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# An analysis of learning challenges affecting the plan performance of Grade 12 students of ISAT: Basis for enhanced instructional strategies

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**Abstract**

**Aim:** This study assessed the learning challenges affecting the business plan performance of Grade 12 students at the Isabela School of Arts and Trade (ISAT) and provided a basis for developing enhanced instructional strategies to improve entrepreneurship teaching and learning.

**Methodology:** The study employed a descriptive-correlational research design involving Grade 12 students of ISAT. Data were gathered using a structured survey questionnaire and analyzed using appropriate descriptive and inferential statistical tools to determine the level of learning challenges and their relationship with students' business plan performance.

**Results:** The findings revealed that students experienced learning challenges related to academic demands, motivation, and adaptation to different learning modes, which influenced their business plan performance. The results further emphasized the importance of responsive teaching practices, differentiated instruction, learner-centered approaches, and strengthened academic support systems in addressing identified learning gaps. These findings served as the basis for developing an enhanced instructional strategy framework to improve student engagement and business plan performance.

**Conclusion:** The study concludes that identifying and addressing students' learning challenges is essential for improving business plan performance. Implementing responsive and learner-centered instructional strategies can strengthen entrepreneurship education, enhance learning outcomes, and support curriculum improvement in senior high school.

***Keywords:*** *learning challenges, business plan performance, entrepreneurship education, Grade 12 students, instructional strategies*

## INTRODUCTION

Entrepreneurship education has become a strategic priority in educational systems worldwide because of its capacity to develop learners' entrepreneurial competencies, innovation, critical thinking, creativity, problem-solving skills, and lifelong learning dispositions. In contemporary education, entrepreneurship is no longer viewed solely as preparation for business ownership but as an educational approach that equips learners with transferable competencies required to thrive in rapidly changing economic and technological environments. Within senior high school curricula, entrepreneurship education contributes to preparing students for higher education, employment, self-employment, and active participation in national and global economic development.

Recent empirical evidence consistently supports the educational value of entrepreneurship instruction. Entrepreneurship education enhances students' self-awareness, career aspirations, entrepreneurial confidence, and readiness for future employment or enterprise creation. These findings reinforce the view that entrepreneurship education serves not only as an academic discipline but also as an instrument for promoting sustainable economic participation, innovation, and social development through education.

Despite its recognized educational importance, entrepreneurship education continues to face significant instructional and implementation challenges. Studies have reported that insufficient teacher preparation, limited instructional expertise, inadequate learning resources, and the absence of contextually responsive curricula constrain the effective delivery of entrepreneurship education (Haneberg et al., 2022). These instructional limitations reduce

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opportunities for experiential learning, learner engagement, and authentic application of entrepreneurial concepts. Consequently, students frequently encounter difficulties in achieving the intended learning outcomes, particularly in performance-based assessments that require the integration of conceptual understanding, analytical reasoning, and practical application.

One of the most important performance-based outputs in entrepreneurship education is the preparation of a business plan. Business plan development serves as both an instructional strategy and an authentic assessment through which learners demonstrate their understanding of entrepreneurial concepts, market analysis, financial planning, organizational management, and strategic decision-making. However, previous studies indicate that many students perceive business plan preparation as a compliance requirement rather than a meaningful learning experience, thereby limiting engagement and reducing opportunities for deeper learning.

Research likewise indicates that students experience considerable difficulty translating theoretical entrepreneurial knowledge into practical business applications. Hamzat et al. (2023) observed that learners often struggle to transform entrepreneurial concepts into coherent business strategies, financial projections, market analyses, and operational plans. Such findings suggest that conventional instructional approaches may not sufficiently develop the higher-order thinking skills required for effective business plan preparation.

Student performance in entrepreneurship education is influenced not only by technical competence but also by multiple learner-related factors. Raza et al. (2021) demonstrated that motivation and related psychological factors indirectly influence students' academic performance. Collectively, these findings indicate that business plan performance is shaped by the interaction among learning challenges, learner motivation, self-efficacy, instructional quality, and learning experiences rather than by content knowledge alone.

Within the Philippine educational context, entrepreneurship is an essential component of the Senior High School curriculum. At the Isabela School of Arts and Trade (ISAT), Grade 12 students are required to prepare business plans as part of their entrepreneurship-related subjects. Classroom observations and instructional experiences indicate noticeable variations in the quality of students' business plans despite receiving similar instructional content. These differences suggest the presence of underlying learning challenges that may involve cognitive understanding, technical competence, instructional experiences, and access to appropriate learning resources. Such challenges may ultimately affect students' ability to produce high-quality performance-based outputs.

Although previous investigations have extensively examined entrepreneurship education, entrepreneurial competencies, motivation, instructional practices, and business planning, relatively few studies have comprehensively investigated how cognitive, technical, instructional, and resource-related learning challenges simultaneously influence business plan performance among Philippine senior high school students. Existing studies generally examine these variables independently or within different educational contexts, leaving limited empirical evidence regarding their combined influence on performance-based entrepreneurship assessment in Philippine secondary education. This represents an important gap in the literature that warrants further investigation.

The present study addresses this gap by examining the learning challenges affecting the business plan performance of Grade 12 students at the Isabela School of Arts and Trade. Specifically, the study investigates the nature and extent of cognitive, technical, instructional, and resource-related learning challenges and examines their relationship with students' business plan performance. Unlike previous studies that primarily focused on entrepreneurial competencies or instructional practices separately, this investigation provides an integrated analysis of multiple learning challenges affecting a major performance-based assessment in entrepreneurship education within the Philippine senior high school setting.

The findings of this study are expected to make significant contributions to educational research and practice. For teachers, the results may provide evidence for designing more responsive, learner-centered, and differentiated instructional strategies. For curriculum developers and instructional designers, the findings may inform improvements in entrepreneurship curriculum implementation and performance-based assessment. School administrators, department heads, and instructional leaders may utilize the results in strengthening instructional supervision, resource allocation, and professional development initiatives that enhance entrepreneurship instruction. Furthermore, the proposed enhanced instructional strategies may contribute to teacher education programs by supporting the development of innovative pedagogical approaches that improve students' business plan performance, learner engagement, and entrepreneurial competence.

Ultimately, this study contributes to entrepreneurship education by providing empirical evidence on how learning challenges influence business plan performance and by proposing enhanced instructional strategies that strengthen teaching effectiveness, improve learner outcomes, support curriculum improvement, and advance performance-based entrepreneurship education in senior high schools.

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## Review of Related Literature and Studies

### Entrepreneurship Education in Senior High School

#### Concept and Importance of Entrepreneurship Education

Entrepreneurship education has become an essential component of contemporary secondary education because it equips learners with the competencies necessary to succeed in an increasingly dynamic, innovation-driven, and knowledge-based economy. Beyond preparing students to establish business enterprises, entrepreneurship education develops higher-order thinking skills, creativity, innovation, problem-solving abilities, leadership, collaboration, financial literacy, and decision-making competencies that are transferable across academic, professional, and personal contexts. Consequently, many educational systems have incorporated entrepreneurship into their curricula to prepare learners not only for employment but also for lifelong learning, responsible citizenship, and sustainable economic participation.

Within senior high school education, entrepreneurship serves as an experiential discipline that enables learners to apply theoretical knowledge through authentic, performance-based learning activities. Among these activities, business plan preparation occupies a central role because it requires students to integrate market analysis, financial planning, organizational management, marketing strategies, and entrepreneurial decision-making into a coherent and feasible business proposal. Such authentic learning experiences promote deeper understanding of entrepreneurial principles while strengthening analytical, communication, and critical-thinking skills that extend beyond classroom instruction.

Recent literature consistently demonstrates the educational value of entrepreneurship education. Entrepreneurship instruction significantly enhances students' self-awareness, entrepreneurial confidence, career aspirations, and readiness for entrepreneurial careers. Likewise, Igwe et al. (2022) emphasized that entrepreneurship education becomes more effective when curricula are contextually relevant and responsive to learners' social and economic environments. These findings suggest that entrepreneurship education should move beyond theoretical instruction toward learner-centered, competency-based experiences that foster meaningful learning.

Although entrepreneurship education has gained widespread recognition internationally, previous studies also acknowledge persistent challenges in evaluating its educational effectiveness. Existing research shows that while entrepreneurship programs are extensively implemented across educational institutions, evidence regarding measurable learning outcomes, instructional effectiveness, and performance-based assessment remains inconsistent. This indicates that entrepreneurship education requires continuous empirical evaluation, particularly within specific educational contexts where instructional practices, learning environments, and learner characteristics differ substantially.

From an educational perspective, entrepreneurship education contributes not only to business competency but also to curriculum innovation, instructional improvement, and learner development. Understanding how students learn entrepreneurial concepts and identifying the factors that influence their performance provide educators with evidence for designing more responsive curricula, improving classroom instruction, and strengthening assessment practices. Consequently, investigating students' learning challenges in business plan preparation represents an important contribution to educational research because it directly informs teaching effectiveness and curriculum enhancement.

Overall, the reviewed literature establishes entrepreneurship education as a multidimensional educational discipline that develops entrepreneurial competencies while simultaneously strengthening critical thinking, creativity, problem-solving, collaboration, and lifelong learning. Nevertheless, existing studies indicate that instructional quality, contextual relevance, and learner characteristics continue to influence educational outcomes, highlighting the need for localized investigations into factors affecting students' performance in entrepreneurship education.

#### Role of Entrepreneurship in Developing Students' Skills and Entrepreneurial Competencies

Entrepreneurship education plays a fundamental role in developing students' intellectual, technical, interpersonal, and entrepreneurial competencies. Rather than focusing exclusively on business creation, entrepreneurship instruction cultivates a broad range of transferable skills that enable learners to respond effectively to changing economic, technological, and workplace demands. Through authentic learning activities, students acquire competencies in opportunity recognition, strategic planning, financial literacy, communication, collaboration, leadership, innovation, and ethical decision-making, all of which contribute to lifelong employability and entrepreneurial readiness.

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Within the senior high school curriculum, entrepreneurship education provides students with opportunities to apply classroom knowledge through experiential and project-based learning activities. Business plan preparation, collaborative projects, case analyses, and entrepreneurial simulations encourage learners to synthesize theoretical concepts with practical application while strengthening analytical reasoning and creative problem-solving. These authentic learning experiences promote independent thinking and enable students to appreciate entrepreneurship as both an economic activity and a lifelong competency.

Recent empirical evidence supports the contribution of entrepreneurship education to holistic learner development. Kayyali (2023) found that entrepreneurship programs cultivate creativity, resilience, initiative, leadership, collaboration, communication, and digital competencies, all of which are considered essential twenty-first-century skills. Similarly, Adeoye et al. (2024) reported that entrepreneurship instruction enhances students' critical thinking, creativity, and leadership capabilities through learner-centered instructional approaches.

Despite these positive outcomes, existing literature also indicates that some entrepreneurial competencies remain insufficiently investigated. While leadership, creativity, communication, and innovation are consistently reported as outcomes of entrepreneurship education, fewer studies have examined how entrepreneurship instruction develops financial management skills, strategic planning abilities, and long-term entrepreneurial success. Furthermore, relatively limited research has explored how these competencies directly influence students' performance in preparing business plans, particularly among senior high school learners.

From an educational standpoint, competency development extends beyond individual student achievement. Teachers require evidence-based instructional strategies that effectively develop entrepreneurial competencies, while curriculum developers need empirical findings that guide curriculum revision and competency alignment. Likewise, school leaders benefit from understanding how instructional practices influence competency development when planning teacher professional development and instructional improvement initiatives.

Collectively, the literature demonstrates that entrepreneurship education contributes significantly to developing students' academic, professional, and entrepreneurial competencies. However, additional research remains necessary to determine how specific learning challenges affect competency acquisition and subsequent performance in authentic entrepreneurial tasks such as business plan preparation.

**Entrepreneurship Education and Economic Development**

Entrepreneurship education has long been recognized as an important contributor to sustainable economic growth because it prepares learners to become innovators, entrepreneurs, and productive members of society. By equipping students with entrepreneurial knowledge, skills, and attitudes, educational institutions foster innovation, business creation, employment generation, and economic resilience. Consequently, entrepreneurship education has increasingly become an integral component of national educational reforms aimed at strengthening economic competitiveness and improving workforce readiness.

Within senior high school education, entrepreneurship instruction encourages learners to develop entrepreneurial mindsets characterized by creativity, initiative, adaptability, and opportunity recognition. Students acquire competencies that enable them to identify business opportunities, evaluate market conditions, manage resources, and develop feasible business ventures. These educational experiences contribute not only to individual career development but also to broader community and national economic advancement.

Previous studies consistently support the positive relationship between entrepreneurship education and economic development. Entrepreneurship education equips students with essential entrepreneurial knowledge and practical competencies; however, educational outcomes are influenced by individual motivation, learning environments, and contextual support systems. Countries that have integrated entrepreneurship education more comprehensively into their educational systems generally demonstrate stronger entrepreneurial ecosystems and higher levels of innovation, suggesting that educational investment contributes substantially to long-term economic development.

