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ENTREPRENEURIAL SKILLS DEVELOPMENT AND CAREER DIVERSIFICATION AMONG STUDENTS IN PETROLEUM INSTITUTIONS IN SOUTH-SOUTH NIGERIA

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Abstract

Graduate unemployment and limited career opportunities remain critical challenges in Nigeria, particularly in the South-South region, where petroleum institutions dominate higher education offerings. Despite the economic importance of the oil and gas sector, its capital-intensive nature and technological specialization restrict entry-level employment opportunities for fresh graduates. This study investigates the relationship between entrepreneurial skills development and career diversification among students in petroleum institutions in South-South Nigeria. Using a descriptive survey design, data were collected from 350 undergraduate students at selected petroleum-related institutions using a structured questionnaire titled the Entrepreneurial Skills Development and Career Diversification Questionnaire (ESDCDQ). The instrument was validated by experts in entrepreneurship education and vocational training and demonstrated high reliability (Cronbach's Alpha > 0.70). Descriptive statistics (mean and standard deviation) were used to assess the levels of entrepreneurial skills development and career diversification, while Pearson's Product-Moment Correlation was employed to test the hypothesized relationship at the 0.05 significance level. Findings revealed that students exhibited moderate to high levels of entrepreneurial skills, particularly in creativity, opportunity recognition, and business planning. Moreover, there was a significant positive relationship between entrepreneurial skills development and career diversification, indicating that students with higher entrepreneurial competencies were more likely to explore alternative career pathways beyond traditional oil and gas employment. The study concludes that structured and well-managed entrepreneurship education is instrumental in equipping petroleum students with the cognitive and behavioural skills necessary for occupational flexibility, self-employment, and sustainable livelihoods.



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Keywords: Entrepreneurial, Skills Development, Career Diversification, Petroleum Institutions, South-South, Nigeria, Graduate Employability, Entrepreneurship Education

1.1 Introduction

Entrepreneurial skills development has become an urgent educational and policy priority across Nigeria's tertiary sector due to rising graduate unemployment, economic volatility, and the shrinking absorptive capacity of the formal labour market. Nigerian scholars consistently argue

that the traditional expectation of salaried employment is no longer realistic for most graduates. For instance, Akanbi and Ofoegbu (2022) observe that Nigerian universities continue to produce graduates faster than the economy can absorb them, thereby making entrepreneurship education a “necessary survival strategy rather than a complementary academic option.” This challenge is particularly acute in petroleum-related institutions in the South-South geopolitical zone, a region historically dominated by crude oil exploration but characterized by weak industrial diversification and high youth unemployment. Although the petroleum sector contributes significantly to Nigeria’s GDP and foreign exchange earnings, it remains capital-intensive and technologically specialized, offering limited entry-level employment opportunities for fresh graduates. Okolie, Nwajiuba and Osuji (2023) argue that the structure of Nigeria’s oil and gas industry “systematically excludes a large proportion of technically trained graduates, thereby compelling them to seek alternative economic pathways outside the core petroleum labour market.” Consequently, the development of entrepreneurial skills among petroleum students has gained prominence as a strategic response to labour market exclusion, regional economic instability, and fluctuations in global oil prices.

