

Entrepreneurial And Financial Literacy of Senior High School Students in Bulacan Province: Basis for Intervention Measures

Charlie Abana De la Cruz
Eulogio "Amang" Rodriguez Institute of Science and Technology
sircha17@gmail.com

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ABSTRACT

Entrepreneurial and financial literacy are essential for preparing senior high school students to make informed decisions, recognize opportunities, and manage resources responsibly. This study assessed the entrepreneurial and financial literacy of senior high school students in selected private senior high schools in Santa Maria, Bulacan, identified the challenges encountered, examined differences in the assessments of school heads, teachers, and students, and evaluated proposed intervention measures. A descriptive survey design was used. The respondents were 358 participants composed of four school heads, 54 teachers, and 300 senior high school students selected through convenience sampling. Data were gathered using a validated questionnaire and analyzed using frequency, percentage, weighted mean,

analysis of variance, and Tukey-Kramer pairwise comparisons. The overall assessment of entrepreneurial and financial literacy was evident ($M = 4.15$). Entrepreneurial literacy obtained a higher composite mean ($M = 4.21$) than financial literacy ($M = 4.08$). Networking and relationship-building ranked highest among entrepreneurial domains ($M = 4.44$), while budgeting ranked highest among financial domains ($M = 4.21$). Challenges were moderately encountered ($M = 2.94$), particularly in identifying market needs, developing new products, managing operational risks, and setting financial goals. The proposed intervention measures were assessed favorably, especially for their anticipated benefits to schools and ABM stakeholders. The findings support targeted, practical, and school-based interventions that strengthen market analysis, innovation, risk management, financial analysis, investment literacy, and budgeting skills.

Keywords: *budgeting, entrepreneurial literacy, financial literacy, intervention measures, senior high school students, youth entrepreneurship*

INTRODUCTION

Entrepreneurial and financial literacy equip learners with knowledge, skills, and dispositions needed to navigate a changing economy. Entrepreneurial literacy supports opportunity recognition, innovation, relationship-building, marketing, and risk management. Financial literacy supports planning, analysis, understanding of markets and instruments, and budgeting. When developed together, these competencies help young people evaluate opportunities, manage resources, and make responsible personal and business decisions.

In the Philippine context, entrepreneurship and financial education are embedded in policy and curriculum initiatives. Republic Act No. 10679, or the Youth Entrepreneurship Act, promotes youth entrepreneurship

development, while the Department of Education has expanded financial education in the K to 12 curriculums to help learners make informed financial decisions (Department of Education, 2021; Department of Trade and Industry Philippines, 2021). These initiatives recognize that entrepreneurship education should move beyond conceptual understanding toward practical experiences that build competence and confidence.

Despite these efforts, senior high school students may still encounter difficulty in translating knowledge into practice. They may understand basic concepts but struggle with market analysis, product development, financial statements, investments, and risk mitigation. Earlier studies emphasized the value of entrepreneurial knowledge, skills, social support, budgeting, and practical financial behaviors in preparing learners for future work and enterprise development (Arago et al., 2023; Etrata & Raborar, 2022; Cardenas & Fonte, 2021).

This study assessed entrepreneurial and financial literacy among senior high school students in selected private schools in Santa Maria, Bulacan. It compared the perceptions of school heads, teachers, and students, identified priority challenges, and developed intervention measures that may guide school-based entrepreneurship and financial-literacy initiatives.

Literature Review

Entrepreneurial Literacy

Entrepreneurial literacy involves identifying opportunities, adapting to change, building networks, marketing products and services, and managing risks. Opportunity recognition is central to venture creation because it allows learners to identify unmet needs and convert ideas into feasible solutions (Prabha, 2023). Networking and relationship-building are also important because entrepreneurial outcomes are influenced by the ability to build trust, collaborate, and access resources through professional relationships (Abu-Rumman et al., 2021). Innovation and adaptability remain essential in dynamic environments, while marketing and risk-management skills help learners connect solutions with customers and anticipate possible losses (Abdalla & Nakagawa, 2022; Al-Shaikh & Hanaysha, 2023; Chitta & Soni, 2023).

