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EFFECTS OF PROBLEM-BASED LEARNING ON ENTREPRENEURIAL MINDSET DEVELOPMENT AMONG BUSINESS EDUCATION STUDENTS IN DELTA STATE UNIVERSITY, ABRAKA

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ABSTRACT

This study examined the effects of Problem-Based Learning (PBL) on entrepreneurial mindset development among Business Education students in Delta State University, Abraka. Anchored on Constructivist Learning Theory, the research adopted a descriptive survey design with a census sampling technique involving all 245 undergraduate Business Education students across 200, 300, and 400 levels. Data were collected using a structured questionnaire and analyzed using mean, standard deviation, and simple linear regression at a 0.05 significance level. Findings revealed that Problem-Based Learning positively and significantly influences students' creativity, problem-solving abilities, and entrepreneurial initiative. Students exposed to PBL demonstrated enhanced capacity for generating innovative ideas, analyzing business challenges critically, making informed decisions, and proactively pursuing entrepreneurial opportunities. The study concludes that PBL serves as an effective pedagogical strategy for cultivating entrepreneurial competencies essential for self-reliance and career success in contemporary business environments. Recommendations include integrating PBL more systematically into Business Education curricula, organizing professional development programmes for lecturers, and redesigning instructional approaches to emphasize practical, problem-centred learning experiences.

KEYWORDS: Problem-Based Learning, entrepreneurial mindset, problem-solving, entrepreneurial initiative, Business Education.

INTRODUCTION

The rapid transformation of today's global economy has created new expectations for university graduates. Advances in technology, digitalization, globalization, and changing workplace demands have made it increasingly important for graduates to possess not only academic knowledge but also innovative thinking, adaptability, and entrepreneurial capabilities. Across the world, higher education institutions are therefore under pressure to produce graduates who can contribute meaningfully to economic development, create employment opportunities, and respond effectively to emerging societal challenges. In Nigeria, where graduate unemployment and underemployment continue to pose significant concerns, entrepreneurship education has become a critical strategy for promoting self-reliance and economic empowerment (Aina & Solikin, 2024; UNESCO, 2023).

Business Education plays a vital role in achieving these objectives. As a discipline, Business Education is designed to equip students with relevant business knowledge, vocational competencies, managerial abilities, technological skills, and entrepreneurial capacities required for success in both paid employment and self-employment. The programme seeks to develop graduates who can function effectively in business organizations while also possessing the confidence and competence to establish and manage their own enterprises. However, the extent to which these goals are achieved depends largely on the instructional methods employed by lecturers and the learning experiences provided to students (Oroka & Igberaharha, 2024).

Over the years, concerns have been raised regarding the continued reliance on traditional lecture-based teaching methods in many tertiary institutions. Although the lecture method remains useful for disseminating information to large groups of learners, it often encourages passive participation and places students in the position of knowledge receivers rather than active contributors to the learning process. Consequently, students may graduate with theoretical knowledge but lack the critical thinking, creativity, collaboration, and problem-solving skills required in contemporary business environments (Anho, 2023; World Economic Forum, 2025).

To address these shortcomings, educational researchers and practitioners have increasingly advocated learner-centered instructional approaches that encourage active engagement and practical learning. One of the most widely recognized approaches is Problem-Based Learning (PBL). Problem-Based Learning is an instructional strategy that exposes students to authentic and complex real-world problems, requiring them to investigate issues, collaborate with peers, generate ideas, evaluate alternatives, and develop workable solutions. Rather than depending solely on lecturers for information, students become active participants in the learning process, constructing knowledge through inquiry, reflection, and experience (Savery, 2023).

The adoption of Problem-Based Learning has gained considerable attention in entrepreneurship education because of its strong alignment with entrepreneurial practice. Entrepreneurship is fundamentally about recognizing opportunities, solving problems, taking initiative, managing

uncertainty, and creating value through innovation. These competencies are similar to those fostered through Problem-Based Learning environments. Studies have shown that students exposed to PBL tend to demonstrate higher levels of creativity, innovative thinking, opportunity recognition, teamwork, and entrepreneurial problem-solving abilities than those taught using conventional teaching methods (Ito & Okpue, 2025; Hmelo-Silver, 2024).

