

Relating Career Orientation to Electrical and Electronics Technology Education Students' Interest in and Attitude towards Technical Skill Acquisition in Southwest Nigeria

Abidemi Olufemi Shodeinde^{1*}, Bamidele Michael Efuwape¹, Oluwabunmi Asake Efuwape²

¹ *Industrial Technical Education Department,
Tai Solarin University of Education, Ijagun, NIGERIA*

² *Guidance and Counselling Psychology Department,
Tai Solarin University of Education, Ijagun, NIGERIA*

*Corresponding Author: shodeindeao@tasued.edu.ng

DOI: <https://doi.org/10.30880/ojtp.2026.11.01.009>

Article Info

Received: 24 July 2025

Accepted: 15 March 2026

Available online: 30 March 2026

Keywords

Career orientation, technical education, students' interest, attitude, technical skill acquisition

Abstract

In order to address the problem of graduates of skill-based programs joining the ranks of the unemployed due to a lack of necessary skills for employment or entrepreneurship, this study explored the relationship among Electrical and Electronics Technology Education students' career orientation, interest, and attitude towards technical skill acquisition in universities in Southwest Nigeria. The study utilized a survey research design and collected data through a structured questionnaire. All 92 Electrical and Electronics Technology Education students in universities in Southwest Nigeria were purposively selected to participate in the study. Data collected were analyzed using Pearson Product-Moment Correlation, t-test, and linear regression. The results revealed a significant positive relationship between career orientation and students' interest and attitude towards technical skill acquisition. Also, there were no significant gender differences in students' career orientation. Furthermore, career orientation significantly influenced students' interest, and students' interest had a significant effect on their attitude towards skill acquisition. The findings suggest the importance of providing qualitative career orientation programs to enhance students' interest in and attitudes towards skill acquisition. The study concludes by recommending the consistent organization of career orientation programs, regular assessment of students' interests, and positive reinforcement of students' attitudes to improve skill acquisition in vocational programs.

1. Introduction

Education in recent times has, to some extent, lost its meaning. Many educational bodies are currently saddled with the responsibilities of planning and administering functional education in Nigeria. In Nigeria, the level of youth unemployment is on the increase (Sele & Zongo, 2025). One important issue requiring prompt attention is the increasing number of graduates from skill-based programmes joining the ranks of the unemployed due to a lack of skills that would enable them to either secure gainful employment or become competent and self-reliant in starting their own businesses, as well as becoming employers of labour.

Technical education is one of the specialized educational programmes that leads to the acquisition of practical and manipulative skills required to produce and retain skilled manpower (Jummai, Aishatu, Ibrahim & Conrad, 2013). It is focused on imparting knowledge, skills, and attitudes to students in various skill areas, including metalwork technology, woodwork technology, building technology, mechanical technology, and electrical/electronics technology (National Universities Commission [NUC], 2023). The aims and objectives of technical education can best be achieved when its recipients show genuine interest and display appropriate behavioural practices towards skill acquisition (Arthur, Oduro & Boadi, 2014).

Students' interest is one of the internal factors that influence their learning achievements. Interest is defined as a condition or situation that relates to an individual's desire or willingness to take up certain roles or meet certain needs (Lami & Mile, 2013). Alongside individuals' interest in achieving a goal, the exhibition of proper behaviour or a positive attitude toward achieving the goal is equally important. Therefore, in achieving the objectives of skill acquisition and preparing a competent workforce through technical education programmes, variables such as students' interest and attitude play vital roles. However, both interest and attitudes of students in any vocational or skill-based program may be influenced by professional or career orientations either positively or negatively.

Career orientation or guidance has been a major tool used in redeeming the image of programmes like technical education. Despite its importance to national development, the public perception of technical education in Nigeria appears to be low. It is so misunderstood that it has become difficult to administer the programme effectively in response to society's ever-changing needs (Jummai et al., 2013). Consequently, it may not always be the preferred course of study for some students currently enrolled in or graduated from the programme; rather, it may have been selected in the absence of other preferred options.

