

EXAMINING THE RELATIONSHIP BETWEEN SIMULATION-BASED LEARNING AND ENTREPRENEURIAL SKILL DEVELOPMENT AMONG BUSINESS EDUCATION STUDENTS IN ENUGU STATE

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Abstract

This research examined the effectiveness of simulation-based learning in developing entrepreneurial skills among business education students in three selected universities in Enugu State. Three objectives, research questions, and hypotheses guided the research. This study employed a correlational research design. The study population comprised 143 final-year business education students from three public universities in Enugu State enrolled in entrepreneurship/business education for the 2023/2024 academic year. A census technique was employed because of the population's controllable size. The collection of data employed two instruments: the Simulation-Based Learning Assessment Questionnaire (SBLAQ) and the Entrepreneurial Skills Development Questionnaire (ESDQ), which had reliability values of 0.85 and 0.79, respectively. Questionnaires were distributed electronically, and data were collected and analysed via SPSS 2023. The results showed strong positive relationships between business simulation experiences and the growth of decision-making skills ($r=0.712$), risk management skills ($r=0.684$), and market analysis skills ($r=0.621$) among final-year business education students. The study advocates for business programs to incorporate more extensive simulation-based learning techniques, allocate resources for superior simulation software, and merge simulation experiences with reflective learning opportunities to improve students' entrepreneurial skill development.

Keywords: Simulation-Based Learning, Entrepreneurial Skills, Business Education Students

Introduction

The global business environment has experienced significant shift in recent decades, propelled by technological innovations, globalization, and evolving market dynamics. These changes have profoundly transformed the skills necessary for business success, emphasising adaptability, creativity, and strategic thinking to a larger extent. Conventional business education approaches, although beneficial for theoretical understanding, often fail to equip students with practical experience in handling complex corporate situations (Lainema, 2018). Hence, there is increasing interest in simulation-based learning as an efficient teaching method to reconcile theory and practice in business study.

Simulation-Based Learning encompasses a teaching approach that employs genuine engaging business scenarios to simulate the difficulties inherent in entrepreneurship. It allows business education students to hone critical thinking, problem-solving, innovation, risk-taking,

and abilities to handle resources in a secure supervised setting, promoting the mastery of essential entrepreneurial skills. According to Alabi (2022) business education is part of the total educational programme. Actually, business education is crucial for national development since it cultivates entrepreneurial skills, mindsets, and expertise essential for employment and growth in the business sector. It is a program provided at universities and colleges that imparts knowledge in lecturing business courses. It involves acquiring and cultivating skills, competencies, attributes, and attitudes by their students. It is an aspect of vocational education, and it has been known in the history of education in Nigeria. Business education is significant in the nation's development as it develops vocational skills, attitude and knowledge for employment and advancement in business career. Business education is a course offered in universities and colleges of education. It gives the mastery of teaching business courses. It is the acquisition and development of skills and competencies, attribute and attitudes by its students.

Business education students are individuals enrolled in a formal academic program designed to develop comprehensive understanding of business principles, practices, and theories. These students engage in structured learning experiences that encompass various business disciplines including management, marketing, finance, accounting, economics, and entrepreneurship. They are characterized by their pursuit of both theoretical knowledge and practical skills necessary for effective participation in the business world, whether as employees, managers, or entrepreneurs. Business education students typically demonstrate active engagement in learning activities that bridge academic concepts with real-world business applications, preparing them for diverse career paths in the contemporary business environment. In the content of this study, business education students are individuals who enrolled in a structured academic program focused on business principles and practices, who actively participates in experiential learning activities—such as business simulations—to develop entrepreneurial skills. These students engage in simulation-based learning environments that mirror real-world business challenges, enabling them to practice decision-making, problem-solving, risk management, and teamwork, all of which are essential for entrepreneurial success. Alabi (2022) asserts that business education makes up a component of the broad informative curriculum.