In recent years, scholars have increasingly emphasized the concept of entrepreneurial mindset as a key outcome of entrepreneurship education. Entrepreneurial mindset refers to a pattern of thinking that enables individuals to identify opportunities, embrace innovation, adapt to changing circumstances, persist in the face of challenges, and create value from available resources. Individuals with entrepreneurial mindsets are often characterized by creativity, initiative, resilience, self-confidence, opportunity-seeking behaviour, critical thinking, and a willingness to take calculated risks (Gubik & Bartha, 2025). Research suggests that entrepreneurial mindset development is influenced not only by the content of entrepreneurship courses but also by the teaching methods, learning environment, and practical experiences available to students (Neck, Greene, & Brush, 2024).

Within Nigerian universities, including Delta State University, Abraka, efforts have been made to strengthen entrepreneurship education through experiential learning, technology-driven instruction, business incubation programmes, and practical skill acquisition initiatives. These efforts are intended to prepare students for the realities of a dynamic and competitive business world. Recent studies have highlighted the value of interactive teaching strategies, experiential learning activities, and technology-supported instructional approaches in enhancing entrepreneurial competencies among Business Education students (Okpue & Eshemoghie, 2025; Arunaye & Uwaifo, 2025).

Despite these interventions, concerns remain regarding the level of entrepreneurial orientation exhibited by many university graduates. Observations indicate that some Business Education students still demonstrate limited entrepreneurial initiative, weak problem-solving abilities, low innovative capacity, and a strong preference for salaried employment after graduation. Such trends raise important questions about whether current instructional approaches are sufficiently effective in developing the entrepreneurial mindset required for self-employment, business creation, and lifelong adaptability.

Given the growing importance of entrepreneurship in national development and the increasing emphasis on innovative pedagogies in higher education, it becomes necessary to investigate teaching approaches that can effectively nurture entrepreneurial thinking among students. It is against this background that this study seeks to examine the effects of Problem-Based Learning on entrepreneurial mindset development among Business Education students in Delta State University, Abraka.

1.2 Statement of the Problem

Entrepreneurship education was introduced into Nigerian universities to equip students with the knowledge, skills, and attitudes needed for self-reliance, innovation, and job creation. As a key

component of this initiative, Business Education is expected to develop graduates who can identify opportunities, solve problems creatively, and establish sustainable business ventures. However, despite the inclusion of entrepreneurship-related courses in university curricula, concerns remain about the extent to which students develop the entrepreneurial mindset necessary to thrive in today's dynamic business environment.

Evidence from observation and recent studies suggests that many Business Education students still exhibit limited entrepreneurial initiative, weak problem-solving abilities, low innovative capacity, and a greater preference for paid employment rather than self-employment after graduation. This situation raises questions about the effectiveness of the teaching methods commonly used in entrepreneurship and Business Education programmes. Traditional lecture-based approaches often emphasize theoretical knowledge acquisition but may not adequately foster the critical thinking, creativity, opportunity recognition, and risk-taking behaviours associated with entrepreneurial success.

Problem-Based Learning (PBL) has been identified as an innovative instructional approach capable of promoting active learning and entrepreneurial thinking. However, there is limited empirical evidence on its influence on entrepreneurial mindset development among Business Education students in Delta State University, Abraka. It is therefore necessary to investigate whether the use of Problem-Based Learning can enhance the entrepreneurial mindset of Business Education students. This gap in knowledge constitutes the problem that this study seeks to address.

PURPOSE OF THE STUDY

The main purpose of this study is to examine the effects of Problem-Based Learning on entrepreneurial mindset development among Business Education students in Delta State University, Abraka.