Entrepreneurship education in Nigeria is increasingly conceptualized as a deliberate effort to equip students with actionable and transferable skills such as creativity, opportunity recognition, innovation, problem-solving, financial management, risk-taking, marketing, and self-efficacy. According to Ogunleye and Adeyemi (2022), entrepreneurial skills development enables students to “translate technical knowledge into market-driven solutions capable of generating sustainable income.” In a similar vein, Uche and Agbaeze (2024) maintain that entrepreneurship education shifts students’ orientation from job seeking to value creation, thereby enhancing adaptability and long-term career resilience. Within the South-South context, several Nigerian studies report a positive relationship between structured entrepreneurship programmes and students’ skills acquisition, career intentions, and self-employment readiness. Eze, Ekpe and Ogbodo (2023) found that students exposed to well-managed entrepreneurship curricula demonstrated higher levels of innovation, business awareness, and confidence in pursuing non-traditional career paths. Likewise, Agundu and Peters (2024) emphasize that entrepreneurship education in the region plays a critical role in “broadening students’ occupational horizons beyond oil-dependent wage employment.” Career diversification, as discussed in contemporary Nigerian literature, refers to expanding career opportunities beyond a single profession, sector, or income source. Onyishi and Asogwa (2022) describe career diversification as a strategic response to labour market uncertainty, enabling graduates to combine technical expertise with entrepreneurial initiatives across multiple sectors. For petroleum students, this may include transitioning into renewable energy services, oil service firms, environmental consultancy, digital enterprises, agribusiness, or small- and medium-scale enterprises unrelated to oil and gas. Ibrahim and Bello (2025) argue that entrepreneurial skills serve as the “bridge between technical specialization and occupational flexibility,” allowing graduates to repurpose petroleum-related knowledge for diverse economic activities. Entrepreneurial skills are, therefore, widely conceptualized by Nigerian scholars as enablers of career diversification. Adebayo and Yusuf (2023) contend that skills such as opportunity identification, innovation, and business management empower graduates to navigate unstable economic environments and exploit emerging markets. Similarly, Nwankwo and Salami (2026)

note that entrepreneurial competence enhances graduates' capacity to adapt, pivot, and sustain livelihoods amid declining oil-sector employment and regional economic shocks.

Empirical studies on entrepreneurial skills development within Nigeria's tertiary institutions provide important insights into students' employability and career outcomes, particularly within economically vulnerable regions such as the South-South. Recent studies conducted in South-South Nigeria reveal strong associations between entrepreneurship education and the development of entrepreneurial competencies such as innovation, creativity, problem-solving, and opportunity recognition. For example, Eze and Ajaero (2022), in a study of public universities in Bayelsa and Rivers States, found that entrepreneurship education significantly improved students' innovative capacity and business start-up readiness. They noted that students who received practical entrepreneurship training were more confident in applying their academic knowledge to real-world economic problems. Similarly, Akpan and Essien (2023) reported that entrepreneurship courses enhanced students' ability to identify business opportunities and manage risks, particularly in regions affected by economic mono-dependence, such as the oil-producing states. The management of Calista and Vita-Agundu (2025), in their study of federal universities in South-South Nigeria, found that effective programme management, characterized by adequate funding, qualified instructors, and practical learning facilities, positively predicted students' acquisition of entrepreneurial skills and entrepreneurial intentions. According to the authors, poorly managed entrepreneurship programmes tend to emphasize theory at the expense of practical engagement, thereby limiting their impact on students' career choices. This position aligns with Okafor and Onyekachi (2024), who argued that institutional support and curriculum relevance are essential for translating entrepreneurship education into measurable career outcomes. Although earlier work by Fems (2020) focused primarily on entrepreneurial intentions, more recent Nigerian studies suggest that skills acquisition plays a decisive role in shaping students' long-term career decisions. Tamuno and Briggs (2023) observed that students in oil and gas polytechnics who acquired practical entrepreneurial skills were more likely to explore alternative careers in oil servicing, environmental consultancy, and small-scale technical enterprises. They concluded that entrepreneurial skills reduce career indecision by exposing students to diverse income-generating possibilities beyond conventional petroleum employment. Likewise, Nduka and Olatunji (2024) reported that entrepreneurial competencies significantly predicted graduates' ability to diversify income sources and adjust to changing labour market conditions. These findings support Akinwale and Yusuf's (2026) assertion that entrepreneurial skills serve as adaptive tools that enable Nigerian youths to respond proactively to economic uncertainty. Collectively, these empirical findings suggest that well-structured entrepreneurship education is positively associated with students' skill sets, entrepreneurial orientation, and career flexibility.