In Nigeria, business education programs have facilitated the empowerment of young people and economic engagement, particularly through the incorporation of entrepreneurship courses in higher education institutions (Amoor & Udoh, 2019). Graduates of business

education programs exhibit a greater likelihood to participate in micro and small firms, hence fostering local economic development (Iwu et al., 2020). The gradual adaptation to technology developments diminishes the quality and usefulness of training provided to students. The integration of ICTs in business education may change the way their students learn by augmenting access to educational resources, improving instructional methods, and promoting digital entrepreneurship. ICT tools such as simulation software, e-commerce platforms, and accounting packages provide these students with practical experience and digital competencies (Adu et al., 2013).

Business education students are those undergoing a structured academic program aimed at making a thorough comprehension of business concepts, methods, and theories. These students participate in organised educational experiences that cover multiple business disciplines, including management, marketing, finance, accounting, economics, and entrepreneurship. They are distinguished by their quest for both theoretical understanding and practical competencies essential for effective engagement in the business realm, whether as employees, managers, or entrepreneurs. Students in business education generally exhibit active participation in learning activities that connect academic theories with practical business applications, equipping them for many career trajectories in the modern corporate landscape. In this study, business education students are persons enrolled in a formal academic program on business concepts and practices, who actively engage in practical learning activities—such as business simulations—to cultivate skills in entrepreneurship. These students participate in simulation-based learning settings that replicate real-world business hurdles. Bell, et al (2020) assert that simulation-based learning enables business students to engage in entrepreneurial settings through which they can evaluate strategies, learn from setbacks, and enhance their business expertise without real-world effects.

Simulation-based learning involves the utilisation of computer-generated or observable models that replicate actual business environments, enabling students to make decisions, observe results, and derive lessons from their experiences in a risk-free context (Salas, Wildman, & Piccolo, 2019). According to Emre-Akdoğan and Yazgan-Sağ (2019), this method allows students to implement theoretical knowledge in actual contexts, enhance critical thinking abilities, and cultivate confidence in managing intricate business challenges. Also, simulation-based learning allows students to witness the outcomes of their decisions in a secure and controlled environment. Students can repeatedly experience the consequences of their choices, which is conducive to the development of strategic decision-making skills (Tao,

Cheng, & Sun, 2020). In an ideal situation, simulations offer students a distinctive opportunity to encounter the obstacles and prospects of firm ownership without the financial and personal risks linked to real enterprises. Simulation-based learning, according to Gentry (2015), fosters an interactive environment in which students can practise and enhance their entrepreneurial skills through iterative processes of making decisions, feedback, and evaluation. Through this iterative approach, students can gain a deeper comprehension of business concepts and principles and learn how to apply them in dynamic and uncertain contexts. Faria, Hutchinson, Wellington, and Gold (2019) observed that simulations enable students to connect information from several business areas, such as marketing, finance, operations, and human resources, thereby cultivating a comprehensive grasp of entrepreneurial skills management.

Entrepreneurial skills are relevant skills and competencies that will enable an individual to seek and run an enterprise successfully. It consists of effective utilization of ideas, information and facts that help a learner develop competencies or being productive employee of organization (Egolum, and Chukwuma, 2022). Entrepreneurship skills are a set of competencies that enable students to recognize opportunities, make informed decisions, put their ideas into practice. These skills could help students build confidence, collaborate and be creative (Chukwu & Amedu, 2025). Entrepreneurial skills include a wide array of talents essential for recognising possibilities, generating value, and effectively managing enterprises. These skills encompass decision-making, risk management, market analysis, financial literacy, leadership, innovation, and adaptation (Neck & Greene, 2016). Decision-making skills are essential for entrepreneurs, who frequently face various choices amid ambiguity and insufficient knowledge. Effective decision-making necessitates the capacity to examine information, assess alternatives, and choose suitable actions based on available resources and limitations (Shepherd, Williams, & Patzelt, 2022). Risk management is a crucial entrepreneurial skill, since entrepreneurs have to identify, evaluate, and minimise diverse hazards linked to business operations. This encompasses financial risks, market risks, operational risks, and strategic risks (Ali and Hana (2021). Mustofa, Riani, and Wardana (2023) show how business simulation activities improve students' understanding of various risk factors and develop their ability to devise appropriate risk management strategies through experiential learning environments. Simulation-based learning helps students explore various risk management strategies and evaluate their effectiveness in a controlled setting, thereby improving their understanding of the risk-reward trade-offs in decision-making (Hernández-Lara, Serradell-López, & Fitó-Bertran, 2022). Effective risk management necessitates a balanced methodology that recognises the possibility