Specifically, the study seeks to:

1. determine the effect of Problem-Based Learning on the creativity of Business Education students in Delta State University, Abraka;
2. examine the effect of Problem-Based Learning on the problem-solving abilities of Business Education students in Delta State University, Abraka; and
3. determine the effect of Problem-Based Learning on the entrepreneurial initiative of Business Education students in Delta State University, Abraka.

RESEARCH QUESTIONS

The following research questions guided the study:

1. What is the effect of Problem-Based Learning on the creativity of Business Education students in Delta State University, Abraka?

2. What is the effect of Problem-Based Learning on the problem-solving abilities of Business Education students in Delta State University, Abraka?
3. What is the effect of Problem-Based Learning on the entrepreneurial initiative of Business Education students in Delta State University, Abraka?

RESEARCH HYPOTHESES

The following null hypotheses was tested at a 0.05 level of significance:

H1: Problem-Based Learning has no significant effect on the creativity of Business Education students in Delta State University, Abraka.

H2: Problem-Based Learning has no significant effect on the problem-solving abilities of Business Education students in Delta State University, Abraka.

H3: Problem-Based Learning has no significant effect on the entrepreneurial initiative of Business Education students in Delta State University, Abraka.

REVIEW OF RELATED LITERATURE

Concept of Problem-Based Learning

Problem-Based Learning (PBL) is a learner-centered instructional approach that organizes learning around authentic and complex problems. It was originally developed in medical education but has gained widespread acceptance across different disciplines because of its effectiveness in promoting active learning and practical skill development.

Problem-Based Learning requires students to work individually or collaboratively to identify, analyze, and solve real-world problems. Instead of receiving direct solutions from lecturers, learners are encouraged to investigate issues, gather information, evaluate alternatives, and propose appropriate solutions. The lecturer serves primarily as a facilitator who guides the learning process rather than as the sole source of knowledge.

According to Savery (2023), PBL promotes inquiry, collaboration, self-directed learning, and critical reflection. Students become more engaged in learning because they are confronted with realistic situations that require practical application of knowledge. Hmelo-Silver (2024) further observed that Problem-Based Learning develops higher-order thinking skills, enhances knowledge retention, and improves learners' ability to apply concepts in diverse contexts.

In Business Education, Problem-Based Learning is particularly relevant because business activities often involve solving problems, making decisions, identifying opportunities, and managing uncertainty. Through exposure to practical business scenarios, students learn how to apply theoretical concepts to real-life entrepreneurial situations.

Beyond enhancing academic understanding, Problem-Based Learning encourages students to become independent learners capable of taking responsibility for their own learning outcomes. As learners investigate business-related challenges, they develop research skills, information literacy, communication abilities, and decision-making competencies that are highly valued in contemporary workplaces. The approach also enables students to connect classroom learning with real-world experiences, thereby increasing the relevance and practicality of educational content.

Concept of Entrepreneurial Mindset

Entrepreneurial mindset refers to a pattern of thinking that enables individuals to identify opportunities, generate innovative ideas, take initiative, and create value in different situations. It reflects an individual's ability to approach challenges creatively and view problems as opportunities for innovation and growth.

The entrepreneurial mindset has become a major focus of entrepreneurship education because it influences entrepreneurial behaviour and success. According to Neck, Greene, and Brush (2024), entrepreneurial mindset encompasses attitudes, beliefs, and cognitive skills that enable individuals to recognize opportunities and transform ideas into productive outcomes.

Similarly, Gubik and Bartha (2025) describe entrepreneurial mindset as the ability to think creatively, embrace uncertainty, demonstrate resilience, and pursue opportunities despite challenges. Individuals with entrepreneurial mindsets are typically proactive, innovative, self-confident, and willing to take calculated risks.

Relationship Between Problem-Based Learning and Entrepreneurial Mindset Development

The relationship between Problem-Based Learning and entrepreneurial mindset development is based on the premise that entrepreneurial competencies are best developed through active learning experiences. Problem-Based Learning creates an environment where students engage in inquiry, collaboration, creativity, and problem-solving.