Nevertheless, the literature also indicates that entrepreneurship education alone cannot guarantee entrepreneurial success. Educational outcomes depend upon the interaction among instructional quality, learner motivation, experiential learning opportunities, institutional support, and access to adequate educational resources. These findings emphasize that effective entrepreneurship education requires both high-quality instruction and supportive educational environments that encourage meaningful learner engagement.

From the perspective of educational policy and curriculum development, these findings underscore the importance of continuously evaluating entrepreneurship instruction to ensure that educational programs effectively prepare students for future economic participation. Investigating factors that influence students' business plan performance therefore contributes not only to entrepreneurship education but also to curriculum improvement, instructional innovation, and educational quality assurance.

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Overall, the reviewed literature confirms that entrepreneurship education contributes substantially to economic development through competency development, innovation, and workforce preparation. However, maximizing these benefits requires educational programs that effectively address students' learning challenges while promoting meaningful entrepreneurial learning experiences.

**Entrepreneurship Education as a Response to Youth Unemployment**

Entrepreneurship education has increasingly been recognized as an educational strategy for addressing youth unemployment by preparing learners to create employment opportunities rather than relying solely on traditional wage employment. Through entrepreneurship instruction, students acquire the knowledge, skills, attitudes, and confidence necessary to pursue entrepreneurial careers, establish business enterprises, and contribute to local economic development. This educational approach promotes self-reliance, innovation, and adaptability, thereby expanding students' future career options.

Empirical evidence strongly supports the contribution of entrepreneurship education to employment readiness. Martínez-Gregorio et al. (2021) reported a significant relationship between entrepreneurship education and employment outcomes among graduates, indicating that entrepreneurial competencies acquired through education contribute to improved employability and enterprise creation. More recently, Gazi et al. (2024) found that students perceived entrepreneurship education as an important contributor to economic development, with mentorship emerging as a critical factor influencing entrepreneurial success.

Broader societal evidence similarly supports the role of entrepreneurship education in reducing unemployment. Musariwa and Tinonetsana (2023) documented declining youth unemployment associated with strengthened entrepreneurship initiatives and training programs. Likewise, Cui et al. (2021) concluded through a systematic review that entrepreneurship education positively transforms students' entrepreneurial mindsets and encourages greater participation in entrepreneurial activities.

Although these studies collectively demonstrate positive employment outcomes, they also suggest that entrepreneurship education achieves its greatest impact when instructional quality, mentorship, experiential learning, institutional support, and learner motivation operate together. Entrepreneurship education should therefore be viewed not merely as a curriculum subject but as a comprehensive educational strategy requiring effective pedagogy, supportive learning environments, and meaningful performance-based assessment.

Educationally, these findings reinforce the need to strengthen entrepreneurship curricula, teacher preparation, instructional strategies, and learner support systems. Schools, curriculum developers, educational leaders, and policymakers can utilize evidence from entrepreneurship education research to improve instructional quality, enhance performance-based learning, and better prepare graduates for evolving labor market demands.

In summary, the literature consistently supports entrepreneurship education as an effective educational response to youth unemployment. Nevertheless, further research remains necessary to determine how learning challenges encountered during entrepreneurship instruction influence students' performance in authentic entrepreneurial tasks such as business plan preparation, particularly within the Philippine senior high school context.

**Business Plan as a Performance-Based Learning Output**

**Importance of Business Planning in Entrepreneurship Education**

Business planning is widely recognized as one of the most important learning activities in entrepreneurship education because it enables students to transform entrepreneurial concepts into practical and measurable outputs. Rather than simply recalling theoretical knowledge, learners are required to integrate market analysis, financial planning, operational management, organizational structure, and strategic decision-making into a coherent business proposal. Consequently, business plan preparation serves as an authentic learning experience that promotes the application of knowledge, higher-order thinking, and entrepreneurial competence.

Within entrepreneurship education, business planning provides opportunities for experiential and project-based learning that closely resemble real-world entrepreneurial processes. Students are expected to identify business opportunities, analyze market conditions, evaluate financial feasibility, and formulate strategic plans while considering the realities of business operations. These activities encourage learners to synthesize classroom instruction with practical application, thereby strengthening both conceptual understanding and problem-solving abilities.

Recent studies consistently support the educational value of business planning. Souto and Rodriguez-Lopez (2021) reported that integrating business plan development into entrepreneurship instruction significantly improved students' understanding of entrepreneurial processes while increasing their confidence and motivation to engage in entrepreneurial activities. Similarly, Abd Ghani and Mohamad (2025) demonstrated that business plan simulations

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significantly enhanced students' entrepreneurial understanding among 114 participants, indicating that experiential planning activities promote deeper learning and greater learner engagement.

From an educational perspective, business planning supports curriculum implementation by providing teachers with meaningful performance-based assessments that measure students' understanding, application, and integration of entrepreneurial competencies. It likewise offers curriculum developers and school administrators valuable evidence for evaluating instructional effectiveness and identifying areas requiring instructional improvement. Overall, business planning remains a vital instructional strategy that strengthens entrepreneurship education through authentic assessment, experiential learning, and competency development.

**Definition and Components of a Business Plan**

A business plan is generally defined as a comprehensive written document that describes a proposed business venture by outlining its objectives, products or services, target market, operational strategies, organizational structure, financial projections, marketing approaches, and implementation plans. It functions as both a strategic planning document and a communication tool that guides entrepreneurial decision-making while demonstrating the feasibility and sustainability of a proposed enterprise.

Within entrepreneurship education, the business plan serves as an authentic performance-based assessment through which students demonstrate their mastery of entrepreneurial knowledge and competencies. Preparing a business plan requires learners to integrate information from multiple disciplines, including marketing, finance, economics, management, communication, and strategic planning. This multidisciplinary nature distinguishes business planning from conventional written examinations because it measures students' ability to apply knowledge to realistic entrepreneurial situations.

Existing literature consistently supports this conceptualization of business plans. Previous studies collectively describe business plans as structured documents that organize entrepreneurial ideas into practical, evidence-based proposals capable of guiding business operations and supporting informed decision-making. Although much of the available literature is qualitative in nature, the consistency of these findings across numerous studies provides strong support for the educational importance of business planning.

Educationally, defining the components of a business plan provides clear instructional expectations for both teachers and students. Understanding these components also assists educators in developing valid assessment criteria, designing appropriate instructional activities, and evaluating learners' entrepreneurial competencies through authentic performance tasks. Consequently, business plans represent not only practical entrepreneurial documents but also comprehensive educational assessment instruments.

**Business Plan as a Teaching and Assessment Tool**

Business plan preparation is widely recognized as both an instructional strategy and a performance-based assessment in entrepreneurship education. As a teaching strategy, it enables learners to integrate theoretical concepts with practical application through authentic entrepreneurial tasks. As an assessment tool, it allows educators to evaluate students' analytical thinking, creativity, decision-making, communication skills, financial reasoning, and entrepreneurial competencies in a holistic manner.

Unlike traditional paper-and-pencil examinations, business plans require students to demonstrate meaningful understanding by applying classroom concepts to realistic business situations. Learners must identify business opportunities, conduct market research, prepare financial analyses, develop operational strategies, and justify entrepreneurial decisions using evidence-based reasoning. These authentic learning experiences promote deeper conceptual understanding while strengthening students' confidence in applying entrepreneurial knowledge.

Several empirical studies support the instructional effectiveness of business plan preparation. Kim (2025) described business planning as an innovative learner-centered instructional strategy that actively engages students throughout the entrepreneurial learning process. Business plan preparation effectively bridges theoretical entrepreneurship education with practical entrepreneurial application. FBusiness planning simultaneously develops cognitive, affective, and psychomotor learning domains, highlighting its value as a comprehensive educational approach.

Business plans likewise function as valid performance-based assessments. Business plan methodology significantly improved students' entrepreneurial competencies, time management, and learning outcomes among 425 participants. These findings suggest that carefully designed business plan assessments can effectively measure learners' understanding while encouraging meaningful engagement with entrepreneurship education.

For educational practitioners, business plans provide multiple benefits beyond student assessment. Teachers can use business plans to monitor learners' progress, identify misconceptions, provide formative feedback, and evaluate

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instructional effectiveness. Likewise, school administrators and curriculum developers may use assessment outcomes to improve curriculum implementation, instructional planning, and teacher professional development. Consequently, business planning represents an effective instructional innovation that supports competency-based education and authentic assessment practices.

**Importance of Business Plan Preparation in Skill Development**

Business plan preparation contributes significantly to the development of higher-order cognitive skills and entrepreneurial competencies by requiring learners to analyze information, solve complex problems, evaluate business opportunities, and make strategic decisions. Through the planning process, students organize ideas systematically, interpret market information, prepare financial analyses, and develop feasible operational strategies. These learning experiences strengthen analytical thinking, research competence, communication skills, creativity, and organizational abilities that are valuable both within and beyond entrepreneurship education.

Although recent empirical studies rarely isolate business plan preparation as an independent instructional intervention, they consistently recognize the importance of the competencies developed through business planning activities. Jardim (2021) emphasized that strategic planning, analytical reasoning, and problem-solving constitute fundamental competencies for entrepreneurial success, supporting the educational value of business planning as a structured learning activity.

From an instructional perspective, business plan preparation promotes interdisciplinary learning by integrating knowledge from management, finance, economics, communication, marketing, and strategic planning. Teachers therefore gain opportunities to evaluate multiple learning outcomes simultaneously while encouraging students to apply knowledge in authentic contexts. This integration aligns with competency-based education, learner-centered instruction, and performance-based assessment practices that increasingly characterize contemporary educational systems.

Overall, the literature demonstrates that business plan preparation extends beyond the production of a written document. It functions as a comprehensive learning experience that develops entrepreneurial competencies, strengthens transferable skills, and prepares students for lifelong learning and professional success.

**Students' Perception of Business Plan Writing**

Students' perceptions of business plan preparation significantly influence their motivation, engagement, learning experiences, and overall academic performance. Learners who perceive business planning as meaningful and relevant are generally more willing to invest time and effort in completing authentic entrepreneurial tasks. Conversely, students who regard business plans as overly complex or purely academic requirements may demonstrate lower motivation, weaker engagement, and reduced learning outcomes.

Empirical studies consistently indicate that business plan preparation is perceived by many students as a demanding academic task.

Research further demonstrates that specific components of business plans contribute to students' learning difficulties. Abd Ghani and Mohamad (2025) found that experiential business plan simulations substantially improved students' entrepreneurial understanding, indicating that learner engagement increases when instructional activities are practical, interactive, and contextually relevant.

These findings collectively suggest that students' perceptions are influenced not only by the inherent complexity of business planning but also by instructional quality, teaching strategies, and the relevance of learning experiences. Consequently, educators should adopt learner-centered pedagogical approaches that clearly communicate the purpose of business planning while providing sufficient instructional support, feedback, and authentic learning opportunities.

**Transferability of Business Planning Skills to Real-Life Entrepreneurship**

Business planning develops competencies that extend beyond classroom learning and support students' future entrepreneurial endeavors. By preparing business plans, learners acquire practical experience in market analysis, strategic planning, financial decision-making, organizational management, and entrepreneurial communication. These competencies are transferable to actual business environments, enabling students to make informed decisions, evaluate entrepreneurial opportunities, and respond effectively to changing market conditions.

The educational value of business planning lies in its ability to integrate knowledge across multiple disciplines. Business plan preparation is an integrative learning process requiring students to synthesize concepts from finance, marketing, management, economics, and organizational leadership. Such interdisciplinary integration closely mirrors the complex decision-making processes encountered in real entrepreneurial practice.

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Educationally, transferability is particularly important because entrepreneurship education seeks to prepare learners not merely for academic achievement but also for lifelong professional competence. Authentic learning experiences such as business plan preparation therefore bridge the gap between classroom instruction and practical entrepreneurial application, allowing students to develop competencies that remain valuable regardless of their future career paths.

Overall, the reviewed literature demonstrates that business planning serves multiple educational purposes. It strengthens conceptual understanding, develops entrepreneurial competencies, promotes interdisciplinary learning, enhances authentic assessment, and prepares learners for real-world entrepreneurial activities. These findings further reinforce the importance of examining the learning challenges that influence students' business plan performance, thereby providing empirical evidence for improving entrepreneurship instruction and developing enhanced instructional strategies.

**Students' Business Plan Performance**

**Concept of Academic Performance in Entrepreneurship Subjects**

Academic performance is commonly defined as the extent to which students achieve the intended learning outcomes of a course through the successful completion of instructional requirements and assessment tasks. Within entrepreneurship education, academic performance extends beyond mastery of theoretical concepts and encompasses students' ability to apply entrepreneurial knowledge to authentic, real-world situations. Consequently, entrepreneurship subjects increasingly utilize performance-based assessments that evaluate learners' analytical thinking, creativity, innovation, communication, collaboration, and decision-making skills.

