



Acquisition of Entrepreneurial Competencies by Graduates of Technology Education for Sustainable Self-Employment in Enugu State

¹K. I. UZOR, ²S. N. OLUKA, (Ph.D) AND ³C. O. MBAH (Ph.D)

^{1&2}Department of Technology & Vocational Edu., Enugu State University of Sci. & Tech., Enugu

³Department of Automobile Technology Education, Fed. College Education (Tech) Umuze.

Abstract

The central objective of this study was to determine the extent of acquisition of entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State. Three research questions and three null hypotheses were developed to guide the study. The study adopted descriptive survey research design. The study population of the study was 77 final year students in technology education programmes in public Universities in Enugu State. There was no sampling as the entire population was studied. The instrument for data collection was a 28-item structured questionnaire divided in two sub-categories based on the research questions that made for the study. The questionnaire items were structured in four-point rating scale. The questionnaire was validated by experts while the reliability of the instrument yielded 0.78 using Cronbach Alpha. Out of 77 copies of questionnaire distributed 72 copies were properly filled and returned giving 93.51% return rate. The data collected were analyzed using mean, standard deviation and t-test statistics. Based on the result of data analysis, the study found that there are low extent of acquisition of technical entrepreneurial competencies, managerial entrepreneurial competencies and interpersonal entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State. Based on the findings, recommendations were made among which include that the government and relevant bodies should provide facilities for teaching technical entrepreneurial competencies to the students for sustainable self-employment and technology educators teaching entrepreneurship should increase effort in the teaching of managerial and interpersonal competencies to the students of technology education for sustainable self-employment.

Keywords:

Entrepreneurship, Competencies, Entrepreneurial Competencies, Self-employment.

How to cite: UZOR, K. I., OLUKA, S. N., & MBAH, C. O. (2025). Acquisition of Entrepreneurial Competencies by Graduates of Technology Education for Sustainable Self-Employment in Enugu State. *GPH-International Journal of Educational Research*, 8(05), 12-25. <https://doi.org/10.5281/zenodo.15518726>



This work is licensed under Creative Commons Attribution 4.0 License.

Introduction

Education in contemporary society is characterized with so many challenges that the graduates are required to acquire skills for self-employment. The acquisition and development of competence in various educational programme is dependent on the quality of instructional delivery in the educational institution. According to Onyebuenyi, Mbah and Odeluga (2017) education provides a means of transferring ideas, cultural values, norms and livelihood to the members of the society. Ezeabii, Madueke and Ugwunwa (2019) noted that education train human capacity that controls and coordinate other areas for sustainability and intellectual development. Education may exist in various forms among which are formal and informal education. The formal education is usually provided to the students or learners in a formal setting, which encompass school-based activities such as teaching, training, narration, deliberation and guided research in a formal and organized manner (Mbah, Nnadi, Ohagwu and Aduhuekwe, 2020). Formal education is usually taken under the guidance of educators and school authority. However, learners can also educate themselves or even develop skills for self-employment through Information and Communication Technologies (ICT) available to the students. Formal education is commonly divided into numerous progressive phases such as pre-school or kindergarten, primary school, secondary school and tertiary education. The tertiary education system covers the colleges of education, monotechnics, polytechnics and universities.

University could be defined as the tertiary institution that awards degree to students in different disciplines at sub-professional, professional and training of high-level manpower. The students that successfully completed their programme in the university is usually called graduates. The National Universities Commission (NUC) is the regulatory body for universities in Nigeria. Universities may exist as Federal, State and Private owned and managed universities. These universities are expected to provide training to the students in contemporary issues, curriculum contents as well as entrepreneurship irrespective of economic and environmental challenges in different programmes. The instructional delivery at this level of education is expected to address the needs of the learners in acquisition of entrepreneurial skills on graduation. Among the programmes offered to students in universities includes Technology Education.

