

ASSESSING THE EDUCATIONAL KNOWLEDGE AND ENTREPRENEURIAL COMPETENCIES OF BUSINESS OWNERS

By:

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Abstract. *This study examined the demographic profile, level of educational knowledge, and entrepreneurial competencies of small-scale business owners, most of whom operate mini-grocery and fresh produce retail enterprises. The location of many businesses outside the Poblacion area reflects a preference for lower rental costs, reduced market congestion, and better physical space for operations. Business longevity ranges from one month to over thirty years, with most owners operating for two to twenty years, indicating a generally stable and experienced entrepreneurial base. Respondents achieved moderate mean scores in educational knowledge related to skills (3.13) and reinforced learning (3.23), demonstrating strengths in communication, teamwork, active listening, stress management, and basic planning. However, weaker performance was observed in technical skills, digital literacy, adaptability to new technologies, creativity, and receiving timely feedback. Although experiential learning and hands-on practice contribute strongly to entrepreneurial confidence and decision-making, the combined effect of skills, abilities, and reinforcement on entrepreneurial competencies remains only moderate. Overall, entrepreneurial competencies were rated high (mean = 3.42), particularly in risk-taking, persistence, planning, networking, communication, and adaptability, while analytical and information-seeking behaviors were lower. The correlation between educational background and entrepreneurial competencies was weak but significant ($r = 0.031$, $p = 0.000$), and regression analysis showed that skills, abilities, experience, and reinforced learning collectively explain only a small proportion of variance ($R^2 = 0.035$), with no individual predictor reaching statistical significance. The findings suggest that entrepreneurial competencies are shaped more by practical experience, mentoring, motivation, and real-world exposure than by formal education alone, underscoring the need for a holistic, practice-oriented approach to entrepreneurship education and support programs.*

Keywords. *Entrepreneurial competencies, educational knowledge, small business owners, Retail entrepreneurship, Mini-grocery and fresh produce businesses, Entrepreneurial skills, Digital literacy, Experiential learning, Reinforced learning.*

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INTRODUCTION

The contemporary business landscape presents unique challenges that diverge sharply from those of the past. Small and micro-entrepreneurs in local markets must navigate rapid technological advancements, evolving consumer preferences, and intensifying competition. In this dynamic environment, discerning the key factors enabling successful management has become essential. While entrepreneurial experience often suffices for many owners, formal education's role in shaping competencies warrants deeper scrutiny—particularly in regions with varying educational backgrounds.

This study examines the entrepreneurial competencies of business owners in Poblacion, Tagoloan, Misamis Oriental. It investigates whether their educational attainment—ranging from secondary school completion and vocational training to primarily experiential learning—influences their managerial skills and abilities. The research focuses exclusively on active small and micro-entrepreneurs in the public market, a hub of diverse businesses and daily commerce. By analyzing business specifics, locational

geography, and operational tenure, the study reveals how these variables shape competency acquisition and application.

This research is timely, as many entrepreneurs still rely solely on hands-on experience for skill development. Experience holds undeniable value, yet it often falls short amid fast-changing markets, where challenges in planning, innovation, financial management, and trend adaptation persist. Identifying links between education and competencies can pinpoint support needs, informing community programs, local training initiatives, and policy interventions.

While entrepreneurship has attracted extensive study, most research targets university students, formal training programs, or startups in major metros. Few explore the competencies of small-scale operators in local markets, especially semi-urban areas like Tagoloan, or integrate educational backgrounds with practical skills. This gap in localized, practitioner-focused evidence presents an opportunity; by drawing data directly from real-world owners rather than students, the study better captures the realities of daily entrepreneurship.

The study is anchored in Entrepreneurial Competency Theory, Human Capital Theory, and Experiential Learning Theory. These frameworks posit that competitive edges arise from education, experience, personal traits, and continuous learning. Human Capital Theory asserts that education boosts individual productivity; Experiential Learning underscores real-world knowledge gains; and Entrepreneurial Competency Theory identifies the skills, traits, and behaviors driving business success. Grounded in these, the research offers practical insights: entrepreneurs can assess strengths and gaps, educators can tailor programs, and policymakers can advance community-driven business development.

METHODOLOGY

Research Design

To achieve the study's objectives, this research employs a quantitative correlational design with a comparative approach. This method describes and measures the entrepreneurial competencies of small and micro-entrepreneurs while examining differences across educational backgrounds (e.g., secondary education, vocational training, or primarily experiential learning).

Data will be collected via structured questionnaires and surveys administered to active business owners in Poblacion Public Market, Tagoloan, Misamis Oriental. These instruments assess competencies in key areas such as planning, innovation, financial management, and market adaptation, alongside respondents' educational attainment, business specifics, location factors, and operational duration.

