Assessing the Impact of AI-Driven Tools on Fostering an Entrepreneurial Mindset among Business Education Students in South-South Nigeria Universities.

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Abstract

This study investigated how AI-powered tools might help business education students in South-South Nigerian universities develop an inventive business attitude. This was accomplished by addressing three study objectives and testing three related hypotheses at a significant level of 0.05. The target population consisted of 73 business education students from five chosen universities in the South-South geopolitical zone, and a descriptive survey research design was employed. Due to their usage of AI-driven techniques, all 73 Students purposefully constituted the sample size. A business education professional validated the instrument, called the "Assessing the Impact of AI-Driven Tools on Fostering an Entrepreneurial Mindset among Business Education Students Questionnaire" (AIAIDTMEBESQ), which was used to collect data. A reliability coefficient value of 0.762 was obtained for the instrument. Results showed that AI-driven tools influence opportunity recognition skills among business education students in South-South Nigeria, revealing a positive relationship between using AI-driven tools and the development of risk-taking behaviours; however, this relationship was statistically insignificant and weak. Furthermore, while AI-driven tools were found to influence problem-solving abilities, this influence was also statistically insignificant. The study concludes that although AI-driven tools hold promises for fostering elements of an entrepreneurial mindset, their effect on risk-taking behaviour and problem-solving abilities among business education students is limited. The study recommends that universities integrate AI-driven tools more effectively into the business education curriculum, emphasizing practical applications that enhance critical thinking, opportunity recognition, and entrepreneurial problem-solving skills.

Keywords: AI-Driven Tools, Artificial Intelligence, Business Education Students, Entrepreneurial Mindset,

Introduction

The global economy is increasingly influenced by technological advancements, with Artificial Intelligence (AI) redefining industries and education systems. AI has become a transformative force, providing innovative solutions that help students develop practical skills and competencies needed in modern workplaces. Artificial intelligence, according to Copeland (2024), is the capacity of digital systems to carry out operations like learning, reasoning, and problem-solving that normally demand human intelligence. LeewayHertz (2023) examines a range of artificial intelligence (AI) applications in business education, highlighting their advantages and methods of implementation. Virtual assistants, data analytics platforms, business simulators, and adaptive learning systems, for instance, are currently improving conventional teaching techniques. These resources facilitate individualized instruction and

provide students with the chance to practice critical thinking, problem-solving, and creativity, all of which are crucial components of an entrepreneurial mindset. (AACSB International, 2025; eCampus Ontario, n.d.; ChannelE2E, 2024).

Conversely, an entrepreneurial mindset is defined by the ability to recognize opportunities, take calculated risks, and drive innovation, AI-driven tools are software applications, platforms, or systems that utilize AI technologies to perform tasks, analyze data, or provide solutions with an intelligence level like human decision-making. By utilizing machine learning, natural language processing, predictive analytics, computer vision, and other AI approaches, these products improve productivity, efficiency, and creativity. Key features of AI-driven tools include automation, adaptability, predictive insights, personalization, and real-time decision-making, which process data and make decisions instantly, enabling rapid responses to changing conditions. Examples of AI-driven tools in education and business include chatbots that provide instant responses to student queries and simulate customer interactions in business training (Goyal, Minz, and Sha, 2024). Business simulation software that helps students practice decision-making in a controlled virtual business environment, AI-powered data analytics tools that assist in identifying entrepreneurial opportunities and market trends, virtual assistants that offer administrative support, schedule management, and reminders for educational or business purposes, and Learning Management Systems (LMS) with AI that personalize educational content based on individual student progress and needs. Hence, AI-driven tools are transformative in education, especially in entrepreneurship, where they foster creativity, critical thinking, and problem-solving by exposing students to real-world challenges and innovative solutions and adapting to change. It is essential for students in business education as it prepares them to thrive in competitive and dynamic environments. However, developing this mindset requires more than theoretical knowledge; it demands practical, hands-on experience and the application of innovative tools to bridge the gap between classroom learning and real-world challenges.

Entrepreneurial mindset is a diverse mix of abilities and attitudes, including adaptability, resilience, creativity, and risk-taking, that enable people to recognize opportunities, overcome obstacles, create value, and promote innovation, employability, and economic growth. The entrepreneurial mindset is crucial as it promotes innovation by inspiring individuals to think creatively and develop unique solutions. It enhances employability by equipping students and professionals with skills that are highly valued in the workplace and promotes self-reliance by encouraging individuals to take initiative and responsibility for their success. Furthermore, it drives economic growth by supporting the creation of businesses, startups, and solutions that contribute to economic development. It also enables lifelong learning by cultivating curiosity and adaptability in an ever-changing world. Nevertheless, an entrepreneurial mindset is not limited to business owners or startups; it is a valuable perspective for

anyone seeking to make an impact, solve problems creatively, and thrive in dynamic environments. It is particularly crucial for students in business education as it prepares them to innovate and succeed in competitive markets.