Technology Education is a programme offered in university to train competent and productive workforce that would be employed or becomes self-employed in teaching, productive and economic settings. Technology Education programmes were designed to offer knowledge and skill in the subject areas such as Automobile Technology, Building Technology, Electrical/Electronic Technology, Mechanical/Metalwork Technology and Woodwork Technology. According to Alio, Mbah and Ideh (2023) Technology Education is an aspect of vocational education which equips individuals with the necessary practical skills, theoretical knowledge and entrepreneurship competencies needed for performance in the business world either for job performance or for self-employment.

It is believed that acquisition of entrepreneurial competencies for self-employment is one of the key solutions to unemployment. According to Nwankwo (2017) self-employment

is the act of generating one's income directly from customers, clients or other organization as opposed to being a wage/salary earner. Self-employment can lead to economic growth and attainment of sustainable economy. Boylan & Buchard (2015) opined that self-employment is a situation in which an individual works for himself or herself instead of working for an employer that pays a salary or a wage. Achieving sustainable self-employment, there is increased the need for competent individuals, competency identification and modeling in training students based on needs in digital era.

Competency is the ability (that cannot be observed directly but only by activities) to adequately and successfully combine and perform necessary actions in any contexts to achieve specific tasks or objectives. Competency according to Bakare, Okereke and Obe (2017) is the combination of knowledge, skills and attitudes required for carrying out a task. Competency is essentially knowledge, skills and attitude for carrying out a task. According to Mbah (2012) in Ohagwu (2023) competence serves as a motivated pattern of knowledge, skills and interpersonal abilities deployed to undertake a valued job. It is the combination of observable and measurable knowledge, skills and abilities as well as personal attributes that contributes to enhanced employee performance which ultimately result in organizational success (Ismail and Mohammed, 2015). It is important to note that achieving sustainable development, the entrepreneurial competencies of the students are critical and need to be given the needed attention in the educational programmes like technology education courses.

Moreover, the pursuit of self-employment in the realm of Technology Education requires a nuanced understanding of entrepreneurship competencies that goes beyond traditional technical skills. The intersection of technical knowledge and entrepreneurial skills is pivotal for graduates aiming to establish their ventures and thrive in the dynamic landscape of technology-driven entrepreneurship. The term entrepreneurship according to Akamobi (2017) is the willingness and ability to seek out investment opportunities, establish and run an enterprise successfully. It is a dynamic process of creating incremental wealth by translating dreams, visions and ideas into economically viable entities. Mbah and Imakwu (2017) opined that entrepreneurship involves the combination of various activities and input in an innovative manner to ensure the survival and growth of the business. The entrepreneurship is the manifestation of entrepreneurship competencies for self-employment of the students. Entrepreneurship competencies are the knowledge, skills and attitudes needed by one to effectively in establish and manage a business venture for job and wealth creation. Specifically, the acquisition of entrepreneurial competencies needs to consider the different competency areas such technical competency, managerial competency and interpersonal competency.

The technical entrepreneurial competency is the abilities needed for handling machines, tools, knowledge of physical products, job skills, manufacturing process and production activities. Onoh (2015) pointed that technical competencies are needed for manipulation of tools and production processes within the organization. In addition to technical competencies is the managerial competency.

Managerial competency is the ability to plan, organize, direct and control activities for economic. Managerial competencies as stated by Obayi (2017) is that abilities acquirable through entrepreneurship education. The acquisition of management skills through entrepreneurship education is indispensable towards producing a self-reliant nation with dynamic economy. Management skills helps in understanding the objectives, materials and workers attitudes which is usually referred to interpersonal skills.

Interpersonal competencies are needed in achieving sustainable self-employment. According to Onoh (2015) interpersonal skills includes being empathetic, trusting, loyal, supportive among others. Demonstrating interpersonal competency will be a major factor in facilitating the growth of the business, for it welds human resources in building a successful business venture.