Analysis involves descriptive statistics (e.g., means, frequencies) to profile competencies, inferential tests (e.g., t-tests, ANOVA for group comparisons), and correlation/regression analyses (e.g., Pearson's r or multiple regression) to evaluate relationships between educational background and competency levels. Statistical software like SPSS or R will process the data, ensuring rigorous testing of hypotheses at a significance level of.

Research Locale

This study was conducted in Poblacion Public Market, Tagoloan, Misamis Oriental—a vibrant commercial hub approximately 200 meters from the national highway, ensuring easy access for residents, travelers, and vendors from surrounding barangays. As one of the municipality's primary trading centers, it hosts a diverse array of small and micro-enterprises, including sari-sari stores, mini-groceries, fresh produce stalls, and homeware shops, where daily exchanges drive local economic activity.

Respondents—active business owners—were surveyed at their stalls or shops, selected for the locale's rich mix of enterprises and practitioners with varied educational backgrounds, from formal secondary/vocational schooling to primarily experiential learning. This diversity enables robust analysis of how education influences entrepreneurial competencies and business practices in a real-world, semi-urban setting.

Research Respondents

The study targeted a total population of 114 active small and micro-business owners in Poblacion Public Market, Tagoloan, Misamis Oriental. Using Slovin's formula at a 95% confidence level and 5% margin of error a representative sample of 89 respondents was selected via stratified random sampling to ensure proportionality across business types.

These owners were chosen as they directly embody the target competencies, providing insights into how educational backgrounds shape business practices. Respondents were stratified into four categories based on business type for organized analysis and comparison:

- Corner stores (sari-sari stores)
- Mini-groceries
- Fresh produce stores
- Homeware stores

This classification facilitates targeted comparisons of entrepreneurial skills across sectors.

Sampling Procedure

This study utilized stratified random sampling to ensure proportional representation of entrepreneurs across educational backgrounds, enabling accurate comparisons of competencies. The target population comprised 114 registered small and micro-business owners in Poblacion Public Market, Tagoloan, Misamis Oriental. Applying Slovin's formula (, with,) yielded a sample size of 89 at 95% confidence.

Data gathering procedure

Following the sample selection, researchers prepared a formal letter of request, endorsed by their advisor and relevant personnel, and submitted it to the Tagoloan Negosyo Center for permission to administer survey questionnaires in Poblacion Public Market. Upon approval, the team visited the 89 identified small and micro-business owners during low-peak hours to distribute validated instruments (pilot-tested for Cronbach's $\alpha > 0.80$) assessing competencies, education, and operations. Respondents received clear instructions for accurate, complete responses, along with assurances of strict confidentiality, anonymity, and voluntary participation—secured via informed consent forms. Completed questionnaires were collected immediately or within 48 hours, screened for completeness (targeting $\geq 90\%$ response rate), and double-encoded into SPSS/R for accuracy. A professional statistician then performed scoring, data cleaning, and interpretative analysis, ensuring the robustness and validity of the study's findings.

Research Instrument

This study was conducted through face-to-face data collection using a structured questionnaire as the primary research instrument. The questionnaire was designed to systematically gather relevant information on the entrepreneurial competencies of business owners, particularly in relation to their educational knowledge.

Prior to data collection, respondents were properly oriented regarding the purpose, objectives, and significance of the study. Informed consent was obtained to ensure voluntary participation, and respondents were assured that all information provided would be treated with strict confidentiality and used solely for academic purposes.

The questionnaire consisted of clearly defined items that measured key dimensions of entrepreneurial competencies, allowing for consistency and reliability in responses. To ensure the validity of the instrument, it was carefully reviewed and aligned with the objectives of the study.

The data gathered were subsequently organized, coded, and analyzed using appropriate statistical tools and techniques. These methods enabled the researchers to accurately assess and interpret the relationship between educational knowledge and the entrepreneurial competencies of business owners.

Reliability and Validity of the Instrument

To ensure the quality and rigor of the research instrument, a pilot test was conducted among 30 respondents who shared similar characteristics with the target population. The purpose of this pilot testing was to evaluate the instrument’s reliability and internal consistency prior to its use in the actual data collection.

The results of the reliability analysis revealed that the instrument demonstrates a high level of internal consistency. Specifically, the computed Cronbach’s Alpha coefficient for the dimension on abilities and entrepreneurial competencies was 0.809, indicating good reliability. Meanwhile, the dimensions covering skills, reinforced learning, and experience obtained a Cronbach’s Alpha of 0.911, which signifies excellent reliability. These values exceed the commonly accepted threshold of 0.70, confirming that the items within each construct are consistently measuring the same underlying concept.