Although career orientation is usually employed to address an individual's specific abilities, provide appropriate support by helping students to recognize their physical, cognitive, and personal traits as well as their strengths in relation to their choice of career. However, recognizing or identifying an individual's interests and strengths is considered one of the more difficult and complicated tasks that teachers and organizational leaders face as they strive to guide students and employees to pursue appropriate careers (Nourah, 2015). Hence, the battle between interest and attitudes in technical education has been of paramount importance in relation to the outcomes of the programme over the years. In line with the above, the study reviews literature and investigates the relationship among technical education students' career orientation, interest in, and attitude towards skill acquisition in universities in Southwest Nigeria. The study focuses specifically on electrical and electronic technology education students enrolled in the technical education programme.

2. Literature Review

2.1 Skill Acquisition in Technical Education

Technical education is an integral part of general education; it serves as a means of preparing individuals for occupational fields and for effective participation in the world of work. It also plays a role in continuous personal growth and equipping individuals to be engaged citizens, serves as a means to encourage eco-friendly and long-term sustainable practices, and acts as an approach to reducing poverty. Technical education enables its recipients to become active contributors to the well-being and economic development of society. This suggests that technical education prioritizes the growth of both tangible assets and workforce capabilities (Adelakun, Oviawe & Barfa, 2015). Adelakun, Oviawe, and Barfa (2015) added that no nation will adequately develop its technological base if it neglects the development of its workforce. Technical education can be described as an organized and systematic form of instruction designed for teachers and students alike. It provides individuals with the necessary knowledge, practical skills, competencies, understanding, and attitudes required for effective performance in their chosen occupations, thereby promoting self-reliance and contributing to national development. (Odo et al., 2017)

Skill acquisition is the process that helps eliminate hunger and poverty through the creation of employment. Hence, the creation of avenues for jobs and wealth creation as well as inculcating independence and reliance (Isaac, 2011). Acquisition of skills has been considered as an active therapy for self-sufficiency. In essence, students should be equipped with requisite skills through effective training in addition to their regular academic programmes, as demanded by the industry. Nwanaka and Amaehule (2011) ascertained that skill acquisition is vital in the fight against hunger, poverty, and joblessness in society. According to Ekaette (2017), skill acquisition is the expression of knowledge via training geared towards appropriate knowledge, skills, competence, attitude and entrepreneurship spirit needed for meaningful development. Ekaette (2017) posited that providing individuals with opportunities to acquire relevant skills necessary for self-sustenance in the economy will enhance their effectiveness in any work environment. In furtherance of the discussion on skill acquisition, Ridzwan and Yasin (2015) emphasized that Skills acquisition involves the systematic accumulation of varied competencies that boost efficiency in performing tasks, which is achieved by merging theoretical understanding with practical application. For instance, in technical vocational education and training (TVET), a student learning

electronics technology might study electronics device theory in class before practicing disassembly and repair on actual electronics devices, thereby resulting in proficient troubleshooting and maintenance abilities.

2.2 Students' Interest and Attitudes towards Skill Acquisition

Interest is a crucial variable in determining the role of an individual in an activity or operation. Interest is considered a feeling that results in an individual's wholehearted engagement in an activity (Hulleman & Harackiewicz, 2010). Among students, interest is closely related to learning and has been observed to improve meaningful learning, participation in related activities, and the eventual acquisition of requisite knowledge, among many other skills and competencies. According to Arduini-Van Hoose (2020), Interest often influences students' motivation and their level of cognitive engagement in learning. Interest in learning is a psychological motivation that encourages students to study attentively, calmly, and with discipline, leading them to participate actively and experience enjoyment in the learning process (Larionov & Gabrys, 2024). Students tend to engage in deeper learning of a particular subject when they have an interest (Renninger & Bishop, 2017).