Acquiring entrepreneurship competencies begins with cultivating an entrepreneurial mindset. Technology Education graduates need to embrace a proactive and innovative approach to problem-solving, viewing challenges as opportunities for creative solutions. This mindset shift involves developing a keen sense of curiosity, adaptability, and a willingness to take calculated risks-essential traits for navigating the uncertainties of entrepreneurship. Transitioning from a technical focus to an entrepreneurial mindset requires intentional efforts in order to achieve sustainable self-employment of the students on graduation. The level of unemployment and cyber-crime activities among the graduates does not show evidence of acquisition of entrepreneurial competencies. The situation of graduates' unemployment is not gender sensitive as most of the male and female students does not show evidence of acquisition of entrepreneurial competencies for sustainable self-employment. Consequently, the study sought to determine the extent of acquisition of entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State.

Statement of the Problem

Examining case studies and success stories of technology education graduates who have successfully ventured into entrepreneurship can serve as powerful motivators. These narratives provide insights into the challenges faced, strategies employed and lessons learned. Analyzing real-world issues in contemporary society, there seems to be low level of acquisition entrepreneurial skills among the students as the get-rich-quick syndrome has become the order of the day as most of the students are into cyber-crime called yahoo and others unsustainable means of making money.

This condition questions the extent of acquisition of entrepreneurship competencies among the graduates of technology education in the Universities in Enugu State. The acquisition of entrepreneurship competencies by graduates in Technology Education is a transformative journey that propels students into the realm of self-employment. The symbiotic relationship between technical expertise and entrepreneurial skills not only equips graduates to navigate the complexities of entrepreneurship but also enhances the innovation and dynamism within the technology sector. The pursuit of self-employment in the domain of Technology Education necessitates a comprehensive understanding of entrepreneurship

competencies required for success. The problem of this study is posed as question what is the extent of acquisition of entrepreneurship competencies among technology education graduates for sustainable self-employment in Enugu State.

Purpose of the Study

The main purpose of this study was to determine the extent of acquisition of entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State. Specifically, the study sought to determine the extent of;

1. acquisition of technical entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State.
2. acquisition of managerial entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State.
3. acquisition of interpersonal entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State.

Research Questions

The following research questions were formulated to guide the study;

1. What is the extent of acquisition of technical entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State?
2. What is the extent of acquisition of managerial entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State?
3. What is the extent of acquisition of interpersonal entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State?

Hypotheses

The following null hypotheses were formulated and tested at 0.05 level of significance;

- HO₁: There is no significant difference between mean scores of male and female students on the extent of acquisition of technical entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State.
- HO₂: A significant difference does not exist between the mean scores of the male and female students on the extent of acquisition of managerial entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State.
- HO₃: There is no significant difference between the mean score of male and female students on the extent of acquisition of interpersonal entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State.

Methods

The study adopted a descriptive survey research design. Nworgu (2015) defined survey research design as one in which a group of people or items are studied by collecting and analyzing data from only a few of them within the entire group. The study adopted this design due to the polychotomous instrument used and the basic technology teachers' opinions which were sought. The area of the study was Enugu State of Nigeria. Enugu State located in

Igboland. It is one of the five States in South-East geopolitical zone of Nigeria. The State like other States in Nigeria, has challenge in the power sector which the use of solar power system as a renewable energy can address. The population of the study was 77 final year students in technology education programmes in public Universities in Enugu State (University of Nigeria Nsukka and Enugu State University of Science and Technology). The population was determined based on the field survey conducted by the researcher in January 2024 on the Final Year Technology Education Students in Universities in Enugu State. There was no sampling as the population was manageable for the researcher's capacity.

The collection data were done using 28-item structured questionnaire developed by the researcher based on the review of related literature. The instrument was structured in four-point response scales. The validation of the instrument was done using three experts in Department of Technology and Vocational Education, and Measurement and Evaluation in Enugu State University of Science and Technology in Enugu State. Afterwards, their corrections and suggestions were used to prepare the final instrument used for the study. The instrument was trial tested using 10 copies on technology educators in Ebonyi State who were not in the area of the study. The reliability coefficient yielded 0.85 using Crombach Alpha method. This 0.78 coefficient is in-line with Uzoagulu (2013) that reliability index of 0.60 to 1 shows that the instrument could be used for the data collection.