In terms of validity, the questionnaire underwent careful review to ensure content validity. The items were aligned with the objectives of the study and were designed to comprehensively capture the key dimensions of educational knowledge and entrepreneurial competencies. This alignment ensures that the instrument adequately measures what it is intended to assess.

Overall, the findings from the pilot testing confirm that the research instrument is both reliable and valid. Hence, it is deemed appropriate for use in the actual survey and is expected to generate consistent, accurate, and trustworthy data for analysis.

Scoring Procedure

The researchers use a four-point Likert scale to quantify the respondents’ responses to each variable.

Scale	Range	Description	Interpretation
4	3.26 – 4.0	Strongly Agree	High related
3	2.51 – 3.25	Agree	Moderately related
2	1.76 – 2.50	Disagree	Related
1	1.0 – 1.75	Strongly Disagree	Less related

RESULTS AND DISCUSSION

The Frequency and Percentage Distribution of the Respondents in terms of Type of business

Profile	Characteristics	Frequency	Percentage
Type of Business	Corner Store	16	18.0
	Mini Groceries	36	40.4
	Fresh Produce Stores	23	25.8

	Homeware Stores	14	15.7
	Total	89	100.0

This table reveals that Mini Groceries account for 40.4% of the total sample, making them the most prevalent type of business among respondents. This is followed by Fresh Produce Stores, Corner Stores, and Homeware Stores. Such a pattern highlights the dominance of food- and consumable-based retail formats within the local market. This finding is consistent with existing literature, which emphasizes the critical role of convenience and essential goods in sustaining small retail enterprises (Melo et al., 2022). Mini grocery establishments tend to perform well because they cater to everyday consumer needs and demonstrate resilience during periods of economic uncertainty (Melo et al., 2022).

The relatively high presence of Fresh Produce Stores further reflects strong consumer demand for fresh and perishable goods, which typically require frequent purchasing behavior (Lee & Stevens, 2023). Overall, the distribution suggests that local retail activity is largely centered on routine and necessity-driven consumption. This reinforces the idea that small-scale retail ecosystems are primarily structured around meeting immediate household needs.

Understanding this distribution is essential, as each business type operates under distinct conditions and challenges. Food-oriented establishments, such as Mini Groceries and Fresh Produce Stores, must effectively manage issues related to perishability, storage, and supply chain efficiency, necessitating strong inventory control practices (Lee & Stevens, 2023). Corner Stores, on the other hand, are often deeply embedded within communities and benefit from their accessibility and proximity to regular customers, which fosters customer loyalty and repeat transactions (Smith & Brown, 2022). Meanwhile, Homeware Stores, although fewer in number, play a significant role in providing durable and non-perishable household items, thereby complementing essential retail services.

From a strategic standpoint, the prominence of Mini Groceries and Fresh Produce Stores underscores the importance of retail formats that directly support daily living. Studies suggest that small businesses that integrate effectively into their communities tend to develop stronger customer relationships and achieve more sustainable operations (Smith & Brown, 2022). These enterprises typically prioritize accessibility, affordability, and convenience, which are key drivers of consumer preference. In contrast, Homeware Stores cater to more specific, less frequent purchasing needs but remain vital in addressing household maintenance and improvement demands.

Overall, the distribution indicates that essential goods retailers form the backbone of the local business landscape. The diversity of store types reflects a balanced retail environment that supports both immediate consumption and supplementary household needs, thereby contributing to the stability and functionality of the local economy.

The Frequency and Percentage Distribution of the Respondents in terms of Location

Profile	Characteristics	Frequency	Percentage
Location	Inside, Poblacion, Public Market	31	34.8
Location	Outside, Poblacion, Public Market	58	65.2
Location	Total	89	100.0

The table reveals that 65.2% of respondents' businesses are situated outside the central Poblacion public market area, while only 34.8% operate within the central zone. This distribution indicates a clear tendency for entrepreneurs to establish their enterprises in less centralized locations. Such a pattern may reflect strategic preferences for lower operating costs and stronger engagement with community-based markets (Jones & Robertson, 2022). Businesses located outside core commercial hubs often benefit from reduced rental expenses and less intense competition, allowing them to cultivate closer relationships with local customers and build loyal patronage over time (Jones & Robertson, 2022). However, these advantages may be offset by reduced foot traffic compared to establishments within central market areas.