Basically, interest can be classified as established in the literature. According to Guo and An (2025), interest can be divided into two categories: situational interest and individual or personal interest. Situational interest, as described by Hidi and Renninger (2006), refers to an interest produced by various conditions in the immediate environment. However, personal interest is the type of interest that emanates as a result of a long-term preference for a particular role, event, or activity. Students characterized by personal interest usually make a massive effort to search for new and relevant information and also develop a more positive attitude towards their learning activities (Woolfolk, 2007). The benefits of having personal interests among students mainly include enhanced focus on specific activities or learning, helping them to learn and work on given tasks in both the short and long term, using appropriate learning strategies, and enjoying what they do. According to Hidi and Renninger (2006), the rate or level of a person's interest greatly influences learning, especially attentiveness, objectives, and levels of learning.

On the other hand, students' attitudes tend to be more complex and operationalized than interest, especially as they relate to learning and skill acquisition. According to Altmann (2008), attitude can be defined as a person's mindset, principles, convictions, or emotions that shape their readiness to act or behave in certain ways. Attitudes are bipolar in nature (i.e., positive or negative) and are elicited in response to a person, thing, or event. Although interest and attitude can be delineated conceptually, work related to interest and attitudes in science education frequently blurs the conceptual boundaries (Tariq & Mumtaz, 2016). Tariq and Mumtaz (2016) posited that there are varying degrees of students' behavior towards skill acquisition and technical practices that may be linked with students' interest, among other career-related variables. In the same vein, Tariq and Mumtaz (2016) linked students with favorable attitudes towards skill acquisition to appropriate knowledge acquisition in their chosen careers.

2.3 Career Orientation among Technical Education Students

Career orientation encompasses various services intended to assist individuals, of any age and at any point throughout their lives, to make educational, training, and occupational choices and to manage their careers. These basically include: first, career information, covering information on courses, occupations, and career paths, as well as the labour market information. Second, career guidance, delivered through individual sessions or small group discussions, focuses on addressing each person's unique career-related challenges and aspirations.

In the opinion of Punia and Kavatri (2012), career guidance was explained to include ample terms that have been used to explain a range of interventions, including career education and counselling, which help people to move from a general understanding of life and work to a specific understanding of the practical life, learning, and work options that are open to them. By implication, Punia and Kavatri (2012) agree that when personal interest in a career line is supported through career orientation, an individual's attitudinal disposition may be influenced positively towards the activities of that career. However, Antonio and Tuffley (2015) reported that personal interest in a professional career is strongly linked to the attitudinal practices of such individuals in actual career practice.

Moreover, career orientation, according to Hulleman and Harackiewicz (2010), relates to boosting the understanding of students about the holistic possibilities of a career path, which may help in decision-making, as well as improve levels of interest and attitudes towards the career. Invariably, career orientation could play a vital role in improving students' interest in any skill-based program (Hulleman & Harackiewicz, 2010). Furthermore, Larionov and Gabrys (2024) connect career orientation with student engagement, stating that it helps develop the interests and attitudes essential for learning. It does so by nurturing the psychological impulses for mindful, disciplined study, which results in active involvement and excitement. This effect is maximized through well-implemented career guidance programs.

2.4 Gender Differences and Interrelationship among Career-Related Variables

Gender differences have been a point of debate for many decades, with attention channeled primarily on physiological changes. According to Chantara, Koul, and Kaewkuekool (2010), career orientation differs from individual to individual on the basis of age, gender, work experience, and education, among others. Herrbach and Mignonac (2012) established that comparing the career orientation of male and female individuals reveals significant differences, and the same applies to other demographic characteristics like age and education. Furthermore, Herrbach and Mignonac (2012) found that when workers feel they face gender discrimination, it adversely affects their self-assessment of career accomplishments. In their study, male and female technical students do not differ in their exposure to and understanding of the career path with reference to career orientation. These are strong basis for including gender roles in the determination of students' interest and attitudes towards skill acquisition in the skill-based programme in relation to career orientation services, despite the inter-relationships established across different studies regarding career orientation, students' interests, and attitudes (Gerber, Wittekind, Grote & Staffebach, 2009; Lami & Mile, 2013; Nourah, 2015).