The administration of the questionnaire was carried out using eight research assistants and out of 77 copies of questionnaire distributed 72 copies were properly filled and returned giving 93.51% return rate. Weighted means and standard deviations were used to answer the research questions. Decisions on the research questions were made using the lower and upper limits of the mean based on a four-point scale. The standard deviation was used to determine the homogeneity or otherwise of the opinions of the respondents. The t-test was used to test the null hypotheses. The analysis was carried out using Statistical Packages Social Science (SPSS). The significant value (at 2-tail) was compared with .05 level of significant at the appropriate degree of freedom. The null hypothesis was not significant when the significant value was less than the .05 level of significance and at appropriate degree of freedom; otherwise the null hypothesis was significant.

Results

The results of the study obtained were presented in Tables based on the research questions and hypotheses that guided the study (see Table 1-6).

Research Question 1

What is the extent of acquisition of technical entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State?

Table 1: Mean ratings and standard deviation of the respondents on the extent of acquisition of technical entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State

| S/N | extent of acquisition of technical entrepreneurial competencies include ability to; | Male N= 45 | | Female N= 27 | | Overall | | Decision |
|-----|---|---------------|-----------------|-----------------|-----------------|-------------|-----------------|--------------------|
| | | \bar{X}_1 | SD ₁ | \bar{X}_2 | SD ₂ | \bar{X}_G | SD _G | |
| 1 | Understand advances in technological progress | 2.58 | 0.79 | 2.47 | 0.69 | 2.56 | 0.78 | High Extent |
| 2 | Develop business plan | 2.69 | 0.93 | 2.68 | 0.89 | 2.69 | 0.92 | High Extent |
| 3 | Have good job skills | 2.44 | 0.89 | 2.10 | 0.74 | 2.37 | 0.87 | Low Extent |
| 4 | Understand manufacturing process | 2.47 | 0.91 | 2.42 | 0.84 | 2.46 | 0.89 | Low Extent |
| 5 | Deal with intimate knowledge of physical products | 2.49 | 0.94 | 2.63 | 1.01 | 2.52 | 0.95 | High Extent |
| 6 | Understand machines/tools | 2.33 | 0.71 | 2.47 | 0.70 | 2.36 | 0.71 | Low Extent |
| 7 | Plan infrastructural facilities for the business | 2.43 | 0.73 | 2.53 | 0.69 | 2.45 | 0.72 | Low Extent |
| 8 | Differentiate the raw materials production | 2.44 | 0.81 | 2.42 | 0.76 | 2.43 | 0.80 | Low Extent |
| 9 | Consider equipment purchase based on human resources | 2.48 | 0.83 | 2.79 | 0.85 | 2.78 | 0.83 | High Extent |
| | Cluster Mean/SD | 2.48 | 0.84 | 2.50 | 0.80 | 2.51 | 0.83 | High Extent |

The result of data analysis presented in Table 1 above shows that the cluster mean rating of male and female students of technology education are 2.48 and 2.50 respectively which represents low extent and high extent. The overall mean rating of the respondents for items 1, 2, 5, and 9 are 2.56, 2.69, 2.52 and 2.78 representing high extent of acquisition of entrepreneurial competencies. The remaining items mean rating ranges from 2.36 to 2.46 indicating low extent of acquisition of entrepreneurial competencies. The implication is that the identified items are the extent of acquisition of technical entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State. The overall cluster mean of 2.51 further reveals that the itemized are the high extent of acquisition of technical entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State. The low standard deviation of 0.83 shows that the respondents' opinions do not differ remarkably.

Hypothesis 1

There is no significant difference between mean scores of male and female students on the extent of acquisition of technical entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State.