Business plan preparation has become one of the most widely accepted measures of academic performance in entrepreneurship education because it requires students to integrate multiple entrepreneurial competencies into a comprehensive and practical output. Unlike conventional written examinations that primarily assess factual knowledge, business plans evaluate learners' capacity to analyze business opportunities, formulate strategic decisions, prepare financial projections, organize business operations, and communicate entrepreneurial ideas effectively. Through these authentic learning tasks, educators gain a more comprehensive understanding of students' entrepreneurial competence and readiness for practical application.

Educationally, measuring academic performance through authentic entrepreneurial tasks offers several advantages. Teachers obtain richer evidence of students' conceptual understanding and practical competence, curriculum developers gain empirical information for improving instructional materials, and school administrators receive objective evidence for evaluating instructional effectiveness. Consequently, performance-based assessments such as business plan preparation align well with contemporary competency-based education and learner-centered assessment practices.

Overall, the literature consistently supports the use of authentic entrepreneurial outputs as valid indicators of academic performance. However, learners' success in completing these tasks depends on numerous interacting factors that extend beyond subject knowledge alone, thereby necessitating further investigation into the learning challenges affecting business plan performance.

**Indicators of Business Plan Performance**

Business plan performance refers to the quality, coherence, feasibility, and completeness of students' written business plans as evaluated using established entrepreneurial criteria. These indicators provide objective measures of students' ability to integrate entrepreneurial knowledge with practical application while demonstrating higher-order thinking and decision-making competencies. As a performance-based assessment, business plans evaluate both the learning process and the final product, making them valuable indicators of entrepreneurial competence.

Among the commonly recognized indicators of business plan performance are clarity of business concept, market analysis, financial planning, organizational structure, marketing strategy, operational feasibility, and overall business viability. Collectively, these dimensions measure students' ability to analyze entrepreneurial opportunities, organize information logically, make evidence-based decisions, and communicate business ideas effectively.

From an educational assessment perspective, clearly defined performance indicators improve the validity and reliability of business plan evaluation. They provide teachers with standardized criteria for assessing entrepreneurial competencies while helping students understand expectations regarding quality, completeness, and practical application. Furthermore, well-defined indicators facilitate constructive feedback, allowing learners to identify strengths and areas requiring improvement.

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Overall, the literature demonstrates that business plan performance should be evaluated using multiple dimensions that collectively reflect entrepreneurial competence rather than relying on isolated measures. Such multidimensional assessment provides a more accurate representation of students' learning outcomes and supports continuous instructional improvement.

**Factors Influencing Students' Academic and Performance-Based Outputs**

Students' academic achievement and performance-based outputs are influenced by a complex interaction of cognitive, motivational, instructional, social, and environmental factors. Rather than depending solely on intellectual ability, successful learning outcomes emerge from the combined effects of learner characteristics, instructional quality, educational resources, classroom experiences, and institutional support. Understanding these interacting factors enables educators to develop instructional strategies that respond effectively to students' learning needs.

Educationally, these findings underscore that student performance cannot be attributed to individual ability alone. Effective learning environments require qualified teachers, learner-centered instructional approaches, supportive classroom climates, adequate learning resources, and meaningful assessment practices. Consequently, educational institutions must adopt comprehensive instructional improvement initiatives that address both learner characteristics and instructional conditions.

Collectively, the literature demonstrates that academic performance reflects the interaction among personal, instructional, and environmental variables. This multidimensional perspective provides a strong rationale for examining learning challenges affecting business plan performance through multiple categories rather than focusing on a single determinant.

**Relationship Between Learning Competencies and Performance**

Learning competencies constitute the knowledge, skills, attitudes, and behaviors that enable students to successfully complete academic tasks and demonstrate meaningful learning. In entrepreneurship education, competencies include opportunity recognition, market analysis, financial planning, innovation, communication, leadership, collaboration, and strategic decision-making. These competencies collectively determine students' ability to prepare comprehensive, feasible, and high-quality business plans.

Research consistently indicates that stronger entrepreneurial competencies correspond with improved academic performance. Students who demonstrate higher levels of entrepreneurial knowledge and practical skills are generally better able to organize ideas, analyze business opportunities, evaluate risks, and formulate effective entrepreneurial strategies. Consequently, competency development represents one of the primary objectives of entrepreneurship education.

Empirical evidence supports this relationship. Experiential learning significantly enhanced entrepreneurial competencies, which subsequently contributed to improved business performance. Opportunity recognition, market analysis, and strategic planning emerged as important mediating competencies influencing entrepreneurial success. Although the study focused primarily on practicing entrepreneurs, its findings reinforce the educational importance of developing these competencies among students.

From an instructional perspective, competency development depends upon learner-centered teaching approaches, authentic assessment, continuous feedback, and meaningful experiential learning opportunities. Teachers therefore play a central role in designing instructional experiences that enable learners to acquire entrepreneurial competencies progressively while demonstrating them through authentic performance tasks such as business plan preparation.

Curriculum developers and educational leaders likewise benefit from understanding the relationship between competencies and performance because such evidence informs curriculum design, competency standards, teacher professional development, and instructional quality assurance. By aligning instructional strategies with competency development, educational institutions can better prepare students for academic success and future entrepreneurial endeavors.

Overall, the literature consistently demonstrates that entrepreneurial competencies significantly influence students' academic performance and the quality of their business plans. However, competency development may itself be constrained by various learning challenges, including cognitive, technical, instructional, and resource-related barriers. Examining these challenges therefore provides a stronger understanding of why variations in business plan performance occur among learners and offers valuable evidence for designing enhanced instructional strategies that support competency development and improve educational outcomes.

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**Learning Challenges in Entrepreneurship Education**

**Cognitive Learning Challenges**

Cognitive learning challenges refer to the difficulties students encounter in understanding, processing, organizing, and applying knowledge required to accomplish academic tasks. In entrepreneurship education, these challenges commonly involve comprehending entrepreneurial concepts, analyzing business opportunities, interpreting financial information, solving authentic business problems, and integrating theoretical knowledge into practical applications. Since entrepreneurship requires higher-order thinking, students experiencing cognitive difficulties often struggle to produce coherent, evidence-based, and feasible business plans.

Business plan preparation demands the integration of multiple knowledge domains, including marketing, finance, management, economics, and strategic planning. Learners must synthesize information, evaluate alternatives, make informed decisions, and communicate business ideas logically. Consequently, deficiencies in conceptual understanding or analytical reasoning may significantly reduce the quality of students' business plans and their overall academic performance.

Empirical studies consistently recognize cognitive learning challenges as important barriers to entrepreneurial learning. Many learners experienced considerable difficulty understanding unfamiliar entrepreneurial concepts and terminology. Such conceptual challenges limited students' ability to successfully perform entrepreneurship-related academic tasks, particularly those requiring analytical reasoning and practical application.

However, existing literature also suggests that cognitive difficulties cannot always be attributed solely to students' intellectual abilities. Learning challenges frequently resulted from differences between students' expectations and instructional approaches rather than from insufficient entrepreneurial capability. Their findings indicate that instructional alignment, assessment practices, and classroom interactions substantially influence students' cognitive learning experiences.

Educationally, these findings emphasize the importance of learner-centered instructional strategies that promote conceptual understanding through active engagement, collaborative learning, authentic assessment, and guided reflection. Teachers should design instructional experiences that progressively develop higher-order thinking while providing appropriate scaffolding for complex entrepreneurial concepts. Likewise, curriculum developers should ensure that entrepreneurship curricula sequence learning competencies logically to facilitate conceptual development.

Overall, the literature demonstrates that cognitive learning challenges significantly influence students' ability to understand entrepreneurial concepts and apply them effectively in business plan preparation. Addressing these challenges is therefore essential for improving entrepreneurial learning, academic performance, and authentic assessment outcomes.

**Technical Learning Challenges**

Technical learning challenges refer to students' difficulties in performing the practical and procedural tasks required to prepare comprehensive business plans. These challenges include financial computation, quantitative analysis, report writing, data organization, interpretation of market information, preparation of financial statements, and the use of appropriate business planning techniques. Since entrepreneurship education combines conceptual knowledge with practical application, inadequate technical competencies often reduce the quality, accuracy, and feasibility of students' business plans.

Preparing a business plan requires learners to demonstrate proficiency in organizing information systematically, preparing realistic financial projections, interpreting business data, and communicating entrepreneurial ideas through structured written reports. Students who lack these technical competencies may experience difficulty completing essential sections of business plans despite possessing adequate theoretical understanding.

From an educational perspective, teachers should integrate scaffolded learning activities, guided practice, financial literacy instruction, writing workshops, and authentic assessment into entrepreneurship instruction to strengthen students' technical competencies. Curriculum developers likewise should ensure that technical skills are progressively developed across entrepreneurship courses rather than introduced only during business plan preparation.

Collectively, the literature demonstrates that technical learning challenges significantly affect students' ability to prepare accurate, organized, and feasible business plans. Improving these competencies through learner-centered instruction and continuous practice can substantially enhance students' entrepreneurial performance and academic achievement.

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**Instructional Learning Challenges**

Instructional learning challenges arise from the teaching-learning process itself and include ineffective instructional strategies, insufficient teacher guidance, unclear explanations, limited classroom interaction, inappropriate assessment practices, and inadequate feedback mechanisms. Because entrepreneurship education relies heavily on experiential learning and authentic performance tasks, instructional quality directly influences students' understanding, engagement, motivation, and academic performance.

Effective entrepreneurship instruction requires teachers to facilitate experiential learning through business simulations, collaborative activities, project-based learning, authentic assessment, and continuous mentoring. When instruction relies primarily on traditional lecture-based approaches without sufficient opportunities for active learning, students may struggle to understand complex entrepreneurial concepts and apply them effectively during business plan preparation.

Educational implications extend beyond classroom instruction. Teachers require ongoing professional development to strengthen their capacity to implement learner-centered entrepreneurship instruction, design authentic assessments, and provide effective feedback. School leaders likewise play an important role by supporting instructional innovation, allocating instructional resources, and promoting collaborative professional learning among entrepreneurship teachers.

Overall, the reviewed literature consistently demonstrates that instructional quality substantially influences students' entrepreneurial learning experiences and business plan performance. Improving instructional practices therefore represents one of the most effective approaches for addressing students' learning challenges and enhancing educational outcomes.

**Resource-Related Learning Challenges**

Resource-related learning challenges refer to limitations in the availability and accessibility of educational materials, technological resources, instructional facilities, reference materials, financial resources, and learning environments necessary to support effective entrepreneurship education. Since business plan preparation requires extensive research, market analysis, financial computation, and information gathering, inadequate educational resources can significantly constrain students' learning experiences and academic performance.

Entrepreneurship education increasingly depends upon access to digital technologies, online business information, financial data, entrepreneurial case studies, market research resources, and collaborative learning environments. Students lacking these resources may experience difficulty completing authentic entrepreneurial tasks despite demonstrating adequate motivation and conceptual understanding.

Curriculum developers and educational leaders likewise should prioritize resource allocation when implementing entrepreneurship programs. Investments in instructional technologies, entrepreneurship laboratories, digital learning platforms, and professional development initiatives contribute significantly to improving students' entrepreneurial learning experiences and performance-based assessment outcomes.

Overall, the literature consistently demonstrates that resource availability substantially influences entrepreneurship education by shaping instructional quality, learner engagement, and students' ability to complete authentic entrepreneurial tasks. Addressing resource-related challenges therefore contributes directly to improving business plan performance and overall educational quality.

**Theoretical Foundations Supporting the Study**

This study is anchored on three complementary educational theories that explain how students acquire entrepreneurial knowledge, develop competencies, and translate learning into authentic performance-based outputs: Constructivist Learning Theory, Experiential Learning Theory, and Self-Efficacy Theory. Collectively, these theories provide a comprehensive framework for understanding how cognitive, technical, instructional, and resource-related learning challenges influence students' business plan performance.

Constructivist Learning Theory explains that meaningful learning occurs when learners actively construct knowledge through interaction, reflection, collaboration, and authentic experiences (Zajda, 2021). Rather than passively receiving information, students continuously organize new knowledge by connecting it with prior learning. Within entrepreneurship education, business plan preparation exemplifies constructivist learning because students actively develop entrepreneurial understanding by analyzing business situations, solving authentic problems, and integrating multiple concepts into practical business proposals.

Experiential Learning Theory, developed by Kolb, further explains that effective learning occurs through a continuous cycle involving concrete experience, reflective observation, abstract conceptualization, and active experimentation (Passarelli & Kolb, 2023). Entrepreneurship education naturally aligns with experiential learning

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because students develop entrepreneurial competence by participating in authentic activities such as business simulations, project-based learning, case analyses, and business plan preparation. Through these experiences, learners continuously refine their understanding by reflecting upon successes, identifying challenges, and modifying entrepreneurial strategies.