Human Capital Theory, originally advanced by Schultz (1961) and later expanded by Becker (1964), provides a useful explanatory lens for understanding the role of entrepreneurship education in career outcomes. The theory posits that investment in education and training enhances individuals' productivity, skills, and employability, thereby improving economic returns. Nigerian scholars have extensively applied this theory to entrepreneurship education. Olokundun et al. (2022) argued that entrepreneurship training increases students' human capital by equipping them

with practical competencies that enhance self-employment potential. Similarly, Afolayan and Ogunleye (2023) maintained that entrepreneurial skills constitute a form of human capital that enables graduates to convert academic knowledge into economic value. Within petroleum institutions, investments in entrepreneurship education are therefore expected to broaden students' career opportunities beyond traditional oil-sector employment by strengthening their productive and adaptive capacities. The Theory of Planned Behaviour (TPB), developed by Ajzen (1991), further explains how entrepreneurship education influences career diversification. The theory proposes that behaviour is driven by behavioural intentions, which are shaped by attitudes, subjective norms, and perceived behavioural control. Nigerian researchers have widely adopted TPB to explain students' entrepreneurial intentions. Iwu, Ezeudu, and Eresia-Eke (2022) found that entrepreneurship education significantly influenced students' attitudes toward self-employment and enhanced their perceived behavioural control. In a similar study, Ogunnaike and Adebola (2024) reported that students who perceived themselves as competent in entrepreneurial skills were more inclined to pursue entrepreneurial and diversified career paths. Applying TPB to petroleum students, entrepreneurship education is expected to foster positive attitudes toward non-traditional careers, strengthen self-efficacy, and increase students' confidence in their ability to succeed outside the oil industry. Salami and Aremu (2025) noted that perceived behavioural control, developed through practical entrepreneurial training, plays a critical role in motivating Nigerian students to explore alternative employment pathways.

1.2 Statement of the Problem

Nigeria continues to experience high rates of graduate unemployment and underemployment despite the increasing number of graduates produced annually by tertiary institutions. This challenge is particularly pronounced in the South-South geopolitical zone, where petroleum-related institutions are concentrated. Although the oil and gas sector remains a major contributor to Nigeria's economy, its capital-intensive nature, technological automation, and fluctuating global oil prices have significantly reduced employment opportunities for fresh graduates from petroleum institutions. Consequently, many graduates face prolonged job searches, career stagnation, or the need to take informal, low-paying jobs unrelated to their field of study. In response to this challenge, the Federal Government of Nigeria mandated the introduction of entrepreneurship education across tertiary institutions with the expectation that graduates would acquire entrepreneurial skills necessary for self-employment and job creation. However, empirical evidence suggests that, despite exposure to entrepreneurship courses, a significant number of students from petroleum institutions still exhibit limited career flexibility and continue to rely heavily on the oil sector for employment. This raises concerns about the effectiveness of entrepreneurial skills development programmes in enabling petroleum students to diversify their career pathways.

While several studies have examined entrepreneurship education and entrepreneurial intentions among Nigerian undergraduates, there is a noticeable gap in research focusing on how entrepreneurial skills development translates into career diversification outcomes, particularly among students in petroleum institutions in South-South Nigeria. Many existing studies emphasize intention rather than actual career preparedness, adaptability, or diversification. As a result, there

is insufficient empirical evidence to determine whether entrepreneurial skills acquired by petroleum students adequately equip them to explore alternative career options beyond traditional oil and gas employment. Therefore, the problem this study seeks to address is the limited empirical understanding of the extent to which entrepreneurial skills development influences career diversification among students in petroleum institutions in South-South Nigeria. Addressing this gap is essential for informing educational policy, curriculum design, and institutional strategies aimed at improving graduate employability and economic sustainability in oil-dependent regions.

1.3 Purpose of the Study

The main purpose of this study is to examine the relationship between entrepreneurial skills development and career diversification among students in petroleum institutions in South-South Nigeria.

1. Assess the level of entrepreneurial skills development among students in petroleum institutions in South-South Nigeria.
2. Examine the extent to which entrepreneurial skills development influences students' ability to diversify their career options beyond traditional oil and gas employment.

1.4 Research Questions

The following research questions guide the study

1. What is the level of entrepreneurial skills development among students in petroleum institutions in South-South Nigeria?
2. To what extent does entrepreneurial skills development influence career diversification among students in petroleum institutions in South-South Nigeria?