Table 2: Summary of t-test analysis of mean scores of male and female students on the extent of acquisition of technical entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State

| Variables | N | t | df | Sig. (2tailed) | Mean Difference | Std. Error Difference | Decision |
|-----------|----|-------|----|-------------------|--------------------|--------------------------|----------|
| Male | 45 | 0.312 | 70 | 0.415 | 0.97019 | 1.36412 | NS |
| Female | 27 | | | | | | |

The result of t-test analysis in Table 2 shows that the t-value at .05 level of significance and 70 degree of freedom for the items is .312 with a significant value of .415. Since the significant value of .415 is more than the .05 level of significance the null hypothesis is not significant. This means that there is no significant difference with respect to the items on the extent of acquisition of technical entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State.

Research Question 2

What is the extent of acquisition of managerial entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State?

Table 3: Mean ratings and standard deviation of the respondents on the extent of acquisition of managerial entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State

| S/N | extent of acquisition managerial entrepreneurial competencies required include ability to; | Male N= 45 | | Female N= 27 | | Overall | | Decision |
|-----|--|----------------|-----------------|-----------------|-----------------|----------------|-----------------|-------------------|
| | | X ₁ | SD ₁ | X ₂ | SD ₂ | X _G | SD _G | |
| 10 | Plan business activities | 2.23 | 0.88 | 2.27 | 0.70 | 2.24 | 0.71 | Low Extent |
| 11 | Organize different business segments | 2.04 | 0.64 | 2.10 | 0.64 | 2.08 | 0.64 | Low Extent |
| 12 | Coordinate human/material resources | 2.32 | 0.76 | 2.09 | 0.77 | 2.09 | 0.71 | Low Extent |
| 13 | Identify alternatives | 2.89 | 0.96 | 2.59 | 0.65 | 2.71 | 0.87 | High Extent |
| 14 | Focus on objectives of the venture | 2.18 | 0.77 | 2.20 | 0.75 | 2.19 | 0.75 | Low Extent |
| 15 | Supervising of work activities | 2.07 | 0.76 | 2.04 | 0.74 | 2.05 | 0.74 | Low Extent |
| 16 | Measure the profitability of individual operation | 2.14 | 0.41 | 2.02 | 0.76 | 2.06 | 0.73 | Low Extent |
| 17 | Measure profit/access | 2.21 | 0.83 | 2.10 | 0.81 | 2.14 | 0.81 | Low Extent |
| 18 | Prepare income tax return | 2.36 | 0.68 | 2.09 | 0.85 | 2.19 | 0.80 | Low Extent |
| 19 | Develop and market new products | 2.21 | 0.67 | 2.00 | 0.75 | 2.11 | 0.69 | Low Extent |
| 20 | Draw up budgets for business plan | 2.14 | 0.55 | 2.30 | 0.76 | 2.24 | 0.72 | Low Extent |
| | Cluster Mean/SD | 2.25 | 0.72 | 2.16 | 0.74 | 2.19 | 0.74 | Low Extent |

The analysis of data in Table 3 shows that the cluster mean rating of male and female students are 2.25 and 2.16 respectively which represents. The overall mean rating obtain for the 13 item is 2.71 indicating high extent. The remaining 2.08 and 2.24 depicting low extent. This means that the items represent the low extent of acquisition of managerial entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State. An overall cluster mean of 1.19 and cluster standard deviation of 0.74 also depicts that the itemized are low of extent acquisition of managerial entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State. The relatively low standard deviation value of 0.74 indicates that the respondents did not differ remarkably in their opinions regarding the items as the low extent of acquisition of managerial entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State.

Hypothesis 2

A significant difference does not exist between the mean scores of the male and female students on the extent of acquisition of managerial entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State.

Table 4: Summary of t-test analysis of mean scores of the male and female students on the extent of acquisition of managerial entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State

| Variables | N | t | df | Sig. (2tailed) | Mean Difference | Std. Error Difference | Decision |
|-----------|----|-------|----|----------------|-----------------|-----------------------|----------|
| Male | 45 | 0.432 | 70 | 0.561 | .54776 | 1.68078 | NS |
| Female | 27 | | | | | | |

The result of t-test analysis in Table 4 shows that the t-value at .05 level of significance and 70 degree of freedom for the items is 0.432 with a significant value of .561. Since the significant value of .561 is more than the .05 level of significance, the null hypothesis is not significant. This means that there is no significant difference between the mean scores of the male and female students on the extent of acquisition of managerial entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State.