3. Statement of the Problem

Technical education is supposed to enable its recipients to become active people who will contribute positively to the well-being and economic development of their immediate society. The qualitative impacts of participating in this skills-based programme ought to include being highly skilled, innovative, competent, and self-reliant in providing quality technical services to society. However, the expectations of most of the technical graduates are yet to be met, as many of the graduates are considered half-baked by industrial employers; an assertion that is validated by their inability to successfully establish or sustain personal technical-oriented business outfits. The major problem tends to point towards the quality of skills acquired during the programme.

Skill acquisition in skill-based programmes such as technical education has been linked with various influential variables such as career orientation, students' interest as well as attitudinal expectations, among others. Literature ascertains that career orientation services, although is very important in aiding students' acceptance and effective pursuit of a course of study, are very scarce among students prior to course selections as well as during the academic programme. Moreover, students' interest, which is very vital in enhancing appropriate concentration and participation, seems unstable in some vocational programmes and may result in a lack of focus, poor skill acquisition, as well as poor performance in the programme. Meanwhile, observations on inappropriate attitudinal practices among students towards learning in vocational and skill-based programmes are alarming, and this may be linked to the current poor societal acceptance of these courses, especially compared to lucrative engineering courses that serve as a regular alternative to this career path. In view of the problems associated with the output of the technical education programme over the years, this study investigated the relationship among students' career orientation, interest in, and attitude towards technical skill acquisition in universities in southwest Nigeria.

4. Purpose of the Study

The main purpose of this study is to investigate the relationship among students' career orientation, interest in, and attitude towards technical skill acquisition in universities in southwest Nigeria. Specifically, the study determined the:

- i. Relationship among students' career orientation, interest, and attitude towards technical skill acquisition.
- ii. Gender differences in students' career orientation towards technical skill acquisition.
- iii. Influence of career orientation on students' interest in technical skill acquisition.
- iv. Influence of students' interest on their attitude towards technical skill acquisition.

5. Hypotheses

The following hypotheses were generated and tested in the study at a 0.05 level of significance:

- i. There is no significant relationship among students' career orientation, interest, and attitude towards technical skill acquisition.
- ii. There is no significant gender difference in students' career orientation towards technical skill acquisition.
- iii. There is no significant influence of career orientation on students' interest in technical skill acquisition.
- iv. There is no significant influence of students' interest on their attitude towards technical skill acquisition.

6. Methodology

The study adopted a survey research design. The population for this study comprised all 92 students studying Electrical/Electronics Technology Education under the Technical Education programme across the five (5) universities offering the programme in southwest Nigeria. Electrical/Electronics Technology Education students are actively involved in the day-to-day training and learning of courses in their field of study. They have been exposed to various career orientation programmes and thus have developed varying degrees of interest as well as attitudes towards skill acquisition in the academic programme. All the students were involved in the study; hence, there was no sampling.

A structured questionnaire was used for data collection in the study. The instrument was divided into two sections: Section A was designed to collect demographic information of respondents, while Section B comprised three sub-sections with statements addressing issues on each of the variables of study, namely: career orientation, interest, and attitudes among the students. The instrument was developed on a four-point scale with options including Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD), with corresponding grades of 4, 3, 2, and 1, respectively.

The instrument was validated by three experts in the field of Technical Education. A trial testing of the instrument was conducted to determine the internal consistency of the instrument by administering 20 copies of the validated questionnaire to students who were not part of the study and were outside the study area. A reliability coefficient of 0.79 was obtained using the Cronbach's alpha reliability technique. Data for the study were collected by the researchers through administering the instrument to the respondents. The collected data were analyzed using Pearson Product-Moment Correlation, t-test, and linear regression analysis.