of both advantageous and detrimental outcomes, while employing strategies to mitigate potential losses and enhance future profits (Dickinson, 2019). Market analysis skills empower entrepreneurs to discern client requirements, assess market prospects, and formulate efficient marketing plans. This encompasses the capacity to perform market research, evaluate competitor actions, comprehend consumer inclinations, and discern market trends (Wang, 2023). Strong market analysis skills enable entrepreneurs to make educated decisions regarding product creation, price, promotion, and distribution, hence enhancing the probability of business success (Payne, Kennedy, & Davis, 2018).

Entrepreneurship education has drawn a lot of interest in Nigeria as a possible remedy for acquiring skills through learning, where graduate unemployment rates are still high. The National Universities Commission (NUC) require all university curriculum to include entrepreneurship courses in order to give graduates the skills they need to work for themselves and start their own businesses (Ogunleye, 2023). However, Shahid and Ahsen (2021) have questioned the efficacy of these entrepreneurship programs, citing a fundamental obstacle as the absence of real-world, experiential learning opportunities. This review underscores the prospective benefits of simulation-based learning in improving the efficacy of entrepreneurship education in Nigerian educational institutions.

Studies have proven the efficacy of simulation-based learning in cultivating entrepreneurial skills. Zulfiqar, Sarwar, Aziz, Ejaz Chandia, and Khan (2019) discovered that business simulations markedly enhanced students' decision-making skills, strategic thinking, and risk assessment skills. Business simulations enhance students' capacity to make intricate judgments amid ambiguity by immersing them in realistic, dynamic contexts that require iterative decision-making. This experiential learning process helps bridge the gap between theoretical knowledge and practical application, thereby fostering deeper understanding and better preparation for actual business challenges (Shaari, Yusoff, Ghazali, and Duan., 2021). Ahn (2018) indicated that engagement in business simulations improved students' self-efficacy, creativity, and problem-solving skills, which are critical for entrepreneurial success. Also, Yakubu, A. et al. (2022) study demonstrates that simulation, among other active methods, is a significant predictor of entrepreneurial skill and self-reliance. Notwithstanding these findings, research on the precise processes by which simulation-based learning fosters the development of entrepreneurial abilities are insufficient in Nigeria.

The use of simulation-based learning into entrepreneurship education signifies a transition from conventional, lecture-centric pedagogies to more interactive, experiential

methodologies. This transition corresponds with modern educational theories, like conceptual and experiential learning, which underscore the significance of active participation, reflection, and practical application in the learning process (Kolb & Kolb, 2017). Okoro (2013) noted that several tactics may be used to improve the teaching of ICT in the business education in Nigerian universities. Using ICT as a teaching tool has the potential to benefit students, professors, and the business community as a whole. And allocating ICT resources to ensure comprehensive training for instructors on the efficient integration of simulation-based learning in their curricula. According to the author, a lack of suitable facilities and equipment, frequent power outages of ICT facilities, and a lack of effective application of ICT policy may affect simulation-based learning methods. Therefore, by presenting students with chances to apply theoretical knowledge in simulated business environments, simulation-based learning methods can boost the development of entrepreneurial skills and better equip students for the pressures of business ownership.

Statement of the Problem

In spite of the increasing focus on entrepreneurship in Nigerian educational institutions, most business graduates find it challenging to implement theoretical knowledge in practical business scenarios. Conventional pedagogical approaches frequently emphasize automatic recall and theoretical comprehension rather than practical application, resulting in students of business education being inadequately prepared for the intricacies of entrepreneurship. The disparity between theoretical knowledge and practical skills results in low success rates for business startups among graduates, thereby sustaining the cycle of unemployment (Okeke & Eze, 2022). Simulation-based learning has arisen as a viable solution to this issue, providing students the chance to cultivate entrepreneurial skills through practical experience in simulated business settings. Nonetheless, there is limited research specifically addressing empirical research investigating the efficacy of this method in Nigeria, especially with the cultivation of particular entrepreneurial skills such as decision-making, risk management, and market analysis

Although prior research has established the overall advantages of simulation-based learning, limited research has examined the specific correlations between simulation experiences and the development of individual entrepreneurial skill. This study intends to address these gaps by evaluating the relationship between simulation-based learning and the development of essential entrepreneurial skills among business education students in selected Nigerian universities.