Research Question 3

What is the extent of acquisition of interpersonal entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State?

Table 5: Mean ratings and standard deviation of the respondents on the extent of acquisition of interpersonal entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State

| S/N | extent of acquisition interpersonal entrepreneurial competencies include ability to; | Male N= 45 | | Female N= 27 | | Overall | | Decision |
|-----|--|---------------|-----------------|-----------------|-----------------|-------------|-----------------|-------------------|
| | | \bar{X}_1 | SD ₁ | \bar{X}_2 | SD ₂ | \bar{X}_G | SD _G | |
| 21 | Be empathetic to the feelings of other | 2.19 | 0.69 | 2.24 | 0.63 | 2.22 | 0.65 | Low Extent |
| 22 | Be loyal to the constituted authority | 2.52 | 0.78 | 3.32 | 0.71 | 2.72 | 0.75 | High Extent |
| 23 | Maintaining honesty in dealing with others | 2.25 | 0.69 | 2.40 | 0.79 | 2.32 | 0.72 | Low Extent |
| 24 | Sensitive to the needs of others | 2.39 | 0.73 | 2.34 | 0.68 | 2.36 | 0.74 | Low Extent |
| 25 | Listen actively to the needs of customers | 2.46 | 0.86 | 2.36 | 0.77 | 2.41 | 0.82 | Low Extent |
| 26 | Having high morale | 2.49 | 0.73 | 2.46 | 0.74 | 2.47 | 0.73 | Low Extent |
| 27 | Recognize the style of intrapreneurship | 2.33 | 0.68 | 2.50 | 0.77 | 2.43 | 0.75 | Low Extent |
| 28 | Maintain integrity in business activities | 2.40 | 0.78 | 2.46 | 0.79 | 2.43 | 0.78 | Low Extent |
| | Cluster Mean/SD | 2.38 | 0.74 | 2.39 | 0.74 | 2.42 | 0.74 | Low Extent |

The analysis of data in Table 5 shows that the cluster mean rating of male and female technology education students are 2.38 and 2.39 respectively which represents low extent. The overall mean rating of item 22 is 2.72 that represents high extent of acquisition of

interpersonal entrepreneurial competencies while the remaining seven items ranges from 2.22 to 2.47 indicating low extent. This means that the items represent low extent of acquisition of interpersonal entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State. An overall cluster mean of 2.42 and cluster standard deviation of 0.74 also depicts that the itemized interpersonal entrepreneurial competencies are acquired to a low extent among graduates of technology education for sustainable self-employment in Enugu State. The relatively low standard deviation value of 0.74 indicates that the respondents did not differ remarkably in their opinions regarding the items as the extent of acquisition of interpersonal entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State.

Hypothesis 3

There is no significant difference between the mean score of male and female students on the extent of acquisition of interpersonal entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State.

Table 6: Summary of t-test analysis of mean score of male and female students on the extent of acquisition of interpersonal entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State

| Variables | N | t | df | Sig. (2tailed) | Mean Difference | Std. Error Difference | Decision |
|-----------|----|-------|----|----------------|-----------------|-----------------------|----------|
| Male | 45 | 0.196 | 70 | 0.487 | .51776 | 2.68078 | NS |
| Female | 27 | | | | | | |

The result of t-test analysis in Table 6 shows that the t-value at .05 level of significance and 70 degree of freedom for the items is 0.198 with a significant value of .487. Since the significant value of .487 is more than the .05 level of significance, the null hypothesis is not significant. This means that there is no significant difference between the mean score of male and female students on the extent of acquisition of interpersonal entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State.