Operating beyond the central market can nonetheless offer strategic value, particularly for enterprises targeting consistent, neighborhood-based demand rather than relying on transient customers. Studies suggest that proximity to residential areas enhances opportunities for personalized interactions, which in turn foster customer loyalty and repeat patronage (Lee & Stevens, 2023). This dynamic is especially beneficial for small businesses with limited marketing resources, as it enables them to sustain revenue through relationship-driven transactions. Conversely, businesses within public market zones benefit from higher customer volumes, especially during peak periods, but must contend with higher rental costs and intensified competition.

Overall, the distribution of business locations presented in Table 4 underscores the critical role of spatial positioning in shaping both cost structures and market access. Centralized locations, while offering greater visibility and sales potential, typically require higher financial investment due to elevated rental rates. In contrast, peripheral locations reduce overhead costs but demand stronger community integration to maintain steady sales performance. These findings suggest that entrepreneurs carefully weigh the trade-offs between cost efficiency and customer reach when selecting business locations. The observed variation in location choices reflects diverse strategic orientations among small business owners, influenced by their financial capacity, target market, and long-term business objectives.

The Frequency and Percentage Distribution of the Respondents in terms of Years in business

Profile	Characteristics	Frequency	Percentage
Years in Business	6 month - 1 year	8	9.0
	2 years - 10 years	31	34.8
	11 years - 20 years	23	25.8
	21 years - 30 years	21	23.6
	31 years and above	6	6.7
	Total	89	100.0

This table indicates that the largest proportion of respondents (34.8%) have been operating their businesses for 2 to 10 years, followed by 25.8% with 11 to 20 years of experience, and 23.6% with 21 to 30 years. In contrast, only 9.0% of businesses are relatively new (1 month to 1 year), while 6.7% have been in operation for more than 31 years. This distribution reflects a typical small business lifecycle, where enterprises that survive the early stages tend to develop stronger adaptive capacity, operational stability, and market familiarity (Park & Kim, 2023). The relatively high concentration in the 2–10-year category suggests that a significant number of businesses have successfully overcome initial startup challenges, a phase often characterized by uncertainty, financial strain, and market entry barriers.

Businesses that have operated for 11 to 30 years demonstrate sustained resilience and the ability to adjust to changing market conditions. Longevity in this range is often associated with the development of strategic capabilities such as effective financial management, customer retention strategies, and continuous innovation (Park & Kim, 2023). These enterprises are more likely to have established stable customer bases and refined their business models over time. Meanwhile, the smaller proportion of firms operating beyond 31 years highlights that long-term survival is relatively uncommon and typically requires ongoing

adaptation, reinvestment, and responsiveness to industry shifts. Such mature businesses often benefit from strong community ties, accumulated experience, and long-standing customer loyalty.

The variation in years of operation underscores the presence of multiple stages of business development within the sample. Newly established businesses may struggle with limited resources, a lack of experience, and the need to build market presence. Those in the mid-stage (2–20 years) are generally focused on growth, consolidation, and competitive positioning, while more mature enterprises (21 years and above) tend to emphasize sustainability, succession planning, and long-term strategic direction. Understanding these lifecycle stages is essential for designing targeted interventions, as each group faces distinct challenges and opportunities that influence business performance and continuity.

The Educational Knowledge of the Respondents in terms of Abilities

Indicators	Mean	SD	Description	Interpretation
My ability to logically find solutions when faced with a difficult challenge.	2.67	0.78	Agree	Moderately Related
My ability to explain my ideas clearly, persuasively when speaking to others.	3.31	0.63	Strongly Agree	High Related
My ability to quickly understand and remember important points from written reports or instructions.	3.26	0.72	Agree	Moderately Related
My ability to use basic numbers, data correctly when making decisions.	3.30	0.61	Strongly Agree	High Related
My ability to plan my work and meet all deadlines on time.	3.40	0.58	Strongly Agree	High Related
My ability to stay calm and produce high-quality work during busy or stressful times.	3.52	0.57	Strongly Agree	High Related
My ability to work effectively and share tasks well with a group of people.	3.49	0.64	Strongly Agree	High Related
My ability to quickly learn brand new skills or adjust to new ways of working.	3.17	0.74	Agree	Moderately Related
My ability to notice small errors and make sure my work is accurate and complete.	3.34	0.64	Strongly Agree	High Related
My ability to make good decisions quickly, even when I don't have all the information.	3.26	0.67	Agree	Moderately Related
AVERAGE MEAN	3.27	0.66	Strongly Agree	High Related

This table presents an overall mean score of 3.27 (SD = 0.66) for educational knowledge in terms of abilities, interpreted as Strongly Agree and categorized as High Related. This finding indicates that respondents generally perceive their personal abilities as closely aligned with both academic competence and entrepreneurial readiness. The high aggregate score reflects a strong level of confidence in essential skills such as communication, planning, teamwork, and stress management. Prior research supports this outcome, emphasizing that the development of cognitive and interpersonal abilities significantly enhances academic performance and overall competence (Kasman et al., 2025).