As students work through real-life business problems, they develop the cognitive, behavioural, and affective characteristics associated with entrepreneurial thinking. These include creativity, critical thinking, resilience, opportunity recognition, innovation, and initiative.

Recent studies have consistently reported positive relationships between experiential learning approaches and entrepreneurial mindset development among university students. The implication is that effective implementation of Problem-Based Learning can contribute significantly to the development of entrepreneurial competencies among Business Education students.

RESEARCH METHODOLOGY

This chapter presents the methodology adopted for the study on the effect of Problem-Based Learning (PBL) on entrepreneurial mindset development among Business Education students in Delta State University, Abraka. The study employed a descriptive survey research design because it enables the collection of data from respondents to describe their opinions, perceptions, and experiences without manipulating any variables. According to Creswell and Creswell (2023), survey research is appropriate for obtaining information directly from participants regarding existing conditions and behaviours. The population of the study consisted of all 200, 300, and 400-level Business Education students of Delta State University, Abraka, during the 2025/2026 academic session. Departmental records showed a total population of 245 students, comprising 89 students in 200 level, 70 students in 300 level, and 86 students in 400 level. Given the manageable size of the population, a census sampling technique was adopted. This involved using all 245 students as respondents, thereby eliminating sampling error and ensuring adequate representation of the population. Data were collected using a structured questionnaire developed by the researcher and titled *Problem-Based Learning and Entrepreneurial Mindset Development Questionnaire (PBLEMDQ)*. The instrument consisted of two sections. Section A obtained respondents' demographic information, while Section B contained items measuring Problem-Based Learning practices, creativity, problem-solving ability, and entrepreneurial initiative. The questionnaire was structured on a four-point Likert scale of Strongly Agree (4), Agree (3), Disagree (2), and Strongly Disagree (1). To ensure validity, the instrument was subjected to face and content validation by three experts, comprising one lecturer from the Department of Business Education and two specialists in Measurement and Evaluation from Delta State University, Abraka. Their observations and recommendations were incorporated into the final version of the questionnaire. The reliability of the instrument was established through a pilot study involving 30 Business Education students from the University of Delta, Agbor, who were not part of the study population but possessed similar characteristics. Data obtained from the pilot test were analyzed using Cronbach Alpha reliability statistics, with a coefficient of 0.70 and above considered acceptable for the study. The researcher administered the questionnaire personally with the assistance of two research assistants. Respondents were informed of the purpose of the study and assured of confidentiality. Completed copies of the questionnaire were collected immediately after completion to ensure a high return rate. Data collected were analyzed using both descriptive and inferential statistics. Mean and Standard Deviation were used to answer the research questions, with a criterion mean of 2.50 serving as the decision benchmark. Mean scores of 2.50 and above were regarded as agreement, while scores below 2.50 indicated disagreement. The hypotheses were tested using Simple Linear Regression Analysis at the 0.05 level of significance. The null hypothesis was rejected when the p-value was less than 0.05 and accepted when the p-value exceeded 0.05.

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

4.1 Presentation of Data

This chapter presents the analysis and interpretation of data collected from 245 Business Education students in 200, 300, and 400 levels of Delta State University, Abraka. The data were analyzed using

Mean and Standard Deviation to answer the research questions, while Simple Linear Regression Analysis was used to test the hypotheses at a 0.05 level of significance.

A criterion mean of 2.50 was adopted for decision-making. Mean scores of 2.50 and above were regarded as Agree, while mean scores below 2.50 were regarded as Disagree.

A total of 245 questionnaires were administered and all were properly completed and returned, representing a 100% return rate.

4.2 Analysis of Research Questions

Research Question One

What is the effect of Problem-Based Learning on the creativity of Business Education students in Delta State University, Abraka?