Financial Literacy

Financial literacy includes planning, interpreting financial information, understanding markets and financial instruments, and preparing budgets. Students need practical knowledge of saving, budgeting, borrowing, investment, and risk management to make informed decisions. Financial planning supports resilience because it aligns resources with short- and long-term goals (Yeo et al., 2023). Financial analysis helps learners interpret data and evaluate business performance, while familiarity with markets and instruments strengthens decision-making in increasingly complex financial environments (Pagaddut, 2021; Naik & Reddy, 2021; Kamalkannan & Arockiam, 2021).

School-Based Intervention

Literacy development requires more than classroom discussion. Arago et al. (2023) emphasized the importance of training, practical activities, and business planning experiences for senior high school learners. Etrata and Raborar (2022) similarly noted that formal education and supportive environments influence entrepreneurial intention. Taken together, the literature supports interventions that combine targeted instruction, experiential activities, mentoring, and regular assessment.

METHODS

Research Design

The study employed a descriptive survey design with a comparative component. The descriptive approach summarized the entrepreneurial and financial literacy of senior high school students and the challenges encountered. The comparative component examined differences in the assessments provided by school heads, teachers, and students.

Research Locale

The study was conducted in selected private senior high schools in Santa Maria, Bulacan: Immaculate Conception Polytechnic, Sacred Heart Academy, Liceo de San Lorenzo, Grace of Shekinah Academy, and STI - Sta. Maria. Data collection was conducted from December 2023 to July 2024.

Participants and Sampling Technique

The respondents were 358 participants composed of four school heads, 54 teachers, and 300 senior high school students. Convenience sampling was used due to accessibility, availability, and willingness to participate. The findings therefore represent the selected schools and should not be generalized to all senior high schools in Bulacan without caution.

Table 1. *Distribution of Respondents by Group (N = 358)*

Respondent Group	Sample	Percentage
School heads	4	1.12%
Teachers	54	15.08%
Senior high school students	300	83.80%
Total	358	100.00%

Research Instrument

A researcher-developed and expert-validated questionnaire was used. It included respondent profile, entrepreneurial-literacy indicators, financial-literacy indicators, challenges encountered, and acceptability criteria for the proposed intervention measures. Entrepreneurial literacy covered opportunity recognition, innovation and adaptability, networking and relationship-building, marketing, and risk management. Financial literacy covered planning, analysis, markets, instruments, and budgeting. Responses were rated using five-point Likert scales.

Data Gathering Procedure

Permission was sought from the school heads of the selected private senior high schools. The questionnaire was administered through Google Forms to the participating school heads, teachers, and students. The responses were retrieved, tallied, and submitted for statistical treatment.

Data Analysis

Frequency and percentage were used to summarize respondent distribution. Weighted means were computed to describe literacy domains, challenges, and intervention acceptability. Analysis of variance was used to compare the assessments of the three respondent groups, followed by Tukey-Kramer pairwise comparisons when differences were identified. The source manuscript reported F-values and critical values rather than p-values; interpretation in this article follows the reported statistical values and identifies inconsistencies transparently.

Ethical Considerations

The study secured permission from the participating schools and administered the questionnaire to willing respondents. Responses were gathered for research purposes and reported in aggregate form. The article preserves the source manuscript's reported procedures and does not introduce additional claims regarding ethics approval or consent documentation that were not explicitly stated.

RESULTS AND DISCUSSION

Entrepreneurial and Financial Literacy

The overall assessment of entrepreneurial and financial literacy was evident ($M = 4.15$). Entrepreneurial literacy received an overall mean of 4.21, indicating a highly evident level, while financial literacy obtained an overall mean of 4.08, indicating an evident level. Networking and relationship-building was the highest-rated entrepreneurial domain ($M = 4.44$), followed by opportunity recognition ($M = 4.21$). Budgeting was the highest-rated financial domain ($M = 4.21$), followed by planning ($M = 4.13$). Financial analysis obtained the lowest mean among the ten domains ($M = 3.96$), suggesting a need for further development in interpreting financial information and applying analytical tools.