Purpose of the Study

This study aimed at examining the relationship between simulation-based learning and entrepreneurial skills development among business education students. Specifically, the study sought to determine the:

1. relationship between simulation-based learning and decision-making skills development among business education students.
2. relationship between simulation-based learning and risk management abilities among business education students.
3. relationship between simulation-based learning and market analysis skills among business education students.

Research Questions

The following research questions guided the study:

1. What is the relationship between simulation-based learning and decision-making skills development among business education students?
2. What is the relationship between simulation-based learning and risk management abilities among business education students?
3. What is the relationship between simulation-based learning and market analysis skills among business education students?

Hypotheses

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

1. There is no significant relationship between simulation-based learning and decision-making skills development among business education students.
2. There is no significant relationship between simulation-based learning and risk management abilities among business education students.
3. There is no significant relationship between simulation-based learning and market analysis skills among business education students.

Methodology

This study utilised a correlational research design to examine the relationship between simulation-based learning and the development of entrepreneurial skills among business education students in selected Nigerian universities. The correlational design was suitable for this study as it facilitated the analysis of relationships between variables without altering the independent variable (Creswell & Creswell, 2023). The study population comprised 143 final-

year business education students from three universities in Enugu State: University of Nigeria 28.6%, n=20, Enugu State University of Science and Technology 137.3%, n=96, and Open University of Nigeria Enugu Learning Centre 38.61%, n=27. These are students who had been exposed to different simulation studies. Owing to the population's manageable size, a census method was utilised, obviating the necessity for sampling techniques. Data collection was conducted using two researcher-created instruments: the Simulation-Based Learning Assessment Questionnaire (SBLAQ) and the Entrepreneurial Skills Development Questionnaire (ESDQ). The SBLAQ included 15 items evaluating students' experiences with simulation-based learning in entrepreneurship courses, whereas the ESDQ contained 20 items measuring the effectiveness of the intervention in developing entrepreneurial skills, encompassing decision-making (7 items), risk management (6 items), and market analysis skillw (7 items). Both instruments utilised a 4-point Likert scale, with responses ranging from Strongly Agree (4 points) to Strongly Disagree (1 point).

The research instrument underwent face and content validation by two specialists, one specialising in business education and the other in educational measurement and evaluation, both in University of Nigeria. The validation process ensured the clarity, relevance, and appropriateness of the instruments for the study. Following the validation, a pilot study was conducted using 32 final-year business students from Federal College of Education (Technical) Enugu to establish the reliability of the instruments. The Cronbach's alpha method was used to determine the internal consistency of the instruments, yielding reliability coefficients of 0.85 for the SBLAQ and 0.79 for the ESDQ. The researchers administered the questionnaires to the respondents electronically through WhatsApp groups using google form. The purpose of the study was explained to the participants through the introductory part of the questionnaire, and they were assured of the confidentiality of their responses. 143 responses gotten represent a 100% response rate.

The collected data was organized and analyzed using the Statistical Product and Service Solutions (SPSS) version 26.0. Descriptive statistics, including means and standard deviations, were used to analyze the data for the research questions, while Pearson Product Moment Correlation (PPMC) was employed to test the hypotheses at a 0.05 level of significance. The decision rule was to reject the null hypothesis if the p-value was less than 0.05 and to accept the null hypothesis if the p-value was greater than or equal to 0.05.

Results

Research Question 1: What is the relationship between simulation-based learning and decision-making skills development among business education students?

Table 1: Relationship Between Simulation-Based Learning and Decision-Making Skills Development Among Business Education Students. (N= 143)

Variables		Simulation-Based Learning	Decision-Making Skills
Simulation-Based Learning	Pearson Correlation	1	.712
	Sig. (2-tailed)	.000	
Decision-Making Skills	Pearson Correlation	.712	1
	Sig. (2-tailed)	.000	

Source: Researcher's Survey (2025)

Table 1 presents the calculated coefficient (r) value examining the relationship between simulation-based learning and decision-making skills development among business education students in selected Nigerian universities. The table indicates a calculated r value of 0.712, suggesting a strong positive relationship between simulation-based learning and decision-making skills development among the students.