The relationship between an entrepreneurial mindset and business education students is deeply interconnected, as business education aims to prepare students for dynamic and competitive environments where entrepreneurial thinking is a critical asset. The entrepreneurial mindset benefits business education students in many ways, including:

Cultivating Skills for Innovation: Business education provides a foundation for understanding management, finance, marketing, and strategy. When combined with an entrepreneurial mindset, students learn to apply this knowledge innovatively, identifying opportunities to create value through new products, services, or ventures. For instance, students can apply their marketing knowledge to design creative strategies for launching a new business idea.

Enhancing Problem-Solving Abilities: An entrepreneurial mindset encourages students to approach challenges with creativity and resilience. Business education offers case studies and real-world scenarios that help students practice solving complex problems, fostering critical thinking and resourcefulness. For instance, using case studies to simulate real-life challenges in a startup environment trains students to think like entrepreneurs.

Promoting Practical Application of Theories: Business education equips students with theoretical knowledge, while an entrepreneurial mindset drives them to translate that knowledge into action. This synergy prepares students to innovate, take calculated risks, and execute business ideas effectively. Students might use financial planning techniques learned in class to draft a viable business plan for a startup competition.

Encouraging Opportunity Recognition: Entrepreneurial-minded students are skilled at identifying unmet market needs. Business education provides tools, such as market research and analytics, to systematically evaluate and act on these opportunities. For instance, a student could identify a gap in e-commerce services and use their business knowledge to develop a platform addressing that need.

Fostering Leadership and Collaboration: Business education often involves team projects and leadership training, which aligns with the entrepreneurial mindset's emphasis on initiative and collaboration. Students learn to lead teams and work collaboratively, essential for entrepreneurial success; group activities in business classes simulate the real-world collaboration required in startups.

Building Resilience and Adaptability: An entrepreneurial mindset teaches resilience in the face of failure, while business education exposes students to scenarios requiring adaptability. This combination

prepares students to pivot strategies when necessary and stay focused on long-term goals. For example, students working on a project that fails might learn to revise their approach based on feedback, a valuable entrepreneurial skill. Finally,

Preparing for Diverse Career Paths: Business education students with an entrepreneurial mindset are not confined to traditional roles; they are equipped to become entrepreneurs, intrapreneurs (innovators within organizations), or leaders in various sectors. For instance, a student could leverage entrepreneurial thinking to innovate within a corporate setting or launch their venture.

Although AI-driven tools are being used in education more and more, it is yet unknown how they will affect South-South Nigerian business education students' development of an entrepreneurial attitude, meanwhile, Iwerima and Bupo (2024) who examined the awareness and utilization of AI technologies among business education students in Rivers State universities. The findings indicated high awareness and usage of AI tools like ChatGPT and Grammarly, suggesting a readiness to integrate AI into their learning processes.

Although there is little empirical data to support their efficacy in this setting, these tools have the potential to improve creativity, opportunity recognition, and risk-taking all essential elements of entrepreneurship. This disparity raises questions about how well AI technologies are being applied to help these students cultivate the entrepreneurial abilities necessary to spur innovation and regional economic growth. In South-South Nigeria, where graduate unemployment and underemployment are still high, developing entrepreneurial skills has taken precedence. Incorporating AI-powered resources into business school programmes presents a special chance to give students the abilities and perspective required to develop and oversee creative

Research Questions

1. How do AI-driven tools influence opportunity recognition skills among business education students in South-South Nigerian universities?
2. What is the relationship between using AI-driven tools and developing risk-taking behaviors in students?
3. To what extent do AI-driven tools impact the problem-solving abilities of business education students?

Research Objectives

1. To assess the influence of AI-driven tools on opportunity recognition skills among business education students.
2. To examine the relationship between the use of AI-driven tools and the development of risk-taking behaviors in students.

3. To evaluate the influence of AI-driven tools on the problem-solving abilities of business education students.

Hypotheses

1. AI-driven tools do not significantly influence opportunity recognition skills among business education students.
2. There is no significant relationship between the use of AI-driven tools and the development of risk-taking behaviors in students.
3. AI-driven tools have no significant influence on the problem-solving abilities of business education students.

