of goods and services, advertising knowledge, and distribution of products. These findings are consistent with those of Osunmuyiwa and Ahlborg (2022) and Fadairo and Olakotan (2021), who enumerated essential marketing skills for promoting products and services in the industry, including communication, creativity, problem-solving, attention to detail, interpersonal skills, leadership, adaptability, writing, and data analysis. Similarly, Amjad, et al. (2020) asserted that effective marketing fundamentally revolves around communication, highlighting it as the primary skill necessary for success in the field.

5. CONCLUSION

In conclusion, the study highlights the critical entrepreneurial skills required by EIMW trade students in GSTCs in Adamawa State for successful self-employment. The findings underscore the importance of managerial, accounting, and marketing skills, revealing that students need competencies such as effective planning, resource control, financial management, and customer retention strategies. By equipping students with these essential skills, educational institutions can better prepare them for the challenges of entrepreneurship in the technical field, ultimately fostering self-employment opportunities and contributing to the economic development of the State.

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Recommendations

Based on the findings of the study the following recommendations are made:

- 1. NBTE should improve the EIMW curriculum to include essential skills in management, accounting, and marketing. This can involve hands-on training, real-life case studies, and workshops to help students gain practical knowledge.
- 2. GSTCs should work together with local businesses to create internship opportunities and mentorship programs. This collaboration will help students learn directly from industry professionals about the challenges of running a business.
- 3. Regular training programs should be offered for teachers to help them stay updated on the latest industry trends and teaching methods. This ensures that educators can effectively teach students the skills they need for self-employment in the technical field.

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