Research Question 2: What is the relationship between simulation-based learning and risk management abilities among business education students?

Table 2: Relationship Between Simulation-Based Learning and Risk Management Skills among Business Education Students (N= 143)

Variables		Simulation-Based Learning	Risk Management Abilities
Simulation-Based Learning	Pearson Correlation	1	.684
	Sig. (2-tailed)	.000	
Risk Management Skills	Pearson Correlation	.684	1
	Sig. (2-tailed)	.000	

Source: Researcher's Survey (2025)

Table 2 presents the calculated coefficient (r) value examining the relationship between simulation-based learning and risk management abilities among business education students in selected Nigerian universities. The table indicates a calculated r value of 0.684, suggesting a moderately strong positive relationship between simulation-based learning and risk management abilities among the students.

Research Question 3: What is the relationship between simulation-based learning and market analysis competencies among business education students?

Table 3: Relationship Between Simulation-Based Learning and Market Analysis Skills Among Business Education Students (N= 143)

Variables		Simulation-Based Learning	Market Analysis Skills
Simulation-Based Learning	Pearson Correlation	1	.621
	Sig. (2-tailed)	.000	
Market Analysis Skills	Pearson Correlation	.621	1
	Sig. (2-tailed)	.000	

Source: Researcher's Survey (2025)

Table 3 presents the calculated coefficient (r) value examining the relationship between simulation-based learning and market analysis skills among business education students in selected Nigerian universities. The table indicates a calculated r value of 0.621, suggesting a moderate positive relationship between simulation-based learning and market analysis skills among the students.

Hypotheses Testing

Hypothesis 1

There is no significant relationship between simulation-based learning and decision-making skills development among business education students.

Table 4: Significance of the Relationship Between Simulation-Based Learning and Decision-Making Skills Development Among Business Education Students (N=143)

Variables		Simulation-Based Learning	Decision-Making Skills
Simulation-Based Learning	Pearson Correlation	1	.712
	Sig. (2-tailed)	.000	
Decision-Making Skills	Pearson Correlation	.712	1
	Sig. (2-tailed)	.000	

Source: Researcher's Survey (2025)

Table 4 presents the calculated coefficient (r) value examining the relationship between simulation-based learning and decision-making skills development among business education students, along with the corresponding p-value. With a sample size of 143 and 141 degrees of freedom (df), the r-value is 0.712 and the p-value is 0.000. Since the p-value is less than the significance level of 0.05 ($p < 0.05$), the null hypothesis is rejected. This indicates that there is

a significant positive relationship between simulation-based learning and decision-making skills development among business education students in the selected Nigerian universities.

Hypothesis 2:

There is no significant relationship between simulation-based learning and risk management abilities of business education students.

Table 5: Significance of the Relationship Between Simulation-Based Learning and Risk Management Skills of Business Education Students (N=143)

Variables		Simulation-Based Learning	Risk Management Skills
Simulation-Based Learning	Pearson Correlation	1	.684
	Sig. (2-tailed)	.000	
Risk Management Skills	Pearson Correlation	.684	1
	Sig. (2-tailed)	.000	

Source: Researcher's Survey (2025)

Table 5 presents the calculated coefficient (r) value examining the relationship between simulation-based learning and risk management skills among business education students, along with the corresponding p-value. With a sample size of 143 and 141 degrees of freedom (df), the r-value is 0.684 and the p-value is 0.000. Since the p-value is less than the significance level of 0.05 ($p < 0.05$), the null hypothesis is rejected. This indicates that there is a significant positive relationship between simulation-based learning and risk management skills among business students in the selected Nigerian universities.

Hypothesis 3:

There is no significant relationship between simulation-based learning and market analysis skills among business education students.