Self-Efficacy Theory, introduced by Bandura, complements these perspectives by emphasizing learners' beliefs regarding their ability to successfully perform academic tasks (Fan & Cui, 2024). Students possessing higher entrepreneurial self-efficacy are generally more motivated to conduct research, analyze information, solve complex problems, and persist despite academic challenges. Conversely, students with lower self-efficacy often experience anxiety, avoidance, and reduced academic engagement. Self-efficacy and self-determination significantly influence entrepreneurial persistence, motivation, and educational success.

Collectively, these three theories provide a comprehensive explanation for the variables examined in the present study. Constructivist Learning Theory primarily explains cognitive learning challenges through knowledge construction; Experiential Learning Theory explains how instructional experiences and practical engagement influence technical and instructional learning challenges; while Self-Efficacy Theory explains how students' confidence, motivation, and persistence affect their responses to cognitive, technical, instructional, and resource-related challenges.

Together, these theoretical perspectives support the assumption that business plan performance is not determined solely by students' intellectual ability but rather by the interaction among knowledge construction, experiential learning opportunities, instructional quality, learning resources, and students' beliefs in their own capabilities. This integrated theoretical foundation provides strong educational justification for investigating the learning challenges affecting business plan performance among Grade 12 students.

**Relationship Between Learning Challenges and Academic Performance**

Academic performance is influenced by a complex interaction of cognitive, motivational, instructional, and environmental factors. In entrepreneurship education, students are expected not only to understand entrepreneurial theories but also to demonstrate their competencies through authentic performance-based outputs such as business plans. Consequently, learning challenges that interfere with knowledge acquisition, skill development, motivation, or instructional engagement can substantially affect students' academic achievement and the quality of their business plan performance.

The literature consistently demonstrates that learning difficulties are associated with lower academic performance. Unresolved learning difficulties contribute to declining academic achievement, reduced learning effectiveness, and emotional challenges among students. Their findings emphasize that academic performance is influenced not merely by students' intellectual abilities but also by their capacity to overcome barriers encountered throughout the learning process. This perspective supports the importance of identifying specific learning challenges that affect entrepreneurship education so that appropriate instructional interventions can be developed.

Students who possessed stronger confidence in their academic abilities demonstrated greater persistence, employed more effective learning strategies, and achieved better academic outcomes. Although conducted in a different educational discipline, these findings remain relevant to entrepreneurship education because business plan preparation similarly requires sustained motivation, confidence, problem-solving, and self-regulated learning.

Educational research further indicates that learner-centered instructional approaches help minimize the negative effects of learning challenges by encouraging active participation, collaboration, reflection, and authentic learning experiences. Students who engage meaningfully with instructional activities develop stronger conceptual understanding and greater confidence in applying entrepreneurial knowledge. Although existing studies provide limited direct evidence linking learner-centered pedagogy specifically to business plan performance, the broader educational literature consistently demonstrates that experiential instruction enhances students' academic achievement and practical competence.

The relationship between learning challenges and academic performance is therefore multidimensional rather than linear. Cognitive challenges may hinder conceptual understanding, technical challenges may reduce students' ability to prepare accurate business plans, instructional challenges may limit meaningful learning opportunities, and resource-related challenges may restrict access to information and learning support. These factors interact with students' motivation, self-efficacy, and engagement, ultimately influencing academic performance and entrepreneurial competence.

From an educational perspective, understanding these relationships enables teachers to identify students requiring additional instructional support and to implement differentiated teaching strategies that respond to diverse learning needs. Curriculum developers may likewise utilize these findings to strengthen entrepreneurship curricula through competency-based learning experiences, authentic assessment, and scaffolded instructional activities. School

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administrators and educational leaders can further support instructional improvement by providing professional development opportunities, strengthening instructional supervision, and ensuring adequate educational resources.

Overall, the reviewed literature establishes that learning challenges significantly influence students' academic performance through interconnected cognitive, motivational, instructional, and environmental mechanisms. Addressing these challenges is therefore essential for improving business plan performance, strengthening entrepreneurship education, and enhancing learners' overall academic success.

**Instructional Strategies to Improve Business Plan Performance**

Instructional strategies play a decisive role in enhancing students' entrepreneurial competencies and improving the quality of business plan preparation. Effective entrepreneurship instruction extends beyond the transmission of theoretical knowledge by engaging learners in authentic experiences that encourage critical thinking, collaboration, creativity, problem-solving, and reflective learning. Consequently, educational institutions increasingly recognize learner-centered instructional approaches as essential for improving both academic performance and entrepreneurial competence.

Project-based learning has emerged as one of the most effective instructional strategies in entrepreneurship education because it enables students to construct knowledge through authentic entrepreneurial tasks. Business plan preparation itself exemplifies project-based learning by requiring learners to investigate business opportunities, conduct market analyses, prepare financial projections, and develop comprehensive entrepreneurial solutions. These experiences allow students to apply classroom concepts while developing practical competencies required in professional settings.

Collaborative learning, project-based learning, and problem-based learning are the instructional approaches most frequently recommended for entrepreneurship education. These learner-centered strategies promote active participation, collaborative problem-solving, and higher-order thinking, thereby enabling students to develop entrepreneurial competencies through meaningful educational experiences rather than passive knowledge acquisition.

Similarly, Abd Ghani and Mohamad (2025) demonstrated that business plan simulations significantly improved students' entrepreneurial understanding among 114 participants. Their findings indicate that simulation-based instruction enables learners to connect theoretical concepts with authentic entrepreneurial practice, thereby strengthening conceptual understanding, learner engagement, and practical competence. These results support the continued integration of experiential learning activities into entrepreneurship instruction.

Effective instructional strategies also encourage differentiated instruction by recognizing that learners possess diverse backgrounds, abilities, learning preferences, and levels of entrepreneurial readiness. Through differentiated learning activities, teachers can provide appropriate instructional support for students experiencing cognitive, technical, instructional, or resource-related challenges. Such individualized instructional approaches improve learner engagement while promoting equitable learning opportunities for all students.

Beyond classroom teaching, instructional improvement requires collaboration among teachers, curriculum developers, school administrators, and educational leaders. Teachers require continuous professional development to strengthen their pedagogical knowledge and instructional competence, while school leaders should support instructional innovation through mentoring programs, collaborative lesson development, instructional supervision, and resource provision. Curriculum developers likewise play an important role by designing entrepreneurship curricula that integrate authentic assessment, experiential learning, and competency-based instruction.

Collectively, the reviewed literature demonstrates that effective instructional strategies significantly enhance students' entrepreneurial competencies, business plan performance, learner motivation, and academic achievement. These findings provide strong educational support for developing enhanced instructional strategies that address students' learning challenges while promoting meaningful entrepreneurship learning experiences.

**Synthesis and Research Gap**

The reviewed literature consistently establishes entrepreneurship education as an essential component of contemporary secondary education that prepares learners for lifelong learning, employment, self-employment, innovation, and sustainable economic participation. Across diverse educational settings, entrepreneurship instruction has been shown to strengthen entrepreneurial competencies, critical thinking, creativity, communication, leadership, collaboration, financial literacy, and problem-solving abilities. Business plan preparation has likewise emerged as one of the most widely accepted performance-based learning activities because it integrates theoretical knowledge with authentic entrepreneurial practice while providing meaningful opportunities for competency development and assessment.

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The literature further demonstrates that successful business plan preparation depends upon multiple interacting educational factors rather than entrepreneurial knowledge alone. Students' cognitive understanding, technical competencies, instructional experiences, learning resources, motivation, self-efficacy, and classroom engagement collectively influence the quality of business plan performance. Contemporary educational research consistently supports learner-centered instruction, experiential learning, project-based learning, authentic assessment, and continuous teacher guidance as effective strategies for improving entrepreneurship education and enhancing students' academic achievement.

Despite these significant contributions, several important research gaps remain. First, while numerous studies have examined entrepreneurship education, entrepreneurial competencies, motivation, instructional practices, or business planning independently, relatively few investigations have comprehensively examined the combined influence of cognitive, technical, instructional, and resource-related learning challenges on students' business plan performance. Existing studies typically investigate only one or two dimensions of learning without considering the interaction among multiple categories of learning challenges.

Second, much of the existing literature relies primarily on students' perceptions, self-reported competencies, or entrepreneurial intentions rather than objective evaluations of performance-based outputs such as business plans. Consequently, empirical evidence directly linking specific learning challenges to measurable indicators of business plan quality remains limited.

Third, previous investigations have largely focused on higher education, vocational education, engineering education, or entrepreneurial training programs conducted in international settings. Comparatively little research has examined these relationships within the Philippine Senior High School context, where entrepreneurship education operates under unique curricular requirements, instructional conditions, and learner characteristics. This represents a significant contextual gap requiring further empirical investigation.

Fourth, although recent studies recommend learner-centered instruction, experiential learning, business simulations, and project-based approaches, limited empirical evidence explains how instructional innovations should be specifically designed to address different categories of learning challenges encountered during business plan preparation. Research examining instructional strategies that directly respond to identified learning challenges remains insufficient.

The present study addresses these gaps by examining the cognitive, technical, instructional, and resource-related learning challenges affecting the business plan performance of Grade 12 students at the Isabela School of Arts and Trade (ISAT). Unlike previous investigations that focused primarily on entrepreneurial competencies or instructional practices separately, this study integrates multiple categories of learning challenges within a single analytical framework and examines their relationship with objectively evaluated business plan performance.

The study likewise contributes to educational research by providing empirical evidence that may inform curriculum enhancement, instructional innovation, teacher professional development, learner support programs, authentic assessment practices, and educational leadership in entrepreneurship education. Ultimately, the findings are expected to strengthen entrepreneurship teaching and learning by providing a comprehensive basis for developing enhanced instructional strategies that improve students' business plan performance and overall learning outcomes.

**Theoretical Framework**

This study is anchored on three complementary educational theories that collectively explain how students acquire entrepreneurial knowledge, develop practical competencies, and translate learning into authentic performance-based outputs. Specifically, the study draws upon Constructivist Learning Theory, Experiential Learning Theory, and Self-Efficacy Theory. These theories provide a comprehensive foundation for understanding how cognitive, technical, instructional, and resource-related learning challenges influence the business plan performance of Grade 12 students at the Isabela School of Arts and Trade (ISAT).

Constructivist Learning Theory, originally advanced by Piaget and later enriched by Vygotsky's social constructivist perspective, posits that learning is an active process in which individuals construct knowledge through interaction with their environment, prior experiences, reflection, and social engagement. Learners do not passively receive information; rather, they actively organize, interpret, and integrate new knowledge with existing cognitive structures. Within entrepreneurship education, this theory explains how students develop entrepreneurial understanding through authentic learning activities such as business planning, market investigation, financial analysis, collaborative problem-solving, and classroom discussions.

Business plan preparation exemplifies constructivist learning because students are required to integrate entrepreneurial concepts from multiple disciplines into a coherent and feasible business proposal. However, when learners encounter cognitive difficulties, insufficient prior knowledge, or poorly scaffolded instruction, they may

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experience challenges in understanding entrepreneurial concepts, analyzing business information, and synthesizing ideas into practical business plans. Consequently, Constructivist Learning Theory provides the theoretical basis for examining cognitive learning challenges as one of the major independent variables influencing business plan performance.

Experiential Learning Theory, proposed by Kolb, complements constructivism by emphasizing that meaningful learning occurs through a continuous cycle consisting of concrete experience, reflective observation, abstract conceptualization, and active experimentation. Entrepreneurship education naturally embodies experiential learning because students acquire entrepreneurial competencies through authentic tasks rather than through theoretical instruction alone. Activities such as business simulations, project-based learning, case analyses, entrepreneurial investigations, and business plan preparation enable learners to experience entrepreneurial decision-making while reflecting on their learning processes.

Within the context of this study, Experiential Learning Theory explains how technical learning challenges and instructional learning challenges may arise when students receive insufficient opportunities for practical application, authentic assessment, guided reflection, or learner-centered instruction. Students who experience limited experiential learning opportunities may struggle to apply theoretical knowledge to financial planning, market analysis, business organization, and strategic decision-making. Consequently, the quality of business plan performance depends not only on conceptual understanding but also on the effectiveness of instructional experiences that facilitate authentic entrepreneurial learning.

Self-Efficacy Theory, introduced by Bandura, provides the motivational dimension of the present investigation by explaining how students' beliefs regarding their own capabilities influence learning behaviors, persistence, academic engagement, and performance. According to this theory, individuals possessing high self-efficacy approach challenging academic tasks with confidence, persistence, and resilience, whereas learners with lower self-efficacy are more likely to avoid difficult tasks, experience anxiety, and demonstrate reduced motivation.

Within entrepreneurship education, self-efficacy significantly influences students' willingness to conduct research, solve entrepreneurial problems, prepare financial analyses, communicate business ideas, and complete comprehensive business plans. Students encountering inadequate instructional support, recurring academic difficulties, or insufficient learning resources may gradually develop lower entrepreneurial self-efficacy, thereby reducing their academic engagement and business plan performance. Self-Efficacy Theory therefore provides the theoretical foundation for understanding how resource-related learning challenges, together with other learning barriers, indirectly affect entrepreneurial performance through learners' motivation, confidence, and persistence.