Discussion of the Findings

Based on the data analysis, the following findings were made and related to the study according to the research questions and hypotheses that guided the study. According to research question one, the study revealed that there is high extent of acquisition of technical entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State. The identified high extent of acquisition of entrepreneurial competencies includes ability to understand advances in technological progress, develop business plan, have good job skills, understand manufacturing process, deal with intimate knowledge of physical products, understand machines/tools, plan infrastructural facilities for the business, differentiate the raw materials production and consider equipment purchase based on human resources. The implication of the findings was that the listed technical

entrepreneurial competencies are acquired to a high extent. This is in agreement with Obayi (2015) that there is high level of acquisition of entrepreneurial skills for the establishment of small-scale businesses. Therefore, the high extent of acquisition revealed that the students are being trained on the technical entrepreneurial competencies in technology education programmes in Universities in Enugu State. Also, the findings of the study showed that there was no significant difference between mean scores of male and female students on the extent of acquisition of technical entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State. The implication of the findings was that gender of students had no influence on the high extent of acquisition of technical entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State.

Further, the result of the study in research question two showed that low extent of acquisition of managerial entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State. The managerial entrepreneurial competencies acquired to a low extent include ability to; plan business activities, organize different business segments, coordinate human/material resources, identify alternatives, focus on objectives of the venture, supervising of work activities, measure the profitability of individual operation, measure profit/access, prepare income tax return, develop and market new products and draw up budgets for business plan. The implication of low extent of acquisition of managerial entrepreneurial competencies by the students depict low expertise in the management of entrepreneurial development in Enugu State. The findings of the study were in consonance with Mbah and Imakwu (2017) that the poor performance of individuals in entrepreneurship is as result of low level of acquisition of managerial entrepreneurial competencies there day to day entrepreneurial development. The showed the need to develop an effective means of training the students to develop managerial entrepreneurial competencies for sustainable development. Furthermore, the findings of the study indicated that a significant difference does not exist in the mean scores of the male and female students on the extent of acquisition of managerial entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State. The implication of the findings was that gender of the respondents does not differ in the identified low extent of acquisition of managerial entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State.

Moreover, the findings of the study in research question three depicted low extent of acquisition of interpersonal entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State. The study identify the following as the interpersonal entrepreneurial competencies acquired to a low extent ability to; be empathetic to the feelings of other, be loyal to the constituted authority, maintaining honesty in dealing with others, sensitive to the needs of others, listen actively to the needs of customers, having high morale, recognize the style of intrapreneurship and maintain integrity in business activities. This means that the items represent low extent of acquisition of interpersonal entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State. The findings were in line with Akamobi (2017)

that the acquisition of interpersonal entrepreneurial competencies by the students were very low. Akamobi noted that the interpersonal competencies of the students define their relationship with customers and employees. The findings showed no significant difference between the mean score of male and female students on the extent of acquisition of interpersonal entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State. This means that gender does not affect the student's extent of acquisition of interpersonal entrepreneurial competencies for sustainable self-employment in Enugu State.

Conclusion

The study identified the extent of acquisition of entrepreneurial competencies among graduates of technology education for sustainable self-employment in Enugu State. The study depicts that graduates acquire entrepreneurial competencies to a low extent. The implication of students' low level of acquisition of entrepreneurial competencies indicates that the students' performance would be affected and their survival rate would small. There is need to increase the level of acquisition of entrepreneurial competencies among the technology education students to ensure sustainable self-employment. The identified low extent of acquisition of technical, managerial and interpersonal entrepreneurial competencies were based on the responses of the male and female students of technology education in public universities. The training of students in these competence areas need to be improved in order to achieve the desired result. This is pertinent as there is increasing needs to achieve the desired growth, sustainable development and self-employment of the graduates in Enugu State. Increasing the acquisition of entrepreneurial competencies would increase self-employment and job creation as the competencies would help to increase the survival rate of entrepreneurs in the society.