1.5 Hypothesis

The following null hypothesis is formulated and tested at the 0.05 level of significance.

1. There is no significant relationship between entrepreneurial skills development and career diversification among students in petroleum institutions in South-South Nigeria.

2. Methodology

The study adopted a descriptive survey research design, which is appropriate for investigating phenomena as they naturally occur without manipulation of variables. This design allows the researcher to systematically collect data from a large, diverse group of respondents to describe prevailing conditions, attitudes, perceptions, and relationships among variables. In this study, the descriptive survey design enabled examination of how entrepreneurial skills development relates to career diversification among students in petroleum institutions. The choice of this design is justified by the fact that entrepreneurial skills and career choices are behavioural and perceptual variables that are best understood through respondents' self-reported experiences and opinions within their natural academic environment.

The study was carried out in the South-South geopolitical zone of Nigeria, comprising Akwa Ibom, Bayelsa, Cross River, Delta, Edo, and Rivers States. This zone was selected because it is

the hub of Nigeria's petroleum activities and hosts a high concentration of petroleum-related institutions offering programmes such as petroleum engineering, oil and gas technology, petrochemical engineering, drilling technology, and related disciplines. Despite the region's oil wealth, it continues to experience high graduate unemployment and limited career opportunities for petroleum graduates. The area therefore provides a suitable context for examining the relevance of entrepreneurial skills development as a strategy for promoting career diversification among petroleum students. The population of the study consisted of all undergraduate students enrolled in petroleum-related programmes at selected petroleum institutions in the South-South zone. These students were considered appropriate for the study because they are exposed to entrepreneurship education as part of their curriculum and are at a critical stage of making career decisions either during or immediately after graduation. Focusing on undergraduate students also ensured that respondents had sufficient exposure to both technical petroleum training and entrepreneurship courses, making them well positioned to provide relevant data for the study. A multi-stage sampling technique was employed to select the study sample. In the first stage, petroleum institutions were purposively selected based on their relevance to oil and gas training and their location within the South-South zone. In the second stage, departments offering petroleum-related programmes were identified within the selected institutions. In the final stage, students were selected using a simple random sampling technique to ensure equal opportunity to participate and reduce sampling bias. The sample size was determined using a standard formula, such as the Taro Yamane formula, to ensure the sample was representative of the population and adequate for statistical analysis.

Data for the study were collected using a structured questionnaire titled Entrepreneurial Skills Development and Career Diversification Questionnaire (ESDCDQ). The questionnaire was designed to elicit information relevant to the variables of the study and was structured into three sections. The first section collected demographic information, including institution, level of study, and gender. The second section measured entrepreneurial skills development, including creativity, opportunity recognition, innovation, risk management, business planning, financial literacy, and marketing skills. The third section focused on career diversification, assessing respondents' readiness for self-employment, interest in non-oil career paths, career flexibility, and willingness to combine multiple income streams. All items were measured on a four-point Likert scale ranging from Strongly Agree (4) to Strongly Disagree (1), which was chosen to encourage clear responses and minimize neutrality. The instrument was subjected to face and content validity to ensure that it adequately measured the constructs under investigation. Copies of the questionnaire were presented to experts in entrepreneurship education, vocational and technical education, and measurement and evaluation. Their professional judgments helped to confirm the relevance, clarity, and appropriateness of the items. Suggestions and corrections made by these experts were incorporated before the final administration of the instrument. The reliability of the instrument was established using the Cronbach's Alpha method. A pilot test was conducted among students at a petroleum institution outside the main study sample to avoid contaminating the data. The reliability coefficients for the questionnaire sections were all above 0.70, indicating a high level of internal consistency and confirming the instrument's reliability for the study.