Collectively, these three theories provide an integrated explanation of the study variables. Constructivist Learning Theory explains the development of cognitive understanding; Experiential Learning Theory explains the acquisition of technical competencies through authentic instructional experiences; and Self-Efficacy Theory explains the motivational processes that influence students' responses to instructional and resource-related challenges. Together, these theories suggest that business plan performance is determined by the interaction among knowledge construction, experiential learning opportunities, instructional quality, learner confidence, and access to educational resources.

Guided by these theoretical perspectives, the present study conceptualizes cognitive learning challenges, technical learning challenges, instructional learning challenges, and resource-related learning challenges as the independent variables, while business plan performance, measured through clarity of business concept, market analysis, financial planning, organizational structure, and overall feasibility, serves as the dependent variable. The findings of the study provide the empirical basis for developing enhanced instructional strategies that improve entrepreneurship teaching, strengthen learner engagement, and enhance students' business plan performance.

**Conceptual Framework**

The conceptual framework of the study illustrates the relationship between the identified learning challenges and the business plan performance of Grade 12 students. Unlike general instructional models, the framework directly reflects the variables identified in the Statement of the Problem, the research objectives, the theoretical framework, and the methodology, thereby ensuring consistency throughout the investigation.

The framework identifies four independent variables representing the major categories of learning challenges experienced by students during entrepreneurship instruction:

- Cognitive Learning Challenges
- Technical Learning Challenges
- Instructional Learning Challenges

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- Resource-Related Learning Challenges

These learning challenges are hypothesized to influence students' ability to prepare high-quality business plans.

The dependent variable is Business Plan Performance, which is evaluated using the following performance indicators:

- Clarity of Business Concept
- Market Analysis
- Financial Planning
- Organizational Structure
- Overall Feasibility

The interaction between the independent and dependent variables provides the empirical basis for identifying specific instructional needs and developing evidence-based interventions.

The output of the study is the formulation of Enhanced Instructional Strategies designed to address the identified learning challenges, strengthen entrepreneurship instruction, improve learner engagement, and enhance students' business plan performance. These strategies are expected to support teachers in implementing learner-centered and performance-based instructional approaches while assisting curriculum developers, school administrators, and educational leaders in improving entrepreneurship education.

Research Paradigm

**Independent Variables**
Cognitive Learning Challenges
Technical Learning Challenges
Instructional Learning Challenges
Resource-Related Learning Challenges
⬇️
**Dependent Variable**
Business Plan Performance
Clarity of Business Concept
Market Analysis
Financial Planning
Organizational Structure
Overall Feasibility
⬇️
**Output**
Enhanced Instructional Strategies

**Statement of the Problem**

This study investigated the learning challenges affecting the business plan performance of Grade 12 students at the Isabela School of Arts and Trade (ISAT). Specifically, it sought to determine the nature and extent of students' cognitive, technical, instructional, and resource-related learning challenges and examine how these challenges influence the quality of their business plan performance. The study also provided empirical evidence for developing enhanced learner-centered instructional strategies that can improve entrepreneurship teaching and strengthen students' business plan performance.

**General Objective**

To analyze the learning challenges affecting the business plan performance of Grade 12 students of the Isabela School of Arts and Trade and develop enhanced instructional strategies based on the findings.

**Specific Objectives**

The study specifically aims to:

1. Determine the level of learning challenges experienced by Grade 12 students in the preparation of business plans in terms of:
   - cognitive factors;

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- technical factors;
- instructional factors; and
- resource-related factors.

2. Assess the level of business plan performance of Grade 12 students in terms of:
   - clarity of business concept;
   - market analysis;
   - financial planning;
   - organizational structure; and
   - overall feasibility.
3. Determine whether a significant relationship exists between the learning challenges experienced by Grade 12 students and their business plan performance.
4. Develop enhanced instructional strategies based on the identified learning challenges and business plan performance of Grade 12 students.

**Research Questions**

1. What is the level of learning challenges encountered by Grade 12 students of the Isabela School of Arts and Trade in preparing business plans in terms of:
   a. cognitive factors;
   b. technical factors;
   c. instructional factors; and
   d. resource-related factors?
2. What is the level of business plan performance of Grade 12 students in terms of:
   a. clarity of business concept;
   b. market analysis;
   c. financial planning;
   d. organizational structure; and
   e. overall feasibility?
3. Is there a significant relationship between the learning challenges experienced by Grade 12 students and their business plan performance?
4. What enhanced instructional strategies may be developed based on the identified learning challenges and business plan performance of Grade 12 students?

**Research Hypothesis**

**$H_0$:** There is no significant relationship between the learning challenges encountered by Grade 12 students of the Isabela School of Arts and Trade and their business plan performance in terms of clarity of business concept, market analysis, financial planning, organizational structure, and overall feasibility.

## METHODOLOGY

**Research Design**

This study employed a descriptive-correlational research design to investigate the learning challenges affecting the business plan performance of Grade 12 students at the Isabela School of Arts and Trade (ISAT) Basic Education Department. The descriptive component of the design was utilized to determine the level of learning challenges experienced by the students in terms of cognitive, technical, instructional, and resource-related factors, as well as to assess the level of their business plan performance based on clarity of business concept, market analysis, financial planning, organizational structure, and overall feasibility. The correlational component was employed to determine whether a significant relationship existed between students' learning challenges and their business plan performance.

A descriptive-correlational research design is appropriate when a study seeks to describe existing conditions and examine the relationships among naturally occurring variables without manipulating them. Correlational research determines the degree to which relationships exist between two or more variables and is appropriate when experimental manipulation is neither feasible nor necessary. Since the present study sought to examine naturally occurring learning challenges within an educational setting, the descriptive-correlational design was considered the most appropriate methodological approach.

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In this study, the independent variable consisted of the learning challenges experienced by Grade 12 students, specifically cognitive, technical, instructional, and resource-related learning challenges. The dependent variable was the students' business plan performance, measured in terms of clarity of business concept, market analysis, financial planning, organizational structure, and overall feasibility.

The study did not manipulate or control any instructional or learning conditions. Instead, it objectively described the existing learning challenges experienced by the respondents and statistically examined their relationship with business plan performance. This design enabled the researcher to obtain empirical evidence that served as the basis for developing enhanced learner-centered instructional strategies intended to improve entrepreneurship teaching and students' business plan performance.

**Population and Sampling**

The respondents of the study were Grade 12 students enrolled in the Basic Education Department of the Isabela School of Arts and Trade (ISAT) who were taking Entrepreneurship or other business-related subjects requiring the preparation of a business plan during the conduct of the study. In the Philippine K–12 educational system, Grade 12 constitutes the final year of Senior High School under the Basic Education Program, during which students complete authentic performance-based assessments, including business plan preparation in entrepreneurship-related courses.

The target population consisted of one hundred (100) Grade 12 students enrolled in entrepreneurship-related subjects during the data collection period. Since the entire population comprised exactly one hundred students, total enumeration sampling was employed. This sampling technique ensured that every qualified member of the population participated in the study, thereby eliminating sampling error associated with selecting only a portion of the population and providing a comprehensive representation of the target group.

The use of total enumeration was considered appropriate because the population size was manageable and all eligible students were accessible during the data collection period. Including the entire population increased the representativeness of the data and strengthened the validity of the statistical analyses conducted in the study.

Inclusion Criteria

Participants were included in the study if they met all of the following criteria:

1. were officially enrolled as Grade 12 students in the Basic Education Department of the Isabela School of Arts and Trade during the conduct of the study;
2. were enrolled in Entrepreneurship or another business-related subject requiring the preparation of a business plan;
3. had actively participated in the preparation or development of a business plan as part of their course requirements; and
4. voluntarily agreed to participate in the study by providing informed consent.

Exclusion Criteria

Students were excluded from the study if they:

1. were not enrolled in Grade 12 during the data collection period;
2. were not taking Entrepreneurship or business-related subjects involving business plan preparation;
3. had not yet participated in any business plan preparation activities at the time of data collection; or
4. declined to participate or failed to provide informed consent.

The respondents were considered appropriate for the study because they had direct and authentic experience in preparing business plans, enabling them to provide reliable information regarding the learning challenges encountered during the business planning process. Their responses served as the primary source of quantitative data for determining the relationship between learning challenges and business plan performance and for formulating enhanced instructional strategies designed to improve entrepreneurship instruction.

**Research Instrument**

The study utilized a researcher-developed structured questionnaire as the primary instrument for gathering quantitative data on the learning challenges affecting the business plan performance of Grade 12 students at the Isabela School of Arts and Trade (ISAT). The questionnaire was developed after an extensive review of related literature and previous empirical studies on entrepreneurship education, learning challenges, instructional practices, and business plan performance. The instrument was designed to ensure alignment with the Statement of the Problem, research objectives, variables, and theoretical framework of the study.

The questionnaire consisted of three major parts.

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Part I gathered the demographic profile of the respondents, including age, academic strand or track, and previous exposure to entrepreneurship-related learning experiences. These variables provided descriptive information regarding the respondents and facilitated the interpretation of the findings.

Part II measured the learning challenges experienced by Grade 12 students during business plan preparation. The items were organized into four dimensions corresponding to the study's independent variable:

- Cognitive learning challenges;
- Technical learning challenges;
- Instructional learning challenges; and
- Resource-related learning challenges.

These dimensions were developed to comprehensively capture the different factors that may influence students' learning experiences during entrepreneurship instruction.

Part III assessed the respondents' business plan performance, which served as the dependent variable of the study. Performance was evaluated using the following indicators:

- clarity of business concept;
- market analysis;
- financial planning;
- organizational structure; and
- overall feasibility.

These indicators were selected because they represent the essential components of a quality business plan and directly correspond to the research objectives and conceptual framework.

The questionnaire employed a five-point Likert scale, allowing respondents to indicate the extent to which they experienced each learning challenge and the level of their business plan performance. The use of the Likert scale facilitated quantitative analysis using descriptive and inferential statistical procedures appropriate for the objectives of the study.

Overall, the researcher-developed instrument provided a systematic means of collecting standardized data regarding students' learning challenges and business plan performance, thereby ensuring consistency and comparability of responses.

Content Validation

Prior to the administration of the research instrument, the questionnaire underwent a comprehensive content validation process to establish its relevance, clarity, consistency, and alignment with the objectives of the study. The validation was conducted by three (3) expert validators possessing extensive experience in educational research, entrepreneurship education, and research instrument development.

The panel of validators consisted of: Validator 1, a Professor of Business Education with a doctoral degree in Educational Management and expertise in entrepreneurship education and curriculum development; Validator 2, a Senior Research Specialist with expertise in educational measurement, quantitative research, and instrument validation; and Validator 3, a Master Teacher in Senior High School specializing in Accountancy, Business, and Management (ABM) education with extensive experience in entrepreneurship instruction and business plan assessment.

The validators evaluated the questionnaire using a research instrument validation rubric that assessed each item based on content relevance, clarity of wording, appropriateness of language, organization of items, adequacy of content coverage, and alignment with the research objectives and variables. Each item was rated using a four-point relevance scale, and the recommendations provided by the validators were carefully reviewed. Necessary revisions were incorporated to improve the clarity, organization, and appropriateness of several questionnaire items before the instrument was finalized for pilot testing.

To establish the content validity of the research instrument, the Item-Level Content Validity Index (I-CVI) and the Scale-Level Content Validity Index (S-CVI) were computed based on the evaluations of the expert validators. The instrument obtained an S-CVI of 0.96, while the individual questionnaire items yielded I-CVI values ranging from 0.92 to 1.00. These values indicated a very high level of agreement among the validators regarding the relevance, clarity, and appropriateness of the questionnaire items. Based on commonly accepted criteria for interpreting content validity indices, the instrument demonstrated excellent content validity and was considered appropriate for measuring the learning challenges affecting the business plan performance of Grade 12 students. The satisfactory content validity results indicated that the questionnaire adequately represented the constructs under investigation and possessed sufficient relevance and clarity for administration to the target respondents. Following expert validation, the instrument proceeded to pilot testing to establish its reliability before the actual data collection.


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**Reliability Testing**

Following the completion of the content validation process, the research instrument underwent pilot testing to establish its reliability and internal consistency prior to its administration to the actual respondents. The pilot test involved thirty (30) Grade 12 students enrolled in a senior high school offering entrepreneurship-related subjects. These students possessed characteristics comparable to those of the target respondents but were not included in the final sample to prevent contamination of the actual research data.

The responses obtained during the pilot testing were analyzed using Cronbach's alpha coefficient, one of the most widely accepted measures of internal consistency for Likert-type research instruments. Cronbach's alpha determines the degree to which the questionnaire items consistently measure the intended constructs and provides evidence of the reliability of the instrument.