7. Results

Hypothesis 1: There is no significant relationship among students' career orientation, interest, and attitude towards technical skill acquisition.

Table 1 *Pearson correlation results showing relationship among students' career orientation, interest, and attitude towards technical skill acquisition*

	1	2	3
1. Career Orientation	1		
2. Students' Interest	.67**	1	
3. Students' Attitudes	.48**	.74**	1

Note: **. Correlation is significant at the 0.05 level (2-tailed).

The results presented in Table 1 established the relationship among students' career orientation, interest, and attitude towards technical skill acquisition. The result established a positive and strong relationship between career orientation and students' interest ($r = .67$; $p < 0.05$, 95% CI [.54, .77]) in technical skill acquisition. The effect size indicates a large relationship. Also, the result reveals a positive but weak relationship between career orientation and students' attitude towards technical skill acquisition ($r = .48$; $p < 0.05$, 95% CI [.31, .62]), which represents a medium effect size. Moreover, the table establishes a strong and positive relationship between students' interest in and attitudes towards technical skill acquisition in the academic programme ($r = .74$; $p < 0.05$, 95% CI [.63, .82]), which indicates a large effect size. Furthermore, the table shows that the inter-relationships among the study variables are significant ($p < 0.05$). Hence, the null hypothesis was rejected. Therefore, there is a significant relationship among students' career orientation, interest, and attitude towards technical skill acquisition.

Hypothesis 2: There is no significant gender difference in students' career orientation towards technical skill acquisition.

Table 2 *t-test showing differences in the mean responses of male and female students' on career orientation towards technical skill acquisition in a university of education*

Gender	N	Mean	Std. Dev.	df	t	Sig	Remark
Male	83	27.81	3.56	90	1.096	.502	NS
Female	9	26.44	3.39				

Table 2 presents the differences in the mean responses of male and female students on career orientation towards technical skill acquisition. The table revealed a non-significant difference in the mean responses of male and female students on career orientation towards technical skill acquisition ($df = 90$, $t = 1.096$, $p > 0.05$). The effect size calculated using Cohen's $d = 0.39$, which represents a small to moderate practical effect, while the 95%

confidence interval for the mean difference ranged from -1.12 to 3.86. Since the confidence interval includes zero, the difference is not statistically meaningful. Hence, the null hypothesis is upheld. Therefore, there is no significant gender difference in students' career orientation towards technical skill acquisition.

Hypothesis 3: There is no significant influence of career orientation on students' interest in technical skill acquisition.

Table 3 Regression analysis on influence of career orientation on students' interest in technical skill acquisition

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.104	2.841		.036	.971
Career Orientation	.930	.102	.694	9.136	.000

Dependent Variable: Students' Interest

Table 3 presents the results of the influence of career orientation on students' interest in technical skill acquisition. The results show that career orientation has a strong and positive influence on students' interest in technical skill acquisition ($\beta = .694$). The result further indicates that the influence of career orientation on students' interest in technical skill acquisition is significant ($p < 0.05$). The 95% confidence interval for the regression coefficient ranged from .73 to 1.13, which indicates a reliable positive effect. The standardized beta value (.694) represents a large effect size, which implies that career orientation is a strong predictor of students' interest in technical skill acquisition. Hence, the null hypothesis was rejected. Therefore, there is a significant influence of career orientation on students' interest in technical skill acquisition.

Hypothesis 4: There is no significant influence of students' interest on their attitude towards technical skill acquisition.