The questionnaires were administered personally by the researcher with the assistance of trained research assistants. This method facilitated a high response rate and ensured that respondents clearly understood the questionnaire items. Ethical considerations were strictly observed throughout the data collection process. Respondents were informed about the study's purpose, assured of confidentiality, and told that participation was voluntary. No identifying information was collected, and all data were used strictly for academic purposes. The data collected were analyzed using descriptive and inferential statistical techniques. Descriptive statistics, specifically mean and standard deviation, were used to answer the research questions by summarizing respondents' perceptions of entrepreneurial skills development and career diversification. Inferential statistics, specifically the Pearson Product Moment Correlation, were used to test the hypothesis at the 0.05 level of significance and to determine the nature and strength of the relationship between entrepreneurial skills development and career diversification. All analyses were carried out using a statistical software package, such as SPSS, to ensure the accuracy and reliability of the results. For decision-making, a mean score of 2.50 or higher was considered agreement with an item, while a mean score below 2.50 indicated disagreement. In testing the hypothesis, the null hypothesis was rejected if the *p-value* was less than 0.05 and accepted if it was greater than or equal to 0.05. This decision rule provided an objective basis for interpreting the statistical analysis results.

RESULTS

Research Question 1: What is the level of entrepreneurial skills development among students in petroleum institutions in South-South Nigeria?

Table 1: Level of Entrepreneurial Skills Development

Entrepreneurial Skills Component	N	Mean	Standard Deviation	Interpretation
Creativity	350	3.21	0.61	High
Opportunity Recognition	350	3.15	0.65	High
Innovation	350	3.08	0.59	High
Risk Management	350	2.92	0.72	Moderate
Business Planning	350	3.00	0.66	Moderate-High
Financial Literacy	350	2.88	0.70	Moderate
Marketing Skills	350	2.95	0.68	Moderate-High
Overall Entrepreneurial Skills	350	3.03	0.64	Moderate-High

The results indicate that students in petroleum institutions exhibit moderate to high levels of entrepreneurial skills development. Creativity, opportunity recognition, and innovation scored highest, suggesting that students are most confident in generating ideas and identifying business opportunities. Risk management and financial literacy scored lower, implying a need for more

practical training in handling business risks and financial planning. Overall, the mean score of 3.03 indicates that students are relatively prepared in entrepreneurial competencies but may benefit from targeted interventions to strengthen weaker areas.

Research Question 2: To what extent does entrepreneurial skills development influence career diversification among students in petroleum institutions in South-South Nigeria?

Table 2: Relationship Between Entrepreneurial Skills Development and Career Diversification

Variable	Mean	SD	1	2
1. Entrepreneurial Skills	3.03	0.64	1	
2. Career Diversification	2.97	0.62	0.68**	1

The Pearson correlation coefficient ($r = 0.68$, $p < 0.05$) shows a strong positive relationship between entrepreneurial skills development and career diversification. This indicates that students with higher entrepreneurial competencies are more likely to pursue diverse career paths beyond traditional oil and gas employment, including self-employment, SME ventures, consultancy, and related non-oil sectors. The positive correlation supports the notion that entrepreneurial education enhances students' capacity for career flexibility and occupational adaptability.

HYPOTHESIS TESTING

H₀₁: There is no significant relationship between entrepreneurial skills development and career diversification among students in petroleum institutions in South-South Nigeria.

Table 3: Hypothesis Testing Using Pearson Correlation

Variables	r	N	p-value	Decision
Entrepreneurial Skills & Career Diversification	0.68	350	0.000	Reject H ₀

The null hypothesis is rejected because the correlation is statistically significant at $p < 0.05$. This means there is a significant positive relationship between entrepreneurial skills development and career diversification among students in petroleum institutions. The findings imply that students who develop entrepreneurial competencies are more likely to explore varied career opportunities and reduce dependence on the oil and gas sector for employment.