The reliability analysis revealed an overall Cronbach's alpha coefficient of 0.93, indicating Excellent Internal Consistency. The reliability coefficients obtained for each major subscale were likewise satisfactory, as presented below:

| Questionnaire Subscale | Cronbach's Alpha | Interpretation |
|---|---|---|
| Cognitive Learning Challenges | 0.91 | Excellent Internal Consistency |
| Technical Learning Challenges | 0.89 | Good Internal Consistency |
| Instructional Learning Challenges | 0.92 | Excellent Internal Consistency |
| Resource-Related Learning Challenges | 0.88 | Good Internal Consistency |
| Business Plan Performance | 0.90 | Excellent Internal Consistency |
| **Overall Instrument** | **0.93** | **Excellent Internal Consistency** |

The obtained reliability coefficients indicate that the questionnaire demonstrated a high degree of internal consistency across all dimensions. Based on commonly accepted standards for reliability analysis, Cronbach's alpha coefficients of 0.70 or higher indicate acceptable reliability, values of 0.80 or higher indicate good internal consistency, and coefficients of 0.90 or higher indicate excellent reliability. The results therefore confirmed that the instrument consistently measured the intended constructs and was appropriate for the actual administration of the study.

The satisfactory reliability results, together with the findings of the content validation process, established that the research instrument possessed adequate psychometric properties and was suitable for collecting reliable data on the learning challenges affecting the business plan performance of Grade 12 students.

**Data Collection Procedure**

The study followed a systematic data collection procedure to ensure the accuracy, reliability, and ethical conduct of the research. Prior to data collection, a formal letter requesting permission to conduct the study was submitted to the appropriate school authorities of the Isabela School of Arts and Trade (ISAT) Basic Education Department. Upon approval, coordination was undertaken with the concerned school administrators and subject teachers to facilitate the orderly administration of the research instrument.

Data collection was conducted during the designated research period in the respondents' regular entrepreneurship classes within the school campus. Before administering the questionnaire, the researcher explained the purpose, objectives, significance, and procedures of the study. The respondents were informed that participation was entirely voluntary and that they could decline or discontinue participation at any stage of the study without any penalty or adverse academic consequences.

Written informed consent was obtained from all participants before the administration of the questionnaire. The respondents were likewise assured that all information gathered would be treated with strict confidentiality and would be used solely for academic and research purposes.

The researcher personally administered the questionnaires to the respondents during scheduled class sessions to ensure a controlled and standardized data collection environment. Clear instructions regarding the completion of the questionnaire were provided, and the researcher remained available throughout the administration to clarify questions or address concerns without influencing the respondents' answers. The respondents were given sufficient time to complete the instrument carefully and independently before the accomplished questionnaires were collected, checked for completeness, and prepared for statistical analysis.

This systematic procedure minimized response errors, promoted consistency in data collection, and enhanced the reliability and validity of the information obtained from the respondents.

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**Treatment of Data**

The data collected were encoded, organized, and analyzed using appropriate descriptive and inferential statistical techniques consistent with the objectives of the study. Statistical analyses were performed using IBM SPSS Statistics Version 29.0 to ensure computational accuracy and efficiency.

To determine the level of learning challenges experienced by the respondents in terms of cognitive, technical, instructional, and resource-related factors, frequency distributions and weighted means were computed. The weighted mean was used to determine the average level of responses for each learning challenge indicator and for each category.

Similarly, frequency distributions and weighted means were utilized to determine the level of business plan performance in terms of clarity of business concept, market analysis, financial planning, organizational structure, and overall feasibility.

To determine whether a significant relationship existed between learning challenges and business plan performance, the study employed the Pearson Product-Moment Correlation Coefficient (Pearson's r). Pearson correlation was selected because the study sought to determine the direction and strength of the relationship between the independent variable (learning challenges) and the dependent variable (business plan performance) using quantitative data obtained from Likert-scale responses. The analysis was performed after verifying that the assumptions for Pearson correlation, including linearity and the use of interval-level composite scores, were reasonably satisfied.

The null hypothesis was tested at the 0.05 level of significance. A probability value (p) less than 0.05 indicated a statistically significant relationship between the variables, resulting in the rejection of the null hypothesis. Conversely, a probability value equal to or greater than 0.05 indicated that no statistically significant relationship existed, and the null hypothesis was not rejected.

The results of the statistical analyses served as the basis for interpreting the learning challenges experienced by the respondents, determining their relationship with business plan performance, and formulating enhanced instructional strategies designed to improve entrepreneurship teaching and learning.

**Ethical Considerations**

The study was conducted in accordance with accepted ethical principles governing educational research involving human participants. Prior to the conduct of the study, permission to administer the research instrument was obtained from the appropriate authorities of the Isabela School of Arts and Trade (ISAT). Where applicable, the study likewise complied with the institutional research review procedures of the school.

Participation in the study was entirely voluntary. Before completing the questionnaire, all respondents were informed of the objectives of the study, the nature of their participation, the procedures involved, and the intended use of the collected data. Written informed consent was obtained from all participants before data collection commenced.

The respondents were assured that their identities would remain anonymous throughout the study. No personally identifiable information was included in the data analysis or research report. Responses were treated with strict confidentiality and were reported only in aggregated form to protect the privacy of all participants.

The respondents were likewise informed of their right to withdraw from the study at any stage without providing any reason and without any penalty, discrimination, or adverse effect on their academic standing, grades, or relationship with the school or their teachers. Participation or non-participation in the study did not influence the respondents' academic evaluation or classroom performance in any manner.

All completed questionnaires and electronic research files were securely stored by the researcher and were accessible only to the researcher for purposes directly related to the study. Upon completion of the research and the required retention period in accordance with institutional policies, all research records will be securely disposed of to maintain participants' confidentiality.

Throughout the conduct of the study, the researcher adhered to the ethical principles of respect for persons, beneficence, non-maleficence, confidentiality, voluntary participation, and academic integrity. These ethical safeguards ensured that the rights, welfare, and dignity of all participants were protected while maintaining the credibility, transparency, and trustworthiness of the research findings.

**RESULTS and DISCUSSION**

This section presents the analysis, interpretation, and discussion of the data gathered from the Grade 12 student respondents regarding the learning challenges affecting their business plan performance. The findings are organized according to the research questions and are interpreted in relation to existing literature and the theoretical foundations of the study. Beyond describing the statistical results, the discussion explains their educational significance

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and implications for entrepreneurship teaching, curriculum implementation, learner-centered instruction, educational leadership, and instructional improvement.

**Table 1.**
*Learning challenges encountered by Grade 12 students in terms of cognitive factors (n = 100)*

| Cognitive Factors | Weighted Mean | Verbal Interpretation |
|---|---|---|
| 1. Difficulty in understanding business concepts and terminologies | 3.42 | Agree |
| 2. Difficulty in analyzing market trends and customer needs | 3.36 | Agree |
| 3. Difficulty in preparing financial computations and projections | 3.58 | Strongly Agree |
| 4. Difficulty in organizing ideas into a coherent business plan | 3.29 | Agree |
| 5. Difficulty in applying entrepreneurial concepts to real-life situations | 3.33 | Agree |
| 6. Difficulty in interpreting business data and information | 3.25 | Agree |
| 7. Difficulty in making decisions related to business strategies | 3.18 | Agree |
| 8. Difficulty in identifying feasible business opportunities | 3.14 | Agree |
| 9. Difficulty in solving problems encountered during business plan preparation | 3.31 | Agree |
| 10. Difficulty in synthesizing gathered information into a complete business plan | 3.40 | Agree |
| Grand Mean | 3.33 | Agree |

Table 1 reveals that Grade 12 students generally experienced cognitive learning challenges during the preparation of their business plans, as reflected by the overall weighted mean of 3.33 ("Agree"). Among the identified indicators, the greatest difficulty was observed in preparing financial computations and projections, while the least difficulty was associated with identifying feasible business opportunities. Although all indicators were interpreted as "Agree," the findings collectively indicate that students encountered noticeable cognitive demands when integrating entrepreneurial concepts into authentic business planning activities.

The findings suggest that business plan preparation requires students to perform complex cognitive processes beyond simple recall of information. Preparing financial projections, interpreting business data, organizing entrepreneurial ideas, and making strategic decisions require higher-order thinking, analytical reasoning, and the application of multiple entrepreneurial concepts simultaneously. Consequently, students who experience difficulties in these areas may encounter challenges in producing comprehensive and feasible business plans.

These findings are consistent with those of Gantalao (2025), who reported that Grade 12 students experienced difficulties applying entrepreneurial concepts to practical business situations. Likewise, Jacosalem and Futalan (2025) found that students encountered challenges understanding fundamental business concepts and managing entrepreneurship-related learning tasks. Furthermore, Jambo et al. (2025) identified financial literacy and financial planning as persistent areas of difficulty among senior high school students, supporting the present finding that financial computation constituted the greatest cognitive challenge during business plan preparation.

From an educational perspective, these findings underscore the need for entrepreneurship teachers to strengthen instructional approaches that promote conceptual understanding rather than procedural completion of business plans. Financial planning activities may be introduced progressively through scaffolded learning experiences, guided exercises, collaborative problem-solving, and authentic entrepreneurial simulations. Such learner-centered approaches are consistent with Constructivist Learning Theory, which emphasizes that learners develop meaningful understanding by actively constructing knowledge through authentic experiences and guided reflection.

The findings likewise have important implications for curriculum development. Since financial planning emerged as the greatest cognitive challenge, entrepreneurship learning competencies may be reviewed to ensure that financial literacy concepts are introduced progressively before students undertake comprehensive business planning activities. Curriculum developers may likewise integrate additional performance-based learning experiences that gradually develop analytical reasoning, entrepreneurial decision-making, and business problem-solving competencies.

For teacher education, the findings suggest that entrepreneurship teachers may benefit from professional development programs focusing on financial literacy instruction, inquiry-based learning, authentic assessment, and differentiated teaching strategies that support students experiencing cognitive learning difficulties.

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School leaders and instructional supervisors may also utilize these findings in strengthening instructional supervision, mentoring programs, and collaborative lesson planning to improve entrepreneurship instruction. Providing opportunities for teachers to share effective instructional practices may contribute to reducing students' cognitive learning challenges while improving business plan performance.

Overall, the findings demonstrate that cognitive learning challenges remain significant barriers to effective entrepreneurship learning. Addressing these challenges through learner-centered pedagogy, curriculum enhancement, and instructional support may substantially improve students' entrepreneurial competence and business plan performance.

**Table 2.**
*Learning challenges encountered by Grade 12 students in terms of technical factors (n = 100)*

| Technical Factors | Weighted Mean | Verbal Interpretation |
|---|---|---|
| 1. Difficulty in using spreadsheet applications for financial computations | 3.41 | Agree |
| 2. Difficulty in formatting the business plan properly | 3.28 | Agree |
| 3. Difficulty in preparing graphs, tables, and charts | 3.22 | Agree |
| 4. Difficulty in conducting online research for business information | 3.10 | Agree |
| 5. Difficulty in using technology-related tools in business planning | 3.18 | Agree |
| 6. Difficulty in preparing digital presentations for the business plan | 3.26 | Strongly Agree |
| 7. Difficulty in organizing files and documents electronically | 3.12 | Agree |
| 8. Difficulty in accessing reliable online business resources | 3.24 | Agree |
| 9. Difficulty in editing and revising business plan documents | 3.30 | Agree |
| 10. Difficulty in integrating technical data into the business plan | 3.35 | Agree |
| Grand Mean | 3.25 | Agree |

Table 2 indicates that the respondents generally experienced technical learning challenges, obtaining a grand mean of 3.25 ("Agree"). The greatest technical difficulty involved the use of spreadsheet applications for financial computation, while conducting online research obtained the lowest weighted mean, although it remained within the "Agree" category.

These findings suggest that technical competence plays an important role in successful business plan preparation. Business planning requires learners to utilize spreadsheets, prepare digital reports, organize business information, create financial tables, and integrate technological resources into entrepreneurial decision-making. Consequently, inadequate digital and technical competencies may reduce students' ability to produce accurate and professionally prepared business plans.

The present findings are supported by Boateng and Kwarteng (2023), who reported that technical competencies significantly influenced the academic performance of Grade 12 business students. Students possessing stronger technological and business-related skills demonstrated greater competence in completing entrepreneurship tasks than those with limited technical proficiency.

Educationally, these findings emphasize the importance of integrating digital literacy with entrepreneurship instruction rather than treating them as separate competencies. Teachers may incorporate spreadsheet workshops, ICT-assisted business planning activities, financial software demonstrations, and technology-supported collaborative learning projects into entrepreneurship classes. Such instructional innovations correspond with Experiential Learning Theory, which proposes that learners develop competence through active engagement with authentic tasks and practical experiences.

The findings likewise support curriculum enhancement by encouraging greater integration of digital entrepreneurship competencies into senior high school entrepreneurship subjects. Since modern entrepreneurial practice increasingly depends on technology, curriculum developers may strengthen learning competencies related to financial technologies, digital business planning, market research applications, and data visualization.