Literature Review

The rise of artificial intelligence (AI) has fundamentally altered business education. AI-powered tools, such as machine learning algorithms, virtual assistants, and predictive analytics, are now being integrated into various educational frameworks to improve student results. This literature review looks at existing studies on the impact of AI-powered tools on entrepreneurship education at Nigeria's institutions. AI-powered business education tools such as chatbots, IBM Watson, Google Bard, HubSpot AI, Copy.ai, virtual simulations, and data-driven decision-making apps are progressively being integrated into curriculum. These technologies promote individualized learning, use predictive analytics to forecast market trends, and support intelligent tutoring systems that help students improve their problem-solving and decision-making abilities (Boden et al., 2017).

According to research, AI technologies help students improve critical thinking and opportunity recognition skills, both of which are required for an entrepreneurial mindset (Kaplan and Haenlein, 2019). Studies on AI integration at Nigerian institutions show that curriculum change, digital literacy training, and institutional support are required to fully realize the benefits of AI-driven learning (Okonkwo et al., 2022). Furthermore, there are chances to use AI to improve experiential learning, market analysis, and business simulations that prepare students for real-world entrepreneurial difficulties (Nwosu & Nduka, 2021). To overcome current impediments, legislative actions and investments in digital infrastructure are critical. The influence of AI-powered tools on creating an entrepreneurial mindset among business students in Nigerian colleges is promising, but further empirical research is needed.

Methodology

This study evaluated how AI-powered tools can help business education students in South-South Nigerian universities develop an entrepreneurial mindset. This study focused on all business education

students at five chosen universities in the South-South geopolitical zone using a descriptive survey research design. The population consisted of 73 business education students who confidentially stated that they utilize AI-powered tools for learning at five selected Universities in the South-South geopolitical zone. The universities were chosen based on the National Universities Commission (NUC) accredited business education programmes, academic quality in business and entrepreneurial education, and digital orientation. A descriptive survey research design was used. All 73 Students were purposefully included in the sample size as they confidentially said that they make use of AI-Driven tools in learning. Of the 73 students, 15 were from Delta State University in Abraka, 10 were from Federal University Otuoke in Bayelsa State, 23 were from the University of Calabar in Calabar, Cross River State, 9 were from the University of Port Harcourt in River State, and 16 were from the University of Uyo in Uyo, Akwa-Ibom State. A self-structured questionnaire titled "Assessing the Impact of AI-Driven Tools on Fostering an Entrepreneurial Mindset among Business Education Students Questionnaire" (AIAIDTMEBESQ) was used as the instrument for gathering data. This instrument was validated by a business education specialist. Cronbach's alpha was used to assess the instrument's internal consistency, yielding a reliability coefficient of 0.762 for the instrument used for data collection. With the help of five research assistants, the researcher individually distributed the questionnaire to the participants. To test the null hypotheses at a significance level of 0.05, the gathered data were analysed using regression analysis, correlation, mean, and standard deviation. The null hypothesis was accepted if the p-value was equal to or greater than 0.05 and rejected if it was less than 0.05.

Results and Discussion

Demographic Data of the respondents

Table 1: Gender Distribution of the Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	50	68.5	68.5	68.5
	Female	23	31.5	31.5	100.0
	Total	73	100.0	100.0	

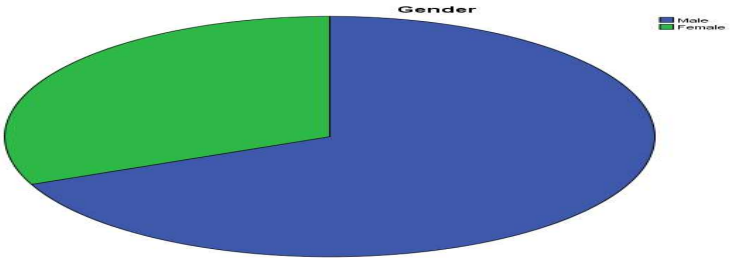

Figure 1: Gender Distribution of Respondents

The table 1 presents the gender distribution of respondents, showing that out of 73 participants, 50 were male (68.5%), and 23 were female (31.5%). This suggests that the study had a higher proportion of male respondents than female respondents.