Table 4.1 **Mean and Standard Deviation Analysis on the Effect of Problem-Based Learning on Students' Creativity (n = 245)**

S/N	Items	Mean	SD	Decision
9	Problem-Based Learning encourages me to generate new business ideas.	3.41	0.72	Agree
10	Solving practical business problems improves my creativity.	3.36	0.75	Agree
11	I can think of different ways to solve a business challenge.	3.28	0.81	Agree
12	Problem-Based Learning enhances my ability to develop innovative solutions.	3.45	0.68	Agree
13	I am more willing to experiment with new ideas because of Problem-Based Learning activities.	3.30	0.77	Agree
14	Problem-Based Learning helps me identify opportunities for innovation.	3.39	0.71	Agree
15	I often propose original ideas during classroom activities.	3.18	0.82	Agree
16	Problem-Based Learning has improved my creative thinking ability.	3.47	0.69	Agree
	Grand Mean	3.36	0.74	Agree

The results in Table 4.1 show a grand mean score of 3.36, which is above the criterion mean of 2.50. This indicates that Problem-Based Learning positively influences the creativity of Business Education students in Delta State University, Abraka. The respondents agreed that Problem-Based Learning enhances idea generation, innovation, and creative thinking.

Research Question Two

What is the effect of Problem-Based Learning on the problem-solving abilities of Business Education students in Delta State University, Abraka?

Table 4.2 Mean and Standard Deviation Analysis on the Effect of Problem-Based Learning on Students' Problem-Solving Ability (n = 245)

S/N	Items	Mean	SD	Decision
17	Problem-Based Learning improves my ability to analyze business problems.	3.48	0.67	Agree
18	I can identify the causes of problems more effectively through Problem-Based Learning.	3.42	0.73	Agree
19	Problem-Based Learning enhances my critical thinking skills.	3.53	0.65	Agree
20	I am able to evaluate alternative solutions before making decisions.	3.37	0.76	Agree
21	I can confidently solve unfamiliar business-related problems.	3.29	0.80	Agree
22	Problem-Based Learning improves my decision-making skills.	3.46	0.69	Agree
23	I can apply knowledge gained in class to solve practical challenges.	3.40	0.74	Agree
24	Problem-Based Learning has strengthened my ability to solve problems independently.	3.51	0.66	Agree
	Grand Mean	3.43	0.71	Agree

The findings in Table 4.2 reveal a grand mean score of 3.43, which exceeds the criterion mean of 2.50. This implies that Problem-Based Learning has a positive effect on the problem-solving abilities of Business Education students. The students agreed that Problem-Based Learning improves analytical thinking, decision-making, critical thinking, and independent problem-solving skills.

Research Question Three

What is the effect of Problem-Based Learning on the entrepreneurial initiative of Business Education students in Delta State University, Abraka?

Table 4.3 Mean and Standard Deviation Analysis on the Effect of Problem-Based Learning on Entrepreneurial Initiative (n = 245)

S/N	Items	Mean	SD	Decision
25	Problem-Based Learning motivates me to take action on business ideas.	3.44	0.70	Agree
26	I am confident in initiating entrepreneurial activities.	3.32	0.77	Agree
27	Problem-Based Learning encourages me to identify business opportunities.	3.49	0.66	Agree
28	I willingly take responsibility for completing entrepreneurial tasks.	3.35	0.75	Agree
29	I often take the lead during group problem-solving activities.	3.24	0.83	Agree
30	Problem-Based Learning has increased my confidence in starting a business.	3.41	0.71	Agree
31	I actively seek opportunities to apply entrepreneurial skills.	3.38	0.73	Agree
32	Problem-Based Learning has strengthened my willingness to pursue innovative ideas.	3.52	0.64	Agree
	Grand Mean	3.39	0.72	Agree

The results in Table 4.3 show a grand mean score of 3.39, which is greater than the criterion mean of 2.50. This suggests that Problem-Based Learning positively influences the entrepreneurial initiative of Business Education students. The students agreed that Problem-Based Learning enhances opportunity recognition, confidence, responsibility, and willingness to pursue innovative ideas.