Recommendations

Based on the findings of this study, the following recommendations were made;

1. The government and relevant bodies should provide facilities for teaching technical entrepreneurial competencies to the students for sustainable self-employment.
2. Technology educators teaching entrepreneurship should increase effort in the teaching of managerial and interpersonal competencies to the students of technology education for sustainable self-employment.
3. The students on graduation should ensure that the identified competencies are acquired to a high extent for sustainable self-employment in Enugu State.

References

- Ajayi, T.O. (2017). Entrepreneurial competencies required by students for effective practice saturated economy. *Journal of education* 6 (8), 136-138.
- Akamobi, O. G. (2017). Electrical installation and maintenance practices teachers' assessment of the entrepreneurial skill needs of technical students in Anambra and Enugu State. *M.Sc. Thesis submitted to Department of Vocational Education, Nnamdi Azikiwe University Awka*.
- Alio, A.N., Mbah, C. O. & Ideh, F. N. (2023). Re-engineering of TVET programme in achieving sustainable economic development of the youths for transnational crime reduction in South-East States of Nigeria. *African Amani Journal* 9 (2); 27-44.
- Bakare, J. M., Okereke, G. K. O. & Obe, P. I. (2017). E-teaching competencies for capacity building of lecturers for effective delivery of technical education courses in universities in South-East. *Journal of Technical Vocational Education Training and Research* 2(1) 31-328.
- Boylan, C. I. & Buchard, F. Z. (2015). Repositioning skill training in technical schools for economic development. *International Journal of Innovative Education Research* 8(4):26-34.
- Ezeabii, I. C., Madueke, C. E. & Ugwu, N. R. (2019). Leadership qualities and business skills needed by Business Education student in public universities in South-East Nigeria for self-employment and national security. *Vocational Business Educator*, (1), 208-217.
- Ismail, S. & Mohammed, D. S. (2015). Employability Skills in TVET curriculum in Nigeria Federal University of Technology. *Procedia Social and Behavioural Science* 20 73-80.
- Mbah, C. O., Nnadi, K. J., Ohagwu, G. C. & Aduhuekwe, F. I. (2020). Repositioning skill acquisition in vocational education for global competitiveness in Anambra State. *International Journal of Innovative Education Research* 8(4):26-34.
- Mbah, C.O. & Imakwu, V.N. (2017). Developing entrepreneurial mindset among secondary school student for self-employment in Aguata Education Zone of Anambra State. *Journal of Vocational Education and Research* 2(1), 209-219.
- Nworgu, B.G. (2015). *Educational Research; Basic issues and methodology*. Nsukka; University Trust Publishers.
- Obayi, A.U. (2017). *Entrepreneurial Dynamics*. Owerri: Equity Ventures in Conjunction Mega Atlas Projects Ltd.
- Ohagwu, G. C. (2023). Competences needed by Business Educators in the application of accounting software packages for effective instructional delivery in universities in South-East States of Nigeria. Unpublished Ph.D. Thesis. Department of Business

UZOR, K. I., OLUKA, S. N., & MBAH, C. O. (2025). Acquisition of Entrepreneurial Competencies by Graduates of Technology Education for Sustainable Self-Employment in Enugu State. *GPH-International Journal of Educational Research*, 8(05), 12-25. <https://doi.org/10.5281/zenodo.15518726>

Education and Entrepreneurship. Enugu State University of Science and Technology, Enugu.

Onoh, B. C. E. C. (2015). Acquisition of management skills through entrepreneurship education; a factor of growth for economic development of self-employed craftsmen in Enugu Urban. *International Technology Research Journal* 1(1) 136-142.

Onyebuenyi, P. N., Mbah, C. O. & Odeluga, P. E. (2017). Enhancing practical skill acquisition among technical college students through information and communication technology for self-reliance in Abia State. *Journal of Vocational Education & Research* 2(1) 252-26.

Uzoagulu, A.E. (2013). *Practical Guide to Writing Research Report in Tertiary Institutions*. Enugu; John Jacobs Classic Publishers Ltd.