Table 6: Significance of the Relationship Between Simulation-Based Learning and Market Analysis skills Among Business Education Students (N=143)

Variables		Simulation-Based Learning	Market Analysis Competencies
Simulation-Based Learning	Pearson Correlation	1	.621
	Sig. (2-tailed)	.000	
Market Analysis Skills	Pearson Correlation	.621	1
	Sig. (2-tailed)	.000	

Source: Researcher's Survey (2025)

Table 6 presents the calculated coefficient (r) value examining the relationship between simulation-based learning and market analysis skills among business education students, along with the corresponding p -value. With a sample size of 143 and 141 degrees of freedom (df), the r -value is 0.621 and the p -value is 0.000. Since the p -value is less than the significance level of 0.05 ($p < 0.05$), the null hypothesis is rejected. This indicates that there is a significant positive relationship between simulation-based learning and market analysis skills among business education students in the selected Nigerian universities.

Discussion of Findings

This study's findings demonstrated a significant positive correlation between simulation-based learning and the development of decision-making skills among business education students ($r = 0.712, p < 0.05$). This discovery indicates that simulation-based learning experiences substantially enhance the decision-making skills of business education students. This outcome corresponds with the research of (Shaari, 2021), which indicated that business simulations improve students' capacity to make intricate judgements amid ambiguity by offering them opportunities to engage in decision-making within realistic, dynamic contexts. Tao, Cheng, and Sun (2020) also discovered that simulation-based learning enhanced students' strategic decision-making skills by enabling them to witness the outcomes of their choices in a secure, controlled setting.

The link between simulation-based learning and decision-making skills can be ascribed to many causes. First, simulations offer students prompt feedback on their choices, enabling them to learn from errors and enhance their decision-making skills. Secondly, business simulations frequently expose students to intricate, multifarious challenges that necessitate the consideration of several elements and trade-offs, akin to actual business scenarios. Third, the iterative characteristics of simulations allow students to cultivate mental models of company operations and comprehend the interconnections among various decision variables, so improving their capacity to make informed, strategic decisions (Lainema, 2018).

The research identified a reasonably substantial positive correlation between simulation-based learning and risk management skills among business education students ($r = 0.684, p < 0.05$). This discovery indicates that simulation-based learning experiences substantially enhance the development of risk management skills in business education students. This outcome aligns with Dickinson's (2019) research, which shows that business simulations improved students' risk assessment and mitigation abilities by presenting diverse risk situations and enabling experimentation with alternative risk management solutions.

Mustofa, Riani, and Wardana (2023) also observed that engagement in business simulations enhanced students' comprehension of risk elements and their capacity to formulate effective risk management strategies.

The positive relationship between simulation-based learning and risk management skills can be ascribed to various variables. Simulations enable students to encounter the repercussions of hazardous decisions without incurring really financial or operational losses, thereby offering a secure setting for acquiring knowledge in risk management. Secondly, business simulations frequently integrate many risk elements, including market volatility, competitor behaviour, and resource limitations, thereby familiarising students with the intricacies of risk management in business environments. Third, simulations allow students to evaluate various risk management measures and assess their efficacy, so deepening their comprehension of risk-reward trade-offs (Hernández-Lara, Serradell-López, & Fitó-Bertran, 2022).

The findings of the study also demonstrated a moderate positive correlation between simulation-based learning and market analysis skills among business education students ($r = 0.621$, $p < 0.05$). The result indicates that simulation-based learning experiences substantially enhance market analysis skills in business education students. This outcome corresponds with the research of Payne, Kennedy, and Davis (2018), which indicated that business simulations improved students' capacity to analyse market dynamics, discern client demands, and formulate efficient marketing strategies. Oliveira, Rodrigues, and Costa (2022) similarly discovered that simulation-based learning enhanced students' competencies in market segmentation, competitive analysis, and strategic positioning.

The positive link between simulation-based learning and market analysis skills can be ascribed to various causes. Simulations frequently furnish students with market data and competitive insights, necessitating the analysis of this information to formulate strategic judgments. Secondly, business simulations generally incorporate market feedback systems, enabling students to analyse the impact of their marketing decisions on consumer behaviour and market share (Suk, 2024). Third, simulations allow students to test various marketing tactics and assess their efficacy under varied market situations, thereby deepening their comprehension of market dynamics (Faria, Hutchinson, Wellington, & Gold, 2019).