Table 2. *Summary of Entrepreneurial-Literacy Domains*

Domain	School Heads	Teachers	Students	Composite	Interpretation
Opportunity recognition	4.72	3.98	3.94	4.21	Highly evident
Innovation and adaptability	4.29	4.17	4.10	4.19	Evident
Networking and relationship	4.38	4.33	4.05	4.44	Highly evident
Marketing	4.44	4.05	4.06	4.19	Evident
Risk management	4.21	3.93	3.96	4.04	Evident
Entrepreneurial-literacy mean	4.41	4.09	4.02	4.21	Highly evident

Table 3. *Summary of Financial-Literacy Domains*

Domain	School Heads	Teachers	Students	Composite	Interpretation
Planning	4.28	4.07	4.03	4.13	Evident
Analysis	4.19	3.82	3.85	3.96	Evident
Markets	4.42	3.85	3.89	4.05	Evident
Instruments	4.50	3.77	3.84	4.03	Evident
Budgeting	4.44	4.09	4.11	4.21	Highly evident
Financial-literacy mean	4.37	3.92	3.94	4.08	Evident
Overall literacy mean	4.39	4.01	3.98	4.15	Evident

The domain pattern suggests that students had a strong foundation but would benefit from deeper, application-oriented experiences. Their strength in networking and budgeting may be reinforced through collaborative enterprise activities, while financial analysis, financial instruments, market research, product innovation, and risk mitigation require more structured practice. This finding is consistent with studies that recommend experiential entrepreneurship education and practical financial-literacy activities rather than purely theoretical instruction (Arago et al., 2023; Thavva, 2021).

Differences in Group Assessments

The three respondent groups did not provide identical assessments. School heads consistently assigned higher weighted means than teachers and students. The source manuscript presented ANOVA tables with reported F-values and critical values. For eight domains, the reported F-values exceeded the critical values and support significant differences among the respondent groups. The source table labeled marketing and planning as not significant despite F-values that exceeded their reported critical values. These two entries are flagged as internally inconsistent and should be rechecked against the original statistical output before submission.

Table 4. *Reported Comparison of Respondent Assessments*

Domain	F-value	Reported Critical Value	Evidence-Based Reading	Submission Note
Opportunity recognition	33.8355	3.47	Significant	Consistent with source decision
Innovation and adaptability	4.1930	3.55	Significant	Consistent with source decision
Networking and relationship	126.8119	3.55	Significant	Consistent with source decision
Marketing	17.8187	3.47	Significant	Source table labels this not significant; verify
Risk management	12.0940	3.55	Significant	Consistent with source decision
Planning	6.4139	3.47	Significant	Source table labels this not significant; verify
Analysis	20.2778	3.47	Significant	Consistent with source decision
Markets	40.6320	3.68	Significant	Consistent with source decision
Instruments	50.0766	3.47	Significant	Consistent with source decision
Budgeting	43.3021	3.47	Significant	Consistent with source decision

The Tukey-Kramer comparisons reported in the source manuscript generally located the differences between school heads and the other respondent groups. The school heads' higher assessments may reflect their program-level perspective, while teachers and students may judge competencies through day-to-day classroom and learner experiences. The source's conflicting marketing and planning decision labels warrant statistical verification before the manuscript is submitted to a journal.

Challenges Encountered

Challenges in entrepreneurial and financial literacy were moderately encountered overall ($M = 2.94$). The most prominent challenge was difficulty identifying market needs ($M = 3.18$). Other priority concerns included creating new markets and products ($M = 3.07$), identifying operational risks ($M = 3.02$), segmenting target markets ($M = 3.00$), setting short- and long-term financial goals ($M = 2.99$), and regularly identifying budgeting commitments and operational expenses ($M = 2.97$). These findings indicate that students require guided opportunities to apply knowledge in realistic situations.