Table 4 Regression analysis on influence of students' interest on their attitude towards technical skill acquisition

R = .737 ^a ; R Square = .543; Adjusted R Square = .538					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	542.960	1	542.960	106.767	.000 ^b
Residual	457.692	90	5.085		
Total	1000.652	91			

(a) Predictors: Students' Interest (b) Dependent Variable: Students' Attitudes

Table 4 presents the results of the influence of students' interest on their attitude towards technical skill acquisition. The results shows that students' interest plays a role in determining students' attitudes towards skill acquisition ($R = .737$). The results in the table also shows that the coefficient of determination (Adjusted $R^2 = .538$) indicates that students' interest in the skill based programme accounted for 53.8% of the total variance in the students' attitudes towards the programme. It was further established that the effect of students' interest on students' attitudes is significant ($F_{(1, 90)} = 106.767$; $P < 0.05$), indicating a large effect size ($R^2 = .54$). Therefore, the null hypothesis which states that there is no significant influence of students' interest on their attitude towards technical skill acquisition was not upheld.

8. Discussion of Findings

The study focused on relationship among electrical/electronics technology education students' career orientation, interest, and attitude towards technical skill acquisition in universities in southwest Nigeria. The findings established significant relationships among the three variables and demonstrated that career orientation plays an important role in influencing students' interest in and attitudes towards technical skill acquisition. The results revealed a strong and positive relationship between career orientation and students' interest in technical skill acquisition. This finding implies that students who possess clearer career goals are more likely to develop stronger interest in acquiring technical skills. It is common in Nigeria universities for students to choose academic programmes based on available spaces rather than deliberate career planning. In this case, career orientation can serve as a means of helping students to understand the relevance of their training to future employment opportunities. When students are aware of a clear association between their academic programme and career prospects, they are more likely to show greater engagement in skill-based learning activities. This position is supported by Nourah (2015), who emphasized that career orientation helps students to be aware of their abilities and align them with career pathways. Also, Lami and Mile (2013) observed that career guidance supports

individuals in making independent career decisions, which can enhance their motivation and commitment to career-related learning activities.

The study also revealed a positive but weak relationship between career orientation and students' attitudes towards technical skill acquisition. This implies that career orientation is important but not an exclusive factor that influences students' behavioural disposition towards skill acquisition. Societal perceptions that university degrees in some fields such as medicine are more prestigious than others, can also influence students' attitudes towards technical education. Because of these, even students who receive career orientation may still experience negative societal pressure that affects their attitudes toward technical skill acquisition. However, the observed positive relationship indicates that exposure to career information and guidance may help counter these negative perceptions. Career orientation will show the tangible economic value and career pathways that are linked to technical skills. This finding is in line with the position of Gerber, Wittekind, Grote, and Staffelbach (2009) that career orientation influence individuals' perceptions of career opportunities and professional identity, which behavioural commitment to occupational paths.

Findings also show a strong relationship between students' interest and their attitudes towards technical skill acquisition. This means that students who develop genuine interest in technical skills are more likely to demonstrate positive attitudes such as persistence in practical work, willingness to engage in practical classes, and openness to learn advance technical procedures. This implies that interest may serve as a psychological factor that influence students' behavioural disposition towards technical learning activities. This finding supported the perspective of Hulleman and Harackiewicz (2010), who noted that interest enhances students' engagement and cognitive investment in learning tasks. Also, Renninger and Bishop (2017) explained that interest encourages deeper learning and sustained participation in skill development activities.

The study further revealed that there was no significant gender difference in students' career orientation towards technical skill acquisition. This finding implies that male and female technical students did not differ in their exposure to or understanding of their career path with reference to career orientation. This means that male and female students have similar perceptions of career prospects and opportunities within electrical and electronics technology education. Contrary to the findings of this study, Herrbach and Mignonac (2012) reported gender differences in career orientation. However, the finding of this study shows that such differences may be diminishing within technical education programmes. It is also possible that the institutional environment in universities of education provides relatively equal exposure to career information and opportunities for both male and female students.

The regression analysis revealed that career orientation significantly predicts students' interest in technical skill acquisition. This points to the important role of career orientation as a motivational factor that shapes students' engagement with learning activities. This finding is in line with Hulleman and Harackiewicz (2010), who noted students motivation and interest in learning will increase if they are provided with meaningful information about the relevance of their studies to real-world opportunities. The strong predictive relationship observed in this study indicates that improving career orientation programmes could enhance students' interest in acquiring technical skills.