This study's findings have substantial implications for entrepreneurship education in Nigerian universities. The robust correlation between simulation-based learning and the cultivation of entrepreneurial skills indicates that such learning methodologies ought to be

more extensively incorporated into entrepreneurship education curricula. Universities can enhance students' preparedness for real-world entrepreneurial difficulties by offering opportunities to cultivate decision-making skills, risk management skills, and market analysis skills through simulation experiences.

Conclusion

This study examined the effectiveness of simulation-based learning in developing entrepreneurial skills among business education students. The findings showed strong positive relationships between business simulation experiences and the growth of decision-making skills, risk management skills, and market analysis skills among the business education students. It concludes that simulation-based learning is substantially associated with the development of entrepreneurial skills among business education students in Enugu State. Simulations can augment the relevance and efficacy of entrepreneurship education programs by offering students opportunities to implement theoretical principles in realistic business scenarios.

Recommendations

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

1. Entrepreneurship educators in Nigerian universities ought to incorporate more extensive simulation-based learning methods into their entrepreneurship curricula to augment the cultivation of entrepreneurial skills among students.
2. Entrepreneurship educators ought to create live simulation experiences that explicitly enhance decision-making skills, risk management capabilities, and market analysis competencies, as these are essential for entrepreneurial success.
3. Universities should allocate resources towards superior business simulation software integration and ensure comprehensive training for instructors on the efficient integration of simulation-based learning in their curricula.
4. University authorities have to invest additional learning resources that will facilitate simulation-based learning in entrepreneurship education, which should include dedicated computer laboratories and technical support personnel.

References

- Adu, E. O., Eze, I. R., & Adu, E. I. (2013). ICT and business education in Nigerian universities. *International Journal of Education and Development using ICT*, 9(2), 80-85.
- Alabi E. B (2022) Adoption of Artificial Intelligence in Business Education and School Administration. *Journal of Business Education, Management Science and Information Technology*. 8(2), pp 106-155
- Ali Murad Syed & Hana Saeed Bawazir | (2021) Recent trends in business financial risk – A bibliometric analysis, *Cogent Economics & Finance*, 9:1, 1913877, DOI: 10.1080/23322039.2021.1913877
- Amoor, S. S., & Udoh, A. A. (2019). Repositioning business education for national transformation through entrepreneurship education. *Nigerian Journal of Business Education*, 6(1), 45–54.
- Chukwu, E.O., & Amedu, A.N.(2025). The Role of Self-Efficacy in Mediating Entrepreneurial Alertness and Skill Development in Secondary Schools. *Economic Education Analysis Journal*, 14 (1), 94-105
- Creswell, J. W., & Creswell, J. D. (2023). *Research design: Qualitative, quantitative, and mixed methods approaches* (6th ed.). SAGE Publications.
- Dickinson, G. (2019). Risk management in entrepreneurship education: A simulation-based approach. *Journal of Education for Business*, 94(3), 184-191.
- Egolum, E. O. and Chukwuma M.U. (2022) Development of Entrepreneurial Skills in Secondary School Students through Science, Technology and Mathematics (STM) Education – *International Journal of*
- Emre-Akdoğan, E. & Yazgan-Sağ, G. (2019). Transformation of theoretical knowledge into instructional practice: A mathematics teacher’s journey. *Issues in Educational Research*, 29(1), 55-69. <http://www.iier.org.au/iier29/emre-akdogan.pdf>
- Faria, A. J., Hutchinson, D., Wellington, W. J., & Gold, S. (2019). Developments in business gaming: A review of the past 40 years. *Simulation & Gaming*, 50(5), 525-553.
- Gentry, J. W. (2015). *Guide to business gaming and experiential learning*. Routledge.
- Hernández-Lara, A. B., Serradell-López, E., & Fitó-Bertran, À. (2022). Risk management in business simulation: Evidence from a European study. *Simulation & Gaming*, 53(3), 323-342.
- Iwu, C. G., Ezeuduji, I. O., & Eresia-Eke, C. (2020). The entrepreneurship debate in business education: A review. *Journal of Entrepreneurship Education*, 23(2), 1–13.
- Kolb, A. Y., & Kolb, D. A. (2017). Experiential learning theory as a guide for experiential educators in higher education. *Experiential Learning & Teaching in Higher Education*, 1(1), 7-44.
- Lainema, T. (2018). Enhancing entrepreneurial mindset through business simulation. In N. Katz, & A. Corbett (Eds.), *Models for entrepreneurship education* (pp. 145-172). Springer.
- Mustofa, R. M., Riani, A. L., & Wardana, L. W. (2023). The impact of business simulation on risk management skills: A study of Indonesian business students. *Journal of Education for Business*, 98(1), 32-41.
- Neck, H. M., & Greene, P. G. (2016). *Teaching entrepreneurship: A practice-based approach*. Edward Elgar Publishing.
- Ogunleye, A. J. (2023). Entrepreneurship education in Nigerian universities: Policy, practice, and prospects. *Journal of Education Policy*, 38(2), 207-221.
- Okeke, C. I., & Eze, P. N. (2022). The relevance of entrepreneurship education in Nigerian universities: Challenges and way forward. *Education + Training*, 64(2), 208-222.