Table 2: Distribution of Respondents by Institutions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Delta State University	15	20.5	20.5	20.5
	Federal University Otuoke	10	13.7	13.7	34.2
	University of Calabar	23	31.5	31.5	65.8
	University of Port Harcourt	9	12.3	12.3	78.1
	University of Uyo	16	21.9	21.9	100.0
	Total	**73**	**100.0**	**100.0**	

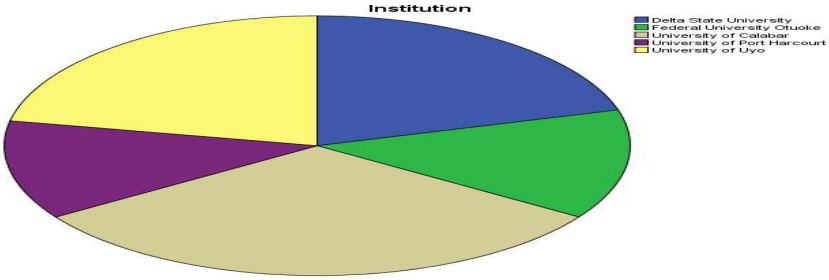

Figure 2. Distribution of Respondents by Institutions

Table 2 presents the distribution of respondents across five different institutions. The University of Calabar had the highest number of respondents (23), making up 31.5%, the University of Uyo followed with 16 respondents (21.9%), Delta State University had 15 respondents (20.5%), Federal University Otuoke had 10 respondents (13.7%), while the University of Port Harcourt had the lowest number of respondents (9), making up 12.3% of the respondents.

Research Question 1: How do AI-driven tools influence opportunity recognition skills among business education students in South-South Nigerian universities?

Table 3: Mean and standard Deviation on how AI-driven tools influence opportunity recognition skills among business education students

S/N	Items	N	Mean	SD	Remarks
1.	Utilizing AI tools such as copy AI enhances my ability to identify new business opportunities.	73	3.29	.59	Agreed
2.	The use of Salesforce Einstein AI learning platforms enhances my decision-making skills in business opportunity recognition.	73	3.34	.58	Agreed
3.	Access to IBM Watson AI-driven data analysis tools boosts my confidence in identifying profitable ventures.	73	3.27	.61	Agreed
4.	HubSpot AI tools help me analyze market trends more effectively for potential opportunities.	73	3.31	.64	Agreed

S/N	Items	N	Mean	SD	Remarks
5.	Leveraging Google Bard AI improves my creativity in recognizing innovative business solutions.	73	3.30	.64	Agreed
6.	IBM Watson AI tools simplify my ability to predict future business trends and opportunities.	73	3.34	.61	Agreed
7.	ChatGPT AI tools assist me in recognizing business opportunities that I might have otherwise overlooked.	73	3.28	.72	Agreed
	Aggregate	**73**	**3.30**	**.63**	**Agreed**

** SD = standard deviation

The mean and standard deviation of respondents' responses about how AI-driven tools affect business education students' ability to recognize opportunities in South-South Nigerian colleges are displayed in Table 3. All seven items had mean responses between 3.27 and 3.34, and standard deviations between 0.58 and 0.72. The comments about AI-driven tools surpass the specified criterion aggregate mean score of 2.50, showing high opportunity recognition skills, with an overall mean of 3.30 and standard deviations for all metrics below one. This shows that AI-driven tools have a positive impact on business education students' ability to recognize opportunities in South-South Nigerian Universities.

Research Question 2: What is the relationship between using AI-driven tools and developing risk-taking behaviors in students?

Table 4: Mean and standard Deviation on the relationship between using AI-driven tools and developing risk-taking behaviors in students

S/N	Items	N	Mean	SD	Remarks
8.	Using IBM Watson AI tools inspires me to take more calculated risks in my studies.	73	1.59	.55	Negative
9.	AI-driven insights enhance my confidence to try new ideas	73	3.18	.54	Positive
10.	Access to ChatGPT AI tools makes me more willing to experiment with unfamiliar tasks.	73	3.37	.79	Positive
11.	IBM Watson AI technologies assist me in evaluating potential risks before making decisions	73	3.22	.56	Positive
12.	Utilizing Tableau AI tools lessens my fear of failure when attempting something new	73	3.23	.61	Positive
13.	Grammarly AI-driven feedback encourages me to tackle challenging academic tasks.	73	3.47	.50	Positive
14.	The application of Google Bard AI tools boosts my willingness to take initiative in uncertain situations.	73	3.52	.60	Positive
	Aggregate	**73**	**3.08**	**.60**	**Positive**

** SD = standard deviation

The aggregate Mean and Standard Deviation of the data about the association between students' growth of risk-taking behaviors and their use of AI-driven technologies are displayed in Table 4. All seven items had mean answers between 1.59 and 3.52, and standard deviations between 0.50 and 0.79. Apart from item eight, which received a negative response, the overall mean score of 3.08 and the standard deviation of all measures falling below one (1) show that the responses about this connection surpass the benchmark overall mean score of 2.50, indicating a favorable association. The high overall mean scores across these categories, however, highlight the positive correlation that currently exists between student's increased risk-taking behaviors and the use of AI-driven technologies.