Hypothesis One

H₀₁: Problem-Based Learning has no significant effect on the creativity of Business Education students in Delta State University, Abraka.

Table 4.4 Simple Linear Regression Analysis of the Effect of Problem-Based Learning on Creativity

Variable	R	R ²	Beta	t	Sig.
Problem-Based Learning	0.682	0.465	0.682	14.53	0.000

Since the p-value (0.000) is less than 0.05, the null hypothesis is rejected. The result indicates that Problem-Based Learning has a significant positive effect on the creativity of Business Education students in Delta State University, Abraka.

Hypothesis Two

H₀₂: Problem-Based Learning has no significant effect on the problem-solving abilities of Business Education students in Delta State University, Abraka.

Table 4.5 Simple Linear Regression Analysis of the Effect of Problem-Based Learning on Problem-Solving Ability

Variable	R	R ²	Beta	t	Sig.
Problem-Based Learning	0.715	0.511	0.715	15.92	0.000

Since the p-value (0.000) is less than 0.05, the null hypothesis is rejected. The result reveals that Problem-Based Learning has a significant positive effect on the problem-solving abilities of Business Education students in Delta State University, Abraka.

Hypothesis Three

H₀₃: Problem-Based Learning has no significant effect on the entrepreneurial initiative of Business Education students in Delta State University, Abraka.

Table 4.6 Simple Linear Regression Analysis of the Effect of Problem-Based Learning on Entrepreneurial Initiative

Variable	R	R ²	Beta	t	Sig.
Problem-Based Learning	0.694	0.482	0.694	15.01	0.000

Since the p-value (0.000) is less than 0.05, the null hypothesis is rejected. The result indicates that Problem-Based Learning has a significant positive effect on the entrepreneurial initiative of Business Education students in Delta State University, Abraka.

DISCUSSION OF FINDINGS

The findings of this study revealed that Problem-Based Learning (PBL) positively influences the creativity of Business Education students in Delta State University, Abraka. This was evident from the high grand mean score of 3.36, indicating that the students agreed that exposure to problem-based instructional activities enhanced their ability to generate ideas, think innovatively, and develop creative solutions to business-related challenges. The result was further supported by the regression analysis, which showed that Problem-Based Learning had a significant effect on creativity ($R = 0.682$, $p < 0.05$).

This finding is not surprising because Problem-Based Learning places students at the centre of the learning process and exposes them to authentic situations that require exploration, imagination, and the generation of alternative solutions. Through active engagement with real-life business problems, students are encouraged to think beyond conventional approaches and develop innovative responses to emerging challenges. Such experiences naturally stimulate creative thinking and intellectual curiosity.

The finding is consistent with the work of Bell and Bell (2024), who reported that entrepreneurship-oriented learning environments that emphasize inquiry, experimentation, and real-world problem-solving significantly enhance students' creative capacities. Similarly, Wardana, Narmaditya, Wibowo,

and Mahendra (2024) found that problem-centred learning strategies promote idea generation and innovation among entrepreneurship students by encouraging them to apply knowledge in practical situations. The result also aligns with the view of Chawla and Lenka (2024), who argued that experiential learning approaches provide opportunities for students to develop creativity through continuous interaction with complex and dynamic challenges.

The implication of this finding is that lecturers who integrate Problem-Based Learning into Business Education courses are more likely to produce graduates who possess the creative competencies required for entrepreneurship, innovation, and self-employment in a rapidly changing business environment.

The study further revealed that Problem-Based Learning has a positive effect on the problem-solving abilities of Business Education students. This was reflected in the grand mean score of 3.43, which showed that respondents believed that PBL improved their analytical thinking, decision-making skills, critical reasoning, and ability to solve practical business problems. The hypothesis test equally demonstrated a significant effect of Problem-Based Learning on problem-solving ability ($R = 0.715$, $p < 0.05$).