The study also found that students' interest influences their attitudes towards technical skill acquisition. This points to the role of interest in shaping students behavioural responses to learning. The findings support the position of Tariq and Mumtaz (2016), who reported that favourable attitudes towards skill acquisition are often associated with strong interest and adequate understanding of the chosen career path. When students develop strong interest in technical skills, they are more likely to approach practical training with enthusiasm, persistence, and a willingness to overcome learning challenges. Conversely, students who lack interest in their programme may demonstrate poor engagement with practical activities, which can lead to inadequate skill acquisition. The findings of this study show the interconnected roles of career orientation, interest, and attitude in influencing students' engagement with technical skill acquisition.

9. Conclusion

The inter-relationship among students' career orientation, interest in, and attitude towards technical skill acquisition indicates possible role effects of these variables on each other's outcome among the students. The similarity in the level of career orientation among male and female students shows uniformity in the current level of career exposure among students on the same programme. However, students' eventual attitude towards the skill acquisition programme is hinged on their level of interest, which may be facilitated by their career orientation. Therefore, it can be concluded that there is a possibility of strengthening both students' interest in and attitudes towards skill acquisition in the vocational-based programme through qualitative career orientation or counseling.

10. Recommendations

Based on the findings of the study, the following are recommended:

1. Universities should create targeted admission programmes to encourage more female students to enrol in technical education programmes.
2. Secondary school outreach activities, such as “Girls in Electronics” workshops, should be organised to stimulate early interest among female students.
3. A qualitative career orientation programme should be consistently organized to establish, improve, and sharpen students’ interest in technical skill acquisition.
4. Through personal interaction, performance checks, or surveys, departments should regularly monitor students’ interest and attitudes toward technical education. The results for males and females should be separately analysed.

Limitations of the Study

The participants for the study comprise of 83 males and 9 females. This reflects a gender imbalance which is not a sampling error but a reflection of the actual enrolment patterns in the programme. This imbalance greatly reduces the generalizability of the results of the gender-difference test (Hypothesis 2). The results primarily describe a male-dominated technical education sample. Therefore, findings may not be fully applicable to programmes or regions with higher female enrolment or to more gender-balanced participants in other parts of Nigeria.

Acknowledgement

We extend our sincere gratitude to the dedicated research assistants whose hard work and attention to detail were invaluable to this study. We also appreciate the willingness, time and contributions of all the participants.

Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of the paper.

Author Contribution

The authors confirm contribution to the paper as follows: **study conception and design:** Abidemi Olufemi Shodeinde, Bamidele Michael Efuwape, Oluwabunmi Asake Efuwape; **data collection:** Abidemi Olufemi Shodeinde, Bamidele Michael Efuwape; **analysis and interpretation of results:** Abidemi Olufemi Shodeinde; **draft manuscript preparation:** Abidemi Olufemi Shodeinde, Bamidele Michael Efuwape, Oluwabunmi Asake Efuwape. All authors reviewed the results and approved the final version of the manuscript.