Research Question 3: To what extent do AI-driven tools impact on the problem-solving abilities of business students?

Table 5: Mean and Standard Deviation to the extent to which AI-driven tools impact the problem-solving abilities of business students

S/N	Items	N	Mean	SD	Remarks
15.	Tidio AI tools assist me in finding effective solutions to business problems.	73	3.38	.70	Agreed
16.	Utilizing Tidio AI technologies enhances my ability to analyze complex issues	73	3.27	.56	Agreed
17.	Google Bard AI-driven tools improve my decision-making skills in problem-solving	73	3.47	.63	Agreed
18.	Tableau AI resources allow me to approach business challenges from various perspectives	73	3.32	.57	Agreed
19.	Access to Grammarly AI tools boosts my efficiency in resolving academic problems	73	3.52	.60	Agreed
20.	Google Bard AI technologies help me break down complicated tasks into manageable steps.	73	3.07	.90	Agreed
21.	Using IBM Watson AI-driven tools increases my confidence in addressing difficult business scenarios	73	3.00	.83	Agreed
	Aggregate	**73**	3.29	0.68	**Agreed**

** SD = standard deviation

The data in Table 5 shows the average responses regarding the extent to which AI-driven tools influence the problem-solving abilities of business education students in South-South Universities. The table indicates that average responses range from 3.00 to 3.52, with standard deviation values from 0.57 to 0.90. Notably, all measures exhibit a standard deviation of less than one (1), indicating that the level of acceptance exceeds the criterion aggregate mean score of 2.50 established for potential influence. The overall score of 3.29 (SD = 0.68) suggests that AI-driven tools and problem-solving abilities are interdependent, effectively breaking down complex tasks into manageable steps. This emphasizes that AI-driven tools influence business education students' problem-solving abilities.

Hypothesis 1: AI-driven tools do not significantly influence opportunity recognition skills among business education students.

Table 6: Shows the summary of the findings about hypothesis 1.

Hypothesis	Regression Weights	Beta Coefficient	R^2	F	p-value	Hypothesis Supported
Ho	UAIT - OR	.219	.022	1.593	.148	Yes

Note: *p > 0.05. UAIT: Use of AI-driven Tools, OR = Opportunity Recognition

The findings in Table 6 indicate that AI-driven tools (ChatGPT AI, Tidio, Google Bard) do not significantly impact opportunity recognition skills among students in South-South universities. The dependent variable, Opportunity Recognition (OR), was regressed on the predictor variable, Use of AI-driven Tools (UAIT), to test the null hypothesis (Ho). The use of AI-driven tools did not significantly predict opportunity recognition skills, $F(1, 72) = 1.593$, $p > .05$, which suggests that UAIT does not influence OR ($b = .219$, $p > .05$), since the p-value exceeds the alpha level of 0.05. This result clearly demonstrates a statistically insignificant influence of AI-driven tools on business education students'

opportunity recognition skills. Additionally, the $R^2 = .022$ indicates that the model accounts for only 2.2% of the variance in opportunity recognition.

Hypothesis 2: There is no significant relationship between the use of AI-driven tools and the development of risk-taking behaviors in students.

Table 7: Correlation between the use of AI-driven tools and the development of risk-taking behaviors in students.

Variable	N	Mean	Std. Deviation	r	P
Use of AI-driven tools	73	9.9041	1.15668	-.025	.834
Developing risk-taking behaviours	73	21.5753	1.90699		

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

Table 7 .1 Correlations

		Use of AI-driven Tools	Developing risk-taking behaviours
Use of AI-driven Tools	Pearson Correlation	1	-.025
	Sig. (2-tailed)		.834
	N	73	73
Developing risk-taking behaviours	Pearson Correlation	-.025	1
	Sig. (2-tailed)	.834	
	N	73	73

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

Table 7 shows the results of the Pearson product-moment relationship analysis between the usage of AI-driven tools and the development of risk-taking behaviors among students in South-South universities. The result indicated a weaker undesirable and statistically tiny significant correlation. Specifically, findings revealed a weaker undesirable and statistically tiny significant relationship amid the use of AI-driven tools plus the emergence of risk-taking behaviors in students at South-South universities ($r = -.025$, $p > .05$).