Teacher education institutions may likewise utilize these findings in strengthening pre-service and in-service entrepreneurship teacher preparation, particularly in integrating educational technologies into business education classrooms. Continuous professional development on digital instructional strategies may further enhance teachers' confidence in facilitating technology-supported entrepreneurship instruction.

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Educational leaders may also prioritize investments in computer laboratories, entrepreneurship software, reliable internet access, and digital learning resources that support authentic business planning activities. Such resource allocation may substantially improve students' technical competencies while strengthening entrepreneurship education.

Overall, the findings demonstrate that technical learning challenges influence students' business plan preparation and highlight the importance of integrating technological competence into entrepreneurship instruction through learner-centered and technology-enhanced pedagogical approaches.

**Table 3.**
*Learning challenges encountered by Grade 12 students in terms of instructional factors (n = 100)*

| Instructional Factors | Weighted Mean | Verbal Interpretation |
|---|---|---|
| 1. Insufficient explanation of business planning concepts by teachers | 3.37 | Agree |
| 2. Limited classroom activities related to business planning | 3.31 | Agree |
| 3. Lack of clear instructions in preparing business plans | 3.45 | Agree |
| 4. Inadequate feedback from teachers | 3.29 | Agree |
| 5. Limited examples of business plans provided during the discussion | 3.26 | Strongly Agree |
| 6. Difficulty in understanding the teaching methods used in class | 3.18 | Agree |
| 7. Insufficient time allotted for business plan preparation | 3.52 | Strongly Agree |
| 8. Lack of individualized guidance from teachers | 3.33 | Agree |
| 9. Limited opportunities for consultation and clarification | 3.27 | Strongly Agree |
| 10. Difficulty in following classroom discussions about entrepreneurship | 3.21 | Agree |
| Grand Mean | 3.32 | Agree |

Table 3 shows that the respondents generally agreed that instructional factors affected their business plan preparation, as reflected by the overall weighted mean of 3.32. The greatest instructional concern involved insufficient time allotted for business plan preparation, while difficulty understanding teaching methods received the lowest weighted mean, although it likewise remained within the "Agree" category.

The results indicate that instructional practices substantially influence students' entrepreneurial learning experiences. Business plan preparation requires continuous teacher guidance, adequate classroom time, meaningful feedback, authentic learning activities, and opportunities for consultation. When these instructional conditions are insufficient, students may encounter difficulties applying entrepreneurial concepts despite possessing adequate theoretical knowledge.

These findings are supported by Chaker and Jarraya (2021), who emphasized that instructional practices significantly influence entrepreneurial competency development. Learner-centered instructional approaches and active learning strategies significantly improved students' achievement in business education. Collectively, these reinforce the present finding that instructional support represents one of the strongest determinants of successful business plan preparation.

Educationally, this finding is particularly important because instructional challenges demonstrated the strongest relationship with business plan performance in the study. Teachers may therefore redesign entrepreneurship instruction by allocating additional time for business plan development, incorporating project-based learning, conducting business simulations, providing continuous formative feedback, and scheduling regular consultation sessions. These practices are consistent with Experiential Learning Theory, which emphasizes learning through authentic experiences, reflection, and active experimentation.

The findings likewise suggest implications for curriculum implementation. Curriculum planners may review the sequencing of entrepreneurship competencies to ensure sufficient instructional time for business planning activities and performance-based assessments. Authentic entrepreneurial projects may likewise be distributed across multiple instructional units rather than concentrated within limited classroom periods.

Teacher education programs may further strengthen pre-service and in-service training on project-based learning, authentic assessment, entrepreneurship pedagogy, differentiated instruction, and formative assessment strategies that support learners with diverse instructional needs.

For school leaders, the findings emphasize the importance of instructional supervision, collaborative lesson planning, mentoring, and workload management that enable teachers to devote sufficient time to entrepreneurship instruction. Department heads and instructional supervisors may also encourage the sharing of effective classroom practices that improve students' entrepreneurial learning experiences.

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Overall, the findings highlight instructional quality as one of the most influential factors affecting business plan performance. Strengthening learner-centered entrepreneurship instruction may therefore substantially improve students' entrepreneurial competencies and academic outcomes.

**Table 4.**
*Learning challenges encountered by Grade 12 students in terms of resource-related factors (n = 100)*

| Resource-Related Factors | Weighted Mean | Verbal Interpretation |
|---|---|---|
| 1. Lack of access to business reference materials | 3.39 | Agree |
| 2. Limited internet connectivity for research purposes | 3.55 | Strongly Agree |
| 3. Insufficient learning materials related to entrepreneurship | 3.33 | Agree |
| 4. Lack of computers or gadgets for business planning tasks | 3.28 | Agree |
| 5. Limited availability of financial data resources | 3.21 | Agree |
| 6. Difficulty in accessing updated business information | 3.25 | Agree |
| 7. Lack of school facilities supporting business planning activities | 3.30 | Agree |
| 8. Insufficient library resources for entrepreneurship subjects | 3.27 | Strongly Agree |
| 9. Limited access to printing and technical services | 3.19 | Agree |
| 10. Lack of community or industry support for business planning activities | 3.24 | Agree |
| Grand Mean | 3.30 | Agree |

Table 4 indicates that respondents generally agreed that resource-related factors affected their business plan preparation, obtaining an overall weighted mean of 3.30. Among the identified indicators, limited internet connectivity emerged as the greatest challenge, while limited access to printing and technical services recorded the lowest weighted mean, although both remained within the "Agree" category.

These findings demonstrate that access to learning resources continues to influence entrepreneurship learning and authentic performance-based assessment. Preparing a business plan requires students to gather current business information, conduct market research, access financial references, utilize digital resources, and prepare professionally organized reports. Consequently, inadequate technological infrastructure and limited access to educational resources may constrain students' opportunities to develop entrepreneurial competencies.

The findings are consistent with those of Kyambade and Namatovu (2025), who identified poor internet connectivity as a major obstacle to effective business education. Limited internet access hindered students' completion of academic tasks. Collectively, these reinforce the importance of adequate educational resources in supporting entrepreneurship instruction.

Educationally, these findings indicate that entrepreneurship education extends beyond classroom teaching and requires supportive learning environments equipped with appropriate instructional resources. Teachers may therefore maximize both printed and digital instructional materials while providing alternative learning resources for students experiencing technological limitations.

Curriculum developers may likewise consider developing modular entrepreneurship learning resources that remain accessible regardless of internet availability. Such materials may include printed entrepreneurship modules, downloadable learning resources, and offline business planning activities that promote equitable learning opportunities.

School administrators and educational leaders play an equally important role by prioritizing investments in internet infrastructure, entrepreneurship laboratories, digital libraries, and ICT facilities that support performance-based entrepreneurship education. Strategic allocation of instructional resources may substantially improve students' opportunities to engage in authentic entrepreneurial learning experiences.

From an educational policy perspective, the findings support continued institutional investment in digital learning infrastructure and entrepreneurship resource development to strengthen students' entrepreneurial readiness within the Philippine K–12 educational system.

Overall, the results demonstrate that resource-related challenges significantly influence business plan preparation. Addressing these barriers through improved instructional resources, technological support, and institutional investment may enhance entrepreneurship teaching, learner engagement, and students' business plan performance.

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**Table 5.**
*Level of Business Plan Performance in Terms of Clarity of Business Concept (n = 100)*

| Indicators | Weighted Mean | Verbal Interpretation |
|---|---|---|
| Clearly identifies the product or service | 3.54 | Very Satisfactory |
| Defines the target market effectively | 3.42 | Satisfactory |
| Presents clear business objectives | 3.38 | Satisfactory |
| Explains the value proposition of the business | 3.47 | Satisfactory |
| Demonstrates originality of business idea | 3.35 | Satisfactory |
| Grand Mean | 3.43 | Satisfactory |

Table 5 indicates that the respondents attained a satisfactory level of business plan performance regarding the clarity of business concept, obtaining a grand mean of 3.43. Students performed best in clearly identifying their products or services, whereas demonstrating originality of business ideas received the lowest rating among the indicators.

These findings suggest that students possess adequate foundational knowledge of entrepreneurship concepts and can organize business ideas logically using established business planning formats. However, generating innovative and original entrepreneurial ideas remains relatively more challenging. This pattern indicates that learners are generally more comfortable applying structured knowledge than engaging in divergent thinking and entrepreneurial creativity.

The findings are consistent with previous literature indicating that novice entrepreneurship students tend to perform better in procedural tasks than in innovation-oriented activities. Students frequently rely on existing business models, templates, and classroom examples when developing business concepts. While these instructional supports enhance conceptual organization, they may unintentionally reduce opportunities for creative thinking if not complemented by innovation-focused learning experiences.

From an educational perspective, these findings emphasize the importance of integrating creativity-enhancing pedagogies into entrepreneurship instruction. Teachers may incorporate design thinking activities, business innovation workshops, idea incubation exercises, entrepreneurial pitching, and collaborative innovation projects that encourage students to develop unique business concepts rather than merely reproducing familiar entrepreneurial models. Such instructional approaches align closely with Constructivist Learning Theory, which emphasizes that learners construct deeper understanding through exploration, inquiry, and authentic problem-solving experiences.

The findings likewise have important implications for curriculum development. Entrepreneurship learning competencies may place greater emphasis on creativity, innovation, opportunity recognition, and entrepreneurial problem-solving before requiring students to prepare comprehensive business plans. Sequencing these competencies progressively may better prepare learners for authentic entrepreneurial tasks requiring originality and innovation.

Teacher education institutions may also strengthen entrepreneurship pedagogy by preparing future teachers to facilitate creativity-based instructional strategies, innovation coaching, and authentic entrepreneurial learning experiences. Continuous professional development focusing on entrepreneurial creativity, project-based learning, and innovation assessment may likewise strengthen classroom instruction.

School leaders and instructional supervisors may support these instructional innovations by encouraging entrepreneurship competitions, innovation fairs, business idea pitching activities, and collaborative partnerships with local entrepreneurs. Such initiatives provide authentic opportunities for students to develop creativity while applying entrepreneurial knowledge beyond classroom instruction.

Overall, the findings demonstrate that students possess satisfactory conceptual understanding of entrepreneurship but require additional instructional support in developing creativity and innovation, which remain fundamental competencies for successful entrepreneurship education.

**Table 6.**
*Level of Business Plan Performance in Terms of Market Analysis (n = 100)*

| Indicators | Weighted Mean | Verbal Interpretation |
|---|---|---|
| Identifies target customers clearly | 3.44 | Satisfactory |
| Presents accurate market information | 3.36 | Satisfactory |
| Analyzes competitors effectively | 3.29 | Satisfactory |
| Uses reliable data sources | 3.31 | Satisfactory |
| Explains market demand appropriately | 3.40 | Satisfactory |
| Grand Mean | 3.36 | Satisfactory |

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Table 6 shows that the respondents demonstrated a satisfactory level of performance in market analysis, with an overall weighted mean of 3.36. Students performed best in identifying target customers, whereas competitor analysis obtained the lowest mean among the evaluated indicators.

The findings indicate that students possess adequate foundational competence in conducting basic market investigations but experience greater difficulty when performing higher-level analytical tasks that require evaluating competitors, interpreting market dynamics, and synthesizing market information into strategic business decisions. Competitor analysis demands more sophisticated analytical reasoning than identifying customer groups, thereby explaining its comparatively lower rating.

Educationally, the findings suggest that entrepreneurship teachers may provide more opportunities for students to conduct authentic market research through field investigations, surveys, interviews, community immersion, business case analyses, and digital market intelligence activities. These experiential learning opportunities strengthen students' analytical thinking while enabling them to apply classroom knowledge to real entrepreneurial contexts. Such approaches correspond with Experiential Learning Theory, which emphasizes learning through concrete experiences and reflective practice.

Curriculum developers may likewise strengthen entrepreneurship competencies related to market investigation, competitor analysis, consumer behavior, and entrepreneurial research. Greater emphasis on inquiry-based learning and authentic market analysis activities may enhance students' entrepreneurial decision-making capabilities.

Teacher education programs may utilize these findings to strengthen pre-service entrepreneurship teacher preparation in market research methodologies, project-based learning, and authentic assessment strategies. Enhancing teachers' research facilitation skills may improve students' analytical competence during business plan preparation.

Educational leaders may also establish partnerships with local businesses, entrepreneurs, and community organizations that enable students to conduct authentic market investigations within real entrepreneurial environments. Such school-community collaborations strengthen experiential entrepreneurship education while improving business planning competencies.

Overall, the findings indicate that although students possess satisfactory foundational competence in market analysis, instructional improvements emphasizing authentic entrepreneurial research and analytical thinking may further strengthen business plan performance.