- Okoro J. (2013) Strategies for Enhancing the Teaching of ICT in Business Education Programmes as Perceived by Business Education Lecturers in Universities in South-South Nigeria, *International Education Studies*, Vol 6, 10.
- Oliveira, M., Rodrigues, F., & Costa, H. (2022). Developing market analysis skills through business simulations: A case study from Portugal. *Simulation & Gaming*, 53(2), 187-204.
- Payne, B. K., Kennedy, E. J., & Davis, M. A. (2018). Teaching business ethics through business simulations: The impact on moral reasoning and market analysis skills. *Journal of Business Ethics Education*, 15(1), 243-265.
- Salas, E., Wildman, J. L., & Piccolo, R. F. (2019). Using simulation-based training to enhance management education. *Academy of Management Learning & Education*, 8(4), 559-573.
- Shaari, I., Yusoff, R. M., Ghazali, F., & Duan, Y. (2021). Business simulation as a tool for entrepreneurial decision-making skills development. *Journal of Education for Business*, 96(4), 227-234.
- Shaari, M. Y., Yusoff, W. F. W., Ghazali, P. L., & Duan, W. (2021). The role of business simulation games in enhancing students' decision-making skills in higher education. *Education and Information Technologies*, 26(5), 5469–5486. <https://doi.org/10.1007/s10639-021-10517-2>
- Shepherd, D. A., Williams, T. A., & Patzelt, H. (2022). *Entrepreneurial decision making: Theory and practice*. Edward Elgar Publishing.
- Suk, J. (2024) What is Business Simulation? Type & Benefits of Using Business Simulations. retrieved from: <https://www.hurix.com/blogs/what-is-business-simulation-type-benefits-of-using-business-simulations/>
- Tao, Y., Cheng, Y., & Sun, J. (2020). The impact of business simulation games on entrepreneurial attitudes and intentions: The mediating role of entrepreneurial learning. *Journal of Hospitality, Leisure, Sport & Tourism Education*, 26, 100234. <https://doi.org/10.1016/j.jhlste.2019.100234>
- Tao, Y., Cheng, Z., & Sun, Y. (2020). The effect of business simulation on entrepreneurial strategic decision-making and opportunity recognition. *Sustainability*, 12(17), 6917.
- Wang, H. (2023). What Abilities Does Business Simulation Cultivate College Students. *Journal of Education and Learning*; 12(1) doi:10.5539/jel.v12n1p29.
- Yakubu, A. S., Kayode, A. E., and Netswera, F. G. (2022). Entrepreneurship education and economic emancipation of youths in Oyo State, Nigeria, West Africa. *International Journal of Research and Innovation in Social Science*. 06(07): 667-671. doi:10.47772/ijriss.2022.6740
- Zulfiqar, S., Sarwar, B., Aziz, S., Ejaz Chandia, K., & Khan, M. K. (2019). An analysis of influence of business simulation games on business school students' attitude and intention toward entrepreneurial activities. *Journal of Educational Computing Research*, 57(1), 106-130.