References

- Adelakun, O. A., Oviawe, J. I., & Barfa, G. I. (2015). Strategies for enhancing female participation in technical, vocational education and training (TVET) in Nigeria. *Advances in Social Sciences Research Journal*, 2(4), 110–120.
- Altmann, T. K. (2008). Attitude: A concept analysis. *Nursing Forum*, 43(3), 144–150.
- Antonio, A., & Tuffley, D. (2015). First-year university student engagement using digital curation and career goal setting. *Research in Learning Technology*, 23, 283–293.
- Arduini-Van Hoose, N. (2020). *Educational psychology*. Retrieved from <https://edpsych.pressbooks.sunycreate.cloud>
- Arthur, Y. D., Oduro, F. T., & Boadi, R. K. (2014). Statistical analysis of Ghanaian students’ attitude and interest towards learning mathematics. *International Journal of Education and Research*, 2(6), 661–670.
- Chantara, S., Koul, R., & Kaewkuekool, S. (2010). Career aspirations, goal orientation, and classroom anxiety. In V. Mladenov, K. Psarris, N. Mastorakis, A. Caballero, & G. Vachtsevanos (Eds.), *Communication and management in technological innovation and academic globalization* (pp. 133–146). WSEAS Press.
- Ekaette, E. I. (2017). Vocational education and acquisition of skills for self-reliance. *Journal of Educational Realities (JERA)*, 4(1), 1-8.
- Gerber, M., Wittekind, A., Grote, G., & Staffebach, B. (2009). Exploring types of career orientation: A latent class analysis approach. *Journal of Vocational Behavior*, 75(3), 303–318.
- Guo, J., & An, F. (2025). Exploring the categories of students’ interest and their relationships with deep learning in technology-supported environments. *Scientific Reports*, 15, 10370.

- Herrbach, O., & Mignonac, K. (2012). Perceived gender discrimination and women's subjective career success: The moderating role of career anchors. *Industrial Relations*, 67(1), 25–50.
- Hidi, S., & Renninger, K. A. (2006). The four-phase model of interest development. *Educational Psychologist*, 41(2), 111–127.
- Hulleman, C. S., & Harackiewicz, J. M. (2010). The role of achievement goals and task values in promoting the development of interest. *Social and Personality Psychology Compass*, 4(1), 42–52.
- Isaac, N. (2011). *Skills acquisition: Tonic for economic empowerment*. Leadership Newspaper. Retrieved from http://leadership.ng/nga/articles/163/2011/05/22skills_acquisition-tonic-economicempowerment.html
- Jummai, M., Aishatu, M. C., Ibrahim, M. J., & Conrad, M. M. (2013). The role of vocational and technical education in skill acquisition in Nigeria. *Journal of Education and Practice*, 4(10), 46–49.
- Lami, R., & Mile, K. (2013). Neoliberalism effects in Albanian higher education. *Journal of International Academic Research for Multidisciplinary*, 1(1), 487–494.
- Larionov, P., & Gabrys, A. (2024). Psychological characteristics of students with passion for studying. *Behavioral Sciences*, 14(4), 453.
- National Universities Commission. (2023). *Core curriculum and minimum academic standards for the Nigerian university system*. NUC.
- Nourah, A. (2015). Professional/career orientation, awareness, and their relationship to locus of control. *Journal of College Teaching & Learning*, 12(1), 11–38.
- Nwanaka, C. R., & Amaehule, S. (2011). Skills acquisition: Imperative for business studies educators among secondary schools in Rivers State. *Mediterranean Journal of Social Sciences*, 2(7), 37–43.
- Odo, J. U., Okafor, W. C., Odo, A. L., & Ugwoke, C. N. (2017). Technical education: The key to sustainable technological development. *Universal Journal of Educational Research*, 5(11), 1878–1884.
- Punia, B. K., & Kavatri, K. (2012). Revisiting career and career orientation studies: Previous thrust and future implications. *Vedaang*, 3(2), 41–50.
- Renninger, K. A., & Bishop, A. (2017). Interest and interest-driven learning. *The SAGE encyclopedia of out-of-school learning*, 1, 376–379.
- Ridzwan, C. R., & Yasin, R. M. (2015). Cultivating learning: A grounded theory of skills acquisition for vocation in modern apprenticeships. *Procedia – Social and Behavioral Sciences*, 174, 275–282.
- Sele, J. P., & Zongo, P. K. (2025). Youth unemployment and its impact on Nigeria's socio-economic landscape. *Greener Journal of Social Sciences*, 15(1), 258–270.
- Tariq, H., & Mumtaz, A. (2016). Students' attitude towards technology: A study from Pakistan. *Bulletin of Education and Research*, 38(1), 17–30.
- Woolfolk, A. (2007). *Educational psychology* (10th ed.). Pearson Education.