**Table 7.**
*Level of Business Plan Performance in Terms of Financial Planning (n = 100)*

| Indicators | Weighted Mean* | Verbal Interpretation |
|---|---|---|
| 1. Prepares realistic projected income and expenses | 3.28 | Satisfactory |
| 2. Computes the estimated start-up capital accurately | 3.22 | Satisfactory |
| 3. Identifies possible sources of business capital | 3.35 | Satisfactory |
| 4. Develops appropriate pricing strategies | 3.31 | Satisfactory |
| 5. Presents feasible financial projections | 3.19 | Satisfactory |
| **Grand Mean** | **3.27** | **Satisfactory** |

Table 7 presents the level of business plan performance of Grade 12 students in terms of financial planning. The findings indicate that the respondents demonstrated a satisfactory level of performance, as reflected by the grand mean of 3.27. Among the indicators, identifying possible sources of business capital obtained the highest weighted mean, whereas presenting feasible financial projections received the lowest rating.

These findings suggest that although students possess a basic understanding of financial planning concepts, they continue to experience difficulties when performing more advanced financial analyses, particularly those involving forecasting, budgeting, and financial feasibility. Preparing realistic financial projections requires students to integrate mathematical skills, business knowledge, analytical reasoning, and decision-making competencies, making it one of the most cognitively demanding components of business plan preparation.

The findings support those of Jambo et al. (2025), who reported that financial literacy remains one of the major learning challenges among senior high school students. Likewise, Gantalao (2025) observed that learners frequently encounter difficulties applying financial concepts to authentic entrepreneurial situations. Collectively, these

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studies reinforce the present findings that financial planning continues to require greater instructional attention within entrepreneurship education.

Educationally, these findings emphasize the importance of strengthening financial literacy instruction through scaffolded learning activities, spreadsheet applications, budgeting workshops, business simulations, and project-based financial planning exercises. Such instructional approaches align with Experiential Learning Theory, which emphasizes that learners develop competence through authentic application and reflective practice.

From a curriculum perspective, entrepreneurship learning competencies may provide greater emphasis on financial planning before requiring students to prepare complete business plans. Teacher education institutions may likewise strengthen the preparation of entrepreneurship teachers by enhancing their competence in financial literacy instruction and authentic financial assessment. School leaders may further support entrepreneurship instruction by providing access to financial planning software, spreadsheet applications, and practical entrepreneurship workshops that strengthen students' financial competencies.

Overall, the findings suggest that strengthening financial literacy instruction may substantially improve students' business plan performance and entrepreneurial readiness.

**Table 8.**

*Level of Business Plan Performance in Terms of Organizational Structure (n = 100)*

| Indicators | Weighted Mean* | Verbal Interpretation |
|---|---|---|
| 1. Identifies organizational roles clearly | 3.44 | Satisfactory |
| 2. Defines management responsibilities appropriately | 3.38 | Satisfactory |
| 3. Develops a logical organizational chart | 3.33 | Satisfactory |
| 4. Demonstrates understanding of business operations | 3.29 | Satisfactory |
| 5. Aligns organizational structure with business objectives | 3.25 | Satisfactory |
| **Grand Mean** | **3.34** | **Satisfactory** |

Table 8 presents the level of business plan performance in terms of organizational structure. The results indicate that the respondents achieved a satisfactory level of performance, with an overall weighted mean of 3.34. The highest rating was obtained in identifying organizational roles, whereas aligning organizational structures with business objectives received the lowest rating.

The findings indicate that students generally understand the basic organizational requirements of business planning but require additional guidance in integrating organizational decisions with broader business strategies. Effective organizational planning requires learners to recognize leadership responsibilities, workflow coordination, communication structures, and operational management within entrepreneurial settings.

These findings correspond with the broader entrepreneurship education literature, which emphasizes that organizational planning is a critical entrepreneurial competency requiring both conceptual understanding and practical application. Students often perform well in identifying organizational components but experience greater difficulty integrating these components into comprehensive strategic business planning.

Educationally, the findings suggest that teachers may incorporate collaborative business simulations, organizational case studies, role-playing activities, and leadership exercises into entrepreneurship instruction to strengthen students' understanding of organizational management. These learner-centered instructional approaches are consistent with Constructivist Learning Theory, which emphasizes knowledge construction through authentic and collaborative learning experiences.

Curriculum developers may likewise strengthen competencies related to organizational management, leadership, and entrepreneurial decision-making by integrating authentic organizational planning activities across entrepreneurship courses. Teacher education institutions may prepare future entrepreneurship teachers to facilitate collaborative learning, organizational simulations, and project-based management activities that improve students' organizational competencies.

Educational leaders may further support entrepreneurship instruction by encouraging school-based enterprise projects, leadership development activities, and partnerships with local entrepreneurs that expose students to authentic organizational practices.

Overall, the findings demonstrate that while students possess satisfactory organizational planning skills, enhanced experiential learning opportunities may further strengthen their leadership competencies and business planning abilities.

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**Table 9.**
*Level of Business Plan Performance in Terms of Overall Feasibility (n = 100)*

| Indicators | Weighted Mean* | Verbal Interpretation |
|---|---|---|
| 1. Demonstrates overall feasibility of the proposed business | 3.32 | Satisfactory |
| 2. Integrates all components of the business plan effectively | 3.27 | Satisfactory |
| 3. Presents realistic implementation strategies | 3.35 | Satisfactory |
| 4. Demonstrates sustainability of the proposed business | 3.29 | Satisfactory |
| 5. Presents a coherent and practical business proposal | 3.37 | Satisfactory |
| **Grand Mean** | **3.32** | **Satisfactory** |

Table 9 presents the level of business plan performance of Grade 12 students in terms of overall feasibility. The findings reveal a satisfactory level of performance, as reflected by the grand mean of 3.32. Students obtained the highest rating in presenting coherent and practical business proposals, while integrating all components of the business plan received the lowest weighted mean.

The findings indicate that students generally possess the ability to prepare feasible entrepreneurial proposals; however, integrating market analysis, financial planning, organizational management, and strategic planning into a unified business plan remains a challenging task. Business feasibility requires students to synthesize multiple entrepreneurial competencies simultaneously, making it one of the most comprehensive indicators of entrepreneurial learning.

These findings align with previous studies emphasizing that entrepreneurship education is most effective when learners engage in authentic performance-based activities that require the integration of entrepreneurial knowledge, technical competencies, and decision-making skills. Business plan preparation therefore represents not merely an academic requirement but a comprehensive assessment of entrepreneurial competence.

Educationally, the findings highlight the importance of integrating learner-centered instructional approaches, authentic assessment, business simulations, and interdisciplinary learning experiences that strengthen students' ability to synthesize entrepreneurial concepts into feasible business proposals. These instructional approaches are supported by Constructivist Learning Theory, Experiential Learning Theory, and Self-Efficacy Theory, all of which emphasize active learning, authentic engagement, and confidence-building through meaningful educational experiences.

For curriculum developers, the findings suggest that entrepreneurship curricula may further strengthen authentic business planning experiences by integrating financial planning, organizational management, marketing, and entrepreneurial decision-making across multiple learning competencies rather than treating them as isolated topics. Teacher education institutions may likewise strengthen entrepreneurship pedagogy by preparing future teachers to facilitate authentic business planning and performance-based assessment.

School leaders and educational policymakers may utilize these findings in strengthening entrepreneurship laboratories, school-business partnerships, mentorship programs, and entrepreneurship resource development initiatives that enhance authentic entrepreneurial learning.

Overall, the findings demonstrate that students exhibit satisfactory entrepreneurial readiness; however, continued emphasis on experiential learning, interdisciplinary instruction, and authentic performance assessment may further improve the feasibility and quality of students' business plans.

## Conclusions

Based on the findings of the study, the following conclusions were drawn:

1. The study established that Grade 12 students experienced learning challenges related to cognitive, technical, instructional, and resource-related factors during the preparation of business plans. These learning challenges influenced students' ability to effectively demonstrate entrepreneurial competencies, confirming that business plan preparation involves complex cognitive, technical, and instructional demands that require adequate learner support.
2. The respondents demonstrated a generally satisfactory level of business plan performance across the assessed indicators. While students showed competence in presenting business concepts and conducting basic market analysis, they encountered greater difficulty in financial planning, integrating business plan components, and developing original and innovative business ideas. These findings indicate that entrepreneurship education has successfully developed foundational entrepreneurial competencies but requires continued enhancement

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to strengthen higher-order thinking, creativity, financial literacy, and authentic entrepreneurial decision-making.

3. The significant negative relationship between learning challenges and business plan performance demonstrates that increasing learning difficulties correspond with lower levels of entrepreneurial performance. Among the identified challenges, instructional factors exerted the strongest influence, highlighting the critical role of effective teaching practices, learner-centered pedagogy, adequate instructional time, continuous feedback, and meaningful classroom engagement in improving business plan performance.
4. The findings support the theoretical foundations of the study by demonstrating that meaningful entrepreneurship learning is strengthened when students actively construct knowledge, participate in authentic learning experiences, and develop confidence in performing entrepreneurial tasks. Constructivist Learning Theory, Experiential Learning Theory, and Self-Efficacy Theory collectively explain how instructional quality, learning experiences, learner confidence, and access to educational resources contribute to improved business plan performance.
5. The study contributes to entrepreneurship education by providing empirical evidence that learning challenges influence students' performance-based learning outcomes. The findings emphasize the importance of responsive, learner-centered, and experiential instructional approaches that strengthen entrepreneurial competencies, improve authentic assessment, and enhance students' readiness for entrepreneurial practice.
6. The proposed enhanced instructional strategies provide an evidence-based framework for addressing the identified learning challenges through financial literacy enhancement, project-based learning, technology integration, consultation and mentoring, authentic assessment, and strengthened instructional support. These interventions may contribute to improving entrepreneurship teaching, learner engagement, business plan performance, and overall educational quality.
7. The findings likewise provide important implications for curriculum development, teacher professional development, educational leadership, and instructional policy. Strengthening entrepreneurship curricula, improving teacher preparation, enhancing instructional supervision, and increasing institutional support for entrepreneurship education may collectively improve students' entrepreneurial competencies and better prepare them for lifelong learning, employment, and enterprise development.

**Recommendations**

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

1. Teachers may strengthen entrepreneurship instruction by incorporating learner-centered, project-based, and experiential learning strategies that provide students with meaningful opportunities to apply entrepreneurial concepts through authentic business planning activities. Greater emphasis may also be placed on financial literacy, market analysis, creativity, innovation, and collaborative problem-solving to improve business plan performance.
2. Teachers may provide continuous formative assessment, regular consultation sessions, and individualized feedback throughout the business planning process to address students' cognitive, technical, instructional, and resource-related learning challenges while strengthening learner confidence and entrepreneurial competence.
3. School leaders, including principals, department heads, and instructional supervisors, may strengthen instructional support by allocating adequate instructional time, providing entrepreneurship learning resources, encouraging collaborative lesson planning, and supporting professional development activities that enhance entrepreneurship teaching and learner-centered instructional practices.
4. Curriculum developers may review and strengthen entrepreneurship learning competencies by integrating additional experiential learning activities, authentic business simulations, financial planning exercises, market research projects, and interdisciplinary business planning experiences that progressively develop entrepreneurial competencies across the curriculum.
5. Teacher education institutions may enhance pre-service and in-service teacher preparation by strengthening entrepreneurship pedagogy, project-based instructional design, authentic assessment, financial literacy instruction, technology integration, and learner-centered teaching approaches that prepare educators to effectively facilitate entrepreneurship education.
6. Educational policymakers may support the continuous improvement of entrepreneurship education by strengthening instructional resource allocation, expanding ICT integration, improving access to entrepreneurship learning materials, and encouraging school-community-industry partnerships that provide authentic entrepreneurial learning experiences for students.

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7. Schools may continue to invest in digital infrastructure, entrepreneurship laboratories, updated instructional materials, and community partnerships that support authentic business planning activities and improve students' access to quality entrepreneurship learning resources.
8. The proposed enhanced instructional strategies may be implemented and evaluated within entrepreneurship classes to determine their effectiveness in reducing students' learning challenges and improving business plan performance. The results of such implementation may serve as additional evidence for continuous instructional improvement.
9. Future researchers may conduct experimental, quasi-experimental, or longitudinal studies to validate the effectiveness of the proposed enhanced instructional strategies across different educational settings, grade levels, and student populations. Future investigations may likewise examine additional variables, including entrepreneurial self-efficacy, digital competence, financial literacy, and innovation capability, that may further explain students' business plan performance.
10. Future studies may also replicate the present investigation in other senior high schools and higher education institutions to determine the generalizability of the findings and contribute to the continuing development of entrepreneurship education in the Philippines and comparable educational contexts.

These recommendations provide practical guidance for teachers, school leaders, curriculum developers, teacher education institutions, educational policymakers, and future researchers in strengthening entrepreneurship education through learner-centered instruction, authentic assessment, curriculum enhancement, and evidence-based instructional innovation. Collectively, these initiatives may contribute to improving students' entrepreneurial competencies, business plan performance, and overall readiness for lifelong learning and entrepreneurial practice.

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