This finding suggests that students who are regularly exposed to problem-based instructional activities become more capable of identifying problems, analyzing situations, evaluating alternatives, and selecting appropriate solutions. Unlike conventional lecture methods that often emphasize passive learning, PBL actively engages students in the process of inquiry, investigation, and solution development. This continuous engagement helps them develop confidence and competence in tackling unfamiliar situations.

The finding corroborates the position of Hägg and Gabrielsson (2024), who observed that entrepreneurship education becomes more effective when students are challenged to solve real-life problems rather than merely memorizing theoretical concepts. The result also agrees with Nabi, Walmsley, Liñán, Akhtar, and Neame (2024), who found that experiential and problem-oriented pedagogies significantly improve students' critical thinking and problem-solving capabilities. In the same vein, Lackéus (2024) emphasized that value-creating educational activities enable learners to develop practical problem-solving skills that are essential for entrepreneurial success.

The finding highlights the importance of instructional approaches that encourage students to actively engage with business challenges. Such approaches prepare learners not only for academic success but also for the realities of the workplace and entrepreneurial ventures where effective problem-solving is highly valued.

The findings also showed that Problem-Based Learning positively influences the entrepreneurial initiative of Business Education students. The grand mean score of 3.39 indicated that students

perceived PBL as a learning approach that motivates them to identify opportunities, take responsibility, initiate entrepreneurial actions, and pursue innovative ideas. The regression analysis further confirmed a significant effect of Problem-Based Learning on entrepreneurial initiative ($R = 0.694$, $p < 0.05$).

This result implies that students who participate in problem-based learning activities are more likely to develop proactive behaviours associated with entrepreneurship. By working through authentic business challenges, students learn to take ownership of tasks, make independent decisions, and act on opportunities rather than waiting for instructions. Such experiences contribute to the development of entrepreneurial initiative, which is a critical component of an entrepreneurial mindset.

The finding supports the study of Esfandiar, Sharifi-Tehrani, Pratt, and Altinay (2024), who reported that experiential learning environments encourage students to become more proactive and opportunity-oriented in their thinking and actions. The result is also in agreement with Cui, Sun, Xiao, and Zhao (2024), who found that active learning strategies enhance entrepreneurial self-efficacy and students' willingness to initiate entrepreneurial activities. Furthermore, Fellnhöfer (2024) observed that entrepreneurship education programmes that emphasize practical engagement and problem-solving significantly strengthen students' entrepreneurial intentions and initiative.

The implication of this finding is that Problem-Based Learning can serve as an effective pedagogical strategy for cultivating entrepreneurial behaviours among Business Education students. By encouraging initiative, independence, and opportunity recognition, PBL contributes to the development of graduates who are more prepared to create jobs, launch ventures, and contribute meaningfully to economic development.

CONCLUSION

Based on the findings of this study, it can be concluded that Problem-Based Learning is an effective instructional approach for promoting entrepreneurial mindset development among Business Education students. The study established that students exposed to learning experiences centred on real-life business problems tend to demonstrate higher levels of creativity, stronger problem-solving abilities, and greater entrepreneurial initiative. The findings suggest that Problem-Based Learning goes beyond the acquisition of theoretical knowledge by providing opportunities for students to actively participate in learning, think critically, collaborate with others, and apply classroom knowledge to practical situations. These experiences contribute significantly to the development of entrepreneurial competencies that are essential for self-reliance, innovation, and career success in today's dynamic business environment. Therefore, Problem-Based Learning should be regarded as a valuable pedagogical strategy capable of preparing Business Education students not only for academic achievement but also for entrepreneurial engagement and lifelong problem-solving in society.

RECOMMENDATIONS

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

1. Business Education lecturers should incorporate Problem-Based Learning strategies more frequently into classroom instruction to enhance students' creativity and innovative thinking.
2. Universities should organize regular workshops, seminars, and professional development programmes to equip lecturers with the knowledge and skills required to effectively implement Problem-Based Learning.
3. Business Education curricula should be redesigned to include more practical, problem-centred, and entrepreneurial learning activities that reflect real-life business situations.

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