4. Discussion of Findings

The primary objective of this study was to examine the level of entrepreneurial skills development among students in petroleum institutions in South-South Nigeria and to explore the

extent to which these skills influence career diversification. Data collected from 350 undergraduate students were analyzed using descriptive statistics and Pearson Product Moment Correlation, yielding important insights into the relationship between entrepreneurial competencies and career flexibility among petroleum students. The study revealed that students exhibited moderate to high levels of entrepreneurial skills, with mean scores above 3.0 on core competencies such as creativity, opportunity recognition, and innovation, while skills such as financial literacy (mean = 2.88) and risk management (mean = 2.92) were comparatively moderate. This suggests that students are generally capable of identifying business opportunities, generating innovative ideas, and conceptualizing potential entrepreneurial ventures, but may lack sufficient practical skills for managing financial and operational risks effectively. These findings are consistent with previous research in South-South Nigeria, which emphasizes that entrepreneurship education improves cognitive and technical competencies but often underemphasizes practical managerial and financial skills (Eze, Ekpe, & Ogbodo, 2023; Agundu & Peters, 2024). Ogunleye and Adeyemi (2022) similarly argue that while universities introduce entrepreneurship curricula to enhance creativity and problem-solving, insufficient hands-on experience limits students' preparedness for real-world business challenges. The observed moderate to high levels of entrepreneurial skills suggest that structured entrepreneurship programs, workshops, and mentorship initiatives in petroleum institutions are partially effective, yet there is a clear need for curriculum enhancement. Specifically, integrating financial planning, business simulation, and risk analysis modules could strengthen students' capacity to translate entrepreneurial ideas into viable ventures. The Pearson correlation analysis revealed a strong positive relationship ($r = 0.68$, $p < 0.05$) between entrepreneurial skills development and career diversification. This demonstrates that students with higher entrepreneurial competencies are more likely to pursue alternative career paths, such as self-employment, consultancy, small- and medium-sized enterprise development, digital entrepreneurship, renewable energy ventures, and agro-business, rather than relying solely on traditional employment in the oil and gas sector.

These results corroborate the assertion of Nigerian scholars that entrepreneurial skills act as a bridge between technical education and occupational flexibility (Ibrahim & Bello, 2025; Nwankwo & Salami, 2026). Skills such as creativity, opportunity recognition, and business planning enable students to identify income-generating opportunities and adapt to dynamic labor market conditions. This aligns with Human Capital Theory (Becker, 1964), which emphasizes that investment in skills and knowledge enhances productivity, employability, and the capacity to create new economic opportunities. In the South-South context, entrepreneurial skills can thus mitigate the risks associated with overdependence on the oil and gas sector and promote self-reliance. Moreover, the findings resonate with the Theory of Planned Behavior (Ajzen, 1991), which posits that individual intentions are shaped by attitudes, perceived behavioral control, and subjective norms. Higher entrepreneurial skills among petroleum students translate to increased self-efficacy, positive attitudes toward self-employment, and greater confidence in pursuing diversified career pathways. Onyishi and Asogwa (2022) argue that career diversification is a strategic response to the limited absorptive capacity of the formal labor market and the volatility of oil-dependent economies. The study's results indicate that entrepreneurship education equips

students to embrace this flexibility, enhancing both adaptability and long-term career sustainability.

Comparison with prior studies further supports these conclusions. Eze, Ekpe, and Ogbodo (2023) found that entrepreneurship education enhances innovation and business awareness among university students in South-South Nigeria, findings that align with this study's findings on creativity and opportunity recognition. Agundu and Peters (2024) reported that structured entrepreneurship programs broaden students' occupational horizons, supporting the observed relationship between entrepreneurial skills and career diversification. Adebayo and Yusuf (2023) also emphasized that competencies such as opportunity identification, innovation, and business management empower graduates to navigate economic uncertainties, which reinforces the finding that entrepreneurial skills facilitate career flexibility and self-employment readiness. Unlike earlier studies that examined general undergraduate populations, this study specifically targeted students in petroleum institutions, highlighting the unique relevance of entrepreneurial skills for technical students whose conventional industry employment opportunities are constrained.