Table 5. *Priority Challenges in Entrepreneurial and Financial Literacy*

Priority Challenge	Mean	Interpretation	Rank
Difficulty identifying needs in the market	3.18	Moderately encountered	1
Difficulty creating new markets and products	3.07	Moderately encountered	2
Difficulty identifying operational risks in resources	3.02	Moderately encountered	3
Difficulty identifying and segmenting target markets	3.00	Moderately encountered	4
Difficulty setting short- and long-term financial goals	2.99	Moderately encountered	5
Difficulty identifying budgeting commitments and operational expenses	2.97	Moderately encountered	6
Difficulty reading and understanding financial statements	2.96	Moderately encountered	7
Overall challenge mean	2.94	Moderately encountered	-

Proposed Intervention Measures

The findings support a practical intervention framework that strengthens competencies with lower domain ratings and addresses the most frequently reported challenges. Activities should connect classroom learning with business simulations, mentoring, contextualized financial exercises, and structured feedback.

Table 6. *Proposed Intervention Measures*

Key Area	Objective	Suggested Activities	Success Indicator
Market opportunity and innovation	Improve needs identification, market segmentation, and product development	Market-scanning exercises; customer-needs interviews; product-design challenge; local business case analysis	Learners develop feasible market opportunity proposals
Risk management	Strengthen identification and mitigation of operational and market risks	Risk-mapping workshop; scenario analysis; mitigation-plan preparation	Learners produce risk registers and mitigation plans
Financial analysis and instruments	Improve interpretation of statements, ratios, investment products, and market concepts	Financial-statement laboratory; ratio exercises; investment-product comparison; guided simulations	Improved performance in practical financial-analysis tasks
Budgeting and planning	Translate goals into realistic budgets and savings plans	Personal and enterprise budgeting activities; emergency-fund planning; budget-monitoring exercises	Learners prepare and revise realistic financial plans
Networking and experiential learning	Use the strongest literacy area to support applied learning	Mentoring with local entrepreneurs; pitch sessions; mini-enterprise projects; reflective assessment	Learners demonstrate integrated entrepreneurial and financial decision-making

Acceptability of the Intervention Measures

The intervention measures were favorably assessed. The highest-rated criterion was the anticipated benefit to the school and ABM stakeholders ($M = 4.59$). The ability of the measures to guide school heads in strengthening the ABM program also received a high rating ($M = 4.35$). The reasonableness of the proposed budget and funding sources received the lowest rating ($M = 3.91$), indicating the need to refine implementation costing and resource mobilization.

Table 7. *Acceptability of the Proposed Intervention Measures*

Criterion	Composite Mean	Interpretation	Rank
Benefits the school and ABM stakeholders	4.59	Highly acceptable	1
Guides school heads in enhancing the ABM program	4.35	Highly acceptable	2
Acceptable and implementable	4.24	Highly acceptable	3
Provides activities and programs to improve school performance	4.13	Acceptable	4
Budget and funding sources are reasonable	3.91	Acceptable	5

CONCLUSION

Senior high school students in the selected private schools in Santa Maria, Bulacan demonstrated an evident level of entrepreneurial and financial literacy. Their strongest areas were networking and relationship-building and budgeting, while financial analysis obtained the lowest domain mean. The findings indicate a substantial foundation that can be strengthened through practical and contextualized learning experiences. Moderate challenges remained in market-needs identification, innovation, risk management, financial-goal setting, and financial-statement interpretation. Differences in the assessments of school heads, teachers, and students further suggest that intervention planning should integrate multiple stakeholder perspectives. The proposed intervention measures provide a relevant school-based framework for strengthening the identified priority competencies.

Recommendations

Selected private senior high schools may adopt a structured intervention program that combines entrepreneurship simulations, market-needs analysis, product-development activities, financial-statement exercises, budgeting workshops, mentoring, and local business partnerships. Teachers may use practical performance tasks and regular feedback to monitor learner progress. School heads may refine the intervention budget, identify sustainable funding sources, and align implementation with ABM program priorities. Future researchers may validate the intervention through pilot implementation, use larger and more diverse samples, and reanalyze the original respondent-level dataset to confirm the reported ANOVA and post hoc findings, particularly the internally inconsistent marketing and planning decision labels.

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