Hypothesis 3: AI-driven tools have no significant influence on the problem-solving abilities of business education students.

Table 8: Shows the summary of the findings about hypothesis 1.

Hypothesis	Regression Weights	Beta Coefficient	R^2	F	p-value	Hypothesis Supported
Ho	UAIT -- PSA	.396	.050	3.775	.225	Yes

Note: *p > 0.05. UAIT: Use of AI-driven Tools, PSA = Problem Solving Abilities

The results in Table 8 indicate that the use of AI-driven tools does not significantly influence the problem-solving abilities of students in South-South universities. The dependent variable, Problem-

Solving Abilities (PSA), was regressed on the predictor variable, Use of AI-Driven Tools (UAIT), to test the hypothesis Ho. The use of AI-driven tools does not significantly predict problem-solving abilities, $F(1, 72) = 3.775$, $p > .05$, which suggests that AI-driven tools (UAIT) do not impact problem-solving abilities (PSA) ($b = .396$, $p > .05$), since the p-value is greater than the alpha value of 0.05. This result indicates a statistically insignificant influence of AI-driven tools on the problem-solving abilities of business education students. Furthermore, the $R^2 = .050$ shows that the model explains 5% of the variance in problem-solving abilities.

Discussion of Findings

This study investigates the impact of AI-driven tools on fostering an entrepreneurial mindset among business education students in South-South Nigeria's universities.

The first research question indicated that AI-driven tools significantly impact opportunity recognition skills among business education students. All seven items on the questionnaire recorded mean scores exceeding the benchmark average, underscoring their potential to enhance students' ability to identify and pursue business opportunities. This study corroborates the findings of Doe, and Smith (2024), who investigated the integration of ChatGPT into entrepreneurship curricula at a U.S. university. Findings indicated that ChatGPT enhanced students' abilities to identify and evaluate business opportunities by providing unique market perspectives and aiding competitive analysis.

The results of the second research question indicated an affirmative relationship linking the use of AI-driven tools and the development of risk-taking behaviors. Meanwhile, the correlation was found to be statistically immaterial and not strong. This study disagrees with the findings of Haaf, Singh, Lin, and Zou (2021), who explored the decision-making patterns of an AI poker algorithm compared to human players, revealing differences in risky behavior following economic triggers.

The findings from the third research question revealed that AI-driven tools influence problem-solving abilities; however, this influence was statistically insignificant. This indicates that while AI tools may contribute to enhancing these skills, their impact is not strong enough to be regarded as conclusive. This study aligns with the findings of Zhai, Nyaaba, and Ma (2024), as well as Lyu, Wang, Chung, and Sun (2024), who provide evidence that although AI-driven tools may influence problem-solving skills, the effect is not sufficiently strong to be deemed conclusive

Conclusion

This study assessed the impact of AI-driven tools on fostering an entrepreneurial mindset among business education students in South-South Nigeria's universities. The findings revealed that AI-driven tools significantly influence opportunity recognition skills among business education students, highlighting their potential to enhance students' ability to identify and pursue business opportunities. Additionally, a positive relationship was found between the use of AI-driven tools and the development of risk-taking behaviors, though this relationship was statistically insignificant and weak, suggesting limited practical impact. Furthermore, the study found that AI-driven tools have an influence on problem-solving abilities, yet this influence was statistically insignificant, indicating that while AI tools may contribute to enhancing these skills, their impact is not strong enough to be considered conclusive. These outcomes suggest that, although AI-driven tools show promise in fostering elements of an entrepreneurial mindset, their influence on risk-taking behavior and problem-solving abilities among business education students remains limited within the studied context.

Recommendations

Based on the preceding information and the results of this study, the following recommendations deemed necessary were proffered:

1. Universities offering business education should encourage students to utilize AI-powered tools such as simulations, decision-support systems, and adaptive learning technologies to provide real-world problem-solving experiences.

2. Develop specialized workshops and training sessions to assist students in leveraging AI tools for entrepreneurial purposes, particularly to strengthen risk-taking behaviors and improve problem-solving abilities.

3. Institutions should encourage hands-on projects and simulations using AI tools, enabling students to engage in real-world business challenges and thereby enhance their opportunity recognition and problem-solving skills.

4. Future studies should consider larger sample sizes across various regions and institutions to yield more generalizable results.

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