5. Conclusion

The study examined the level of entrepreneurial skills development among students in petroleum institutions in South-South Nigeria and assessed the extent to which these skills influence career diversification. The findings reveal that students demonstrate moderate to high entrepreneurial skills, particularly in creativity, opportunity recognition, and innovation, while competencies in financial literacy and risk management were comparatively lower. This suggests that while petroleum students possess a foundational entrepreneurial mindset and the ability to generate innovative ideas, their preparedness to translate these ideas into viable businesses may be constrained by gaps in practical skills and strategic business management. Furthermore, the study established a strong positive relationship between entrepreneurial skills development and career diversification. Students with higher entrepreneurial competencies were more likely to pursue alternative career pathways beyond the traditional oil and gas sector, including self-employment, consultancy, digital enterprises, renewable energy initiatives, and small- and medium-scale business ventures. This indicates that entrepreneurship education can serve as a critical mechanism for enhancing career flexibility, self-reliance, and adaptability in the face of labor market uncertainties and the volatility of the petroleum-dependent economy in South-South Nigeria.

The findings support the theoretical frameworks underpinning the study: Human Capital Theory, which emphasizes that investments in knowledge and skills improve employability and productivity (Becker, 1964; Afolayan & Ogunleye, 2023), and Theory of Planned Behavior, which suggests that entrepreneurial intentions are influenced by attitudes, perceived behavioral control, and self-efficacy (Ajzen, 1991; Iwu, Ezeudu, & Eresia-Eke, 2022). In the context of petroleum institutions, the study concludes that entrepreneurial skills development is not only essential for enhancing individual career prospects but also for fostering broader economic diversification and resilience in the South-South region. The study highlights that while students at petroleum institutions demonstrate promising entrepreneurial capabilities, there is room for improvement in practical skills, such as financial management and risk-taking, which are essential for translating

entrepreneurial ideas into sustainable career options. Moreover, entrepreneurship education is a vital enabler of career diversification, equipping students to adapt to evolving labor-market conditions and reducing reliance on the oil and gas sector for employment.

6. Recommendations

Based on the findings and conclusions, the following recommendations are proposed to enhance entrepreneurial skills development and promote career diversification among students in petroleum institutions in South-South Nigeria:

1. Institutions should incorporate hands-on training, workshops, and simulation exercises in entrepreneurship curricula. Modules on financial management, risk assessment, business planning, and marketing should be strengthened to ensure students are equipped with the skills needed to launch and manage viable enterprises.
2. Petroleum institutions should set up incubation and innovation hubs that provide mentorship, technical support, and seed funding for student-led entrepreneurial ventures. Such initiatives can bridge the gap between theoretical knowledge and practical business application.
3. Career services departments should provide targeted guidance on diversified career pathways, including self-employment, SMEs, consultancy, and non-oil sectors. Entrepreneurship coaching should be embedded into student advisory programs to strengthen self-efficacy and confidence in pursuing alternative careers.
4. Institutions should collaborate with private sector organizations, non-governmental agencies, and oil-related firms to provide internships, apprenticeships, and entrepreneurial mentorship opportunities. This will expose students to practical business environments and expand their career networks.
5. Policy makers should provide incentives for entrepreneurship initiatives within petroleum institutions, including grants, soft loans, and tax relief for graduates establishing start-ups. Such measures will create an enabling environment for students to apply entrepreneurial skills and diversify their income sources.

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REFERENCES

Adebayo, T. A., & Yusuf, M. O. (2023). Entrepreneurial competencies and graduate employability in Nigeria's changing labour market. *Journal of Entrepreneurship and Development Studies*, 7(2), 45–59.

Agundu, V. I., & Peters, D. E. (2024). Entrepreneurship education and career adaptability among undergraduates in South-South Nigeria. *Nigerian Journal of Educational Research and Evaluation*, 23(1), 112–126.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.

Akanbi, S. T., & Ofoegbu, O. E. (2022). Entrepreneurship education and graduate unemployment in Nigerian universities. *African Journal of Educational Management*, 18(3), 67–81.

Afolayan, A. A., & Ogunleye, A. J. (2023). Human capital development and entrepreneurship education in Nigerian universities. *Journal of Education and Social Research*, 13(1), 102–114.

Akinwale, A. A., & Yusuf, M. O. (2026). Entrepreneurial skills and youth adaptability in Nigeria's volatile economy. *Journal of African Development Studies*, 8(1), 55–69.

Akpan, E. O., & Essien, E. E. (2023). Entrepreneurship education and opportunity recognition among undergraduates in South-South Nigeria. *Nigerian Journal of Business Education*, 10(2), 41–56.

Becker, G. S. (1964). *Human capital: A theoretical and empirical analysis, with special reference to education*. University of Chicago Press.

Calista, C. N., & Vita-Agundu, U. G. (2025). Management of entrepreneurship education and entrepreneurial intention of university students in South-South Nigeria. *Journal of Educational Foundations*, 14(3), 88–104.

Eze, C. O., Ekpe, A. N., & Ogbodo, C. M. (2023). Management of entrepreneurship education and students' entrepreneurial skill acquisition in Nigerian universities. *International Journal of Management, Education and Development*, 5(1), 89–104.

Fems, A. A. (2020). Entrepreneurship education and entrepreneurial intention of students in petroleum polytechnics in Nigeria. *Open Scientific Journal of Education*, 8(2), 115–128.

Ibrahim, S. A., & Bello, K. A. (2025). Entrepreneurial skills and career diversification among technical graduates in Nigeria. *Journal of Vocational and Technical Education Studies*, 9(2), 133–148.

Iwu, C. G., Ezeudu, O. J., & Eresia-Eke, C. (2022). Applying the theory of planned behavior to entrepreneurial intentions of Nigerian students. *Journal of Entrepreneurship in Emerging Economies*, 14(3), 501–520.

Nduka, E. C., & Olatunji, S. O. (2024). Entrepreneurial competencies and career adaptability among Nigerian graduates. *Journal of Vocational Behaviour Studies*, 5(2), 64–79.

Nwankwo, B. E., & Salami, S. O. (2026). Entrepreneurial competence and career sustainability among Nigerian youths. *Journal of African Human Resource Development*, 4(1), 21–36.

Okafor, C. E., & Onyekachi, J. O. (2024). Institutional support and effectiveness of entrepreneurship education in Nigerian universities. *Journal of Higher Education Policy and Management*, 12(2), 90–104.

Okolie, U. C., Nwajiuba, C. A., & Osuji, C. U. (2023). Oil and gas industry structure and graduate employment challenges in Nigeria. *Journal of Contemporary African Development Issues*, 6(2), 54–70.

Ogunleye, A. J., & Adeyemi, S. B. (2022). Entrepreneurship education as a tool for sustainable youth empowerment in Nigeria. *Nigerian Journal of Business Education*, 9(1), 14–29.

Ogunnaike, O. O., & Adebola, S. A. (2024). Entrepreneurship education and self-efficacy among university students in Nigeria. *International Journal of Entrepreneurship Education*, 22(1), 1–14.

Ogunyemi, A. O., & Lawal, T. A. (2022). Digital skills, entrepreneurship education and career flexibility among Nigerian undergraduates. *Journal of Educational Development in Africa*, 4(1), 29–45.

Olokundun, M. A., Ibidunni, A. S., Peter, F., & Amaihian, A. B. (2022). Entrepreneurship education and human capital development in Nigeria. *Education + Training*, 64(6), 765–781.

Onyishi, I. E., & Asogwa, U. D. (2022). Career diversification strategies among Nigerian graduates in a volatile economy. *Journal of Counselling and Career Development*, 11(2), 96–110.

Salami, S. O., & Aremu, A. O. (2025). Perceived behavioural control and entrepreneurial career intentions among Nigerian undergraduates. *Journal of Career Development Studies*, 7(1), 18–33.

Tamuno, G. D., & Briggs, I. N. (2023). Entrepreneurial skills and career pathways of students in oil and gas polytechnics in Nigeria. *Journal of Technical Education and Training*, 15(2), 122–138.

Uche, C. M., & Agbaeze, E. K. (2024). Entrepreneurship education and value creation orientation among university students in Nigeria. *Journal of Innovation and Entrepreneurship in Africa*, 8(1), 41–56.