Among the specific indicators, the highest mean was obtained by “My ability to stay calm and produce high-quality work during busy or stressful times” (M = 3.52, SD = 0.57), which was also interpreted as Strongly Agree and Highly Related. This suggests that respondents demonstrate a high level of confidence in managing pressure and maintaining productivity under demanding conditions. Such a result highlights the importance of emotional regulation and resilience, as these competencies are widely

recognized as critical factors in reducing academic stress and improving learning outcomes (Kasman et al., 2025). The ability to function effectively under pressure is also a valuable entrepreneurial trait, particularly in dynamic and uncertain environments.

On the other hand, the lowest mean score was recorded for “My ability to logically find solutions when faced with a difficult challenge” ($M = 2.67, SD = 0.78$), interpreted as Agree and Moderately Related. Although comparatively lower, this rating still reflects a positive self-assessment of respondents’ problem-solving capabilities. It suggests that while students possess a foundational level of analytical thinking, there remains room for further development. Literature indicates that problem-solving skills can be significantly enhanced through structured learning approaches, guided practice, and real-world application, leading to improved reasoning, decision-making, and adaptability (Bal & Doğanay, 2022).

Overall, the results in Table 6 underscore the strong relationship between educational knowledge and the development of key abilities, while also pointing to specific areas—particularly analytical problem-solving—where targeted interventions may further strengthen students’ competencies.

The Educational Knowledge of the Respondents in terms of Experience

Indicators	Mean	SD	Description	Interpretation
My experience in the entrepreneurship challenge/ course gave me opportunities to identify viable business ideas (opportunity-recognition competency).	3.24	0.64	Agree	Moderately Related
Through hands-on activities in the program, I feel more capable of evaluating and selecting good business ideas (idea evaluation competency).	3.45	0.71	Strongly Agree	High Related
The practical tasks and assignments in the course improved my ability to plan and mobilize resources for a venture (resource-procurement competency).	3.37	0.59	Strongly Agree	High Related
Working through projects during the program enhanced my problem-solving and decision-making skills relevant to entrepreneurship.	3.37	0.68	Strongly Agree	High Related
My educational experience allowed me to practice entrepreneurial behaviors (e.g., pitching, resource planning, teamwork), which boosted my competence.	3.37	0.63	Strongly Agree	High Related
The challenge/course experience increased my confidence to launch or run a business (entrepreneurial self-efficacy).	3.38	0.63	Strongly Agree	High Related
I find that what I learned and experienced in the program is directly applicable to real-world entrepreneurial situations.	3.31	0.65	Strongly Agree	High Related
The program’s activities improved my capacity to adapt and respond to unexpected business challenges.	3.35	0.66	Strongly Agree	High Related
My experience in the entrepreneurship course enhanced my creativity and ability to generate innovative business solutions.	3.26	0.65	Agree	Moderately Related
The entrepreneurship education experience significantly strengthened my entrepreneurial competencies.	3.27	0.67	Strongly Agree	High Related
AVERAGE MEAN	3.34	0.65	Strongly Agree	High Related

This table presents an overall mean score of 3.34 ($SD = 0.65$) for educational knowledge in terms of experience, interpreted as Strongly Agree and categorized as Highly Related. This indicates that respondents generally perceive their entrepreneurship course experiences as highly relevant to the development of their entrepreneurial knowledge and competencies. The result suggests that exposure to

experiential learning activities—such as hands-on tasks, simulations, and practical business-related assignments—has significantly contributed to students’ understanding and application of entrepreneurial concepts. Supporting literature emphasizes that entrepreneurship education incorporating experiential learning approaches enhances students’ practical competencies, self-efficacy, and preparedness for entrepreneurial engagement (Kurnia Fatmawati, Kusdiyanti, & Sumarsono, 2023).

Among the indicators, the highest mean was recorded for “Through hands-on activities in the program, I feel more capable of evaluating and selecting good business ideas (idea evaluation competency)” (M = 3.45, SD = 0.71), interpreted as Strongly Agree and High Related. This finding indicates that experiential learning activities requiring active participation in evaluating business ideas have a strong influence on respondents’ confidence in entrepreneurial decision-making. It highlights the effectiveness of applied learning experiences in strengthening opportunity recognition and evaluative judgment. Related studies confirm that engaging students in real or simulated business evaluation tasks enhances their ability to assess opportunities and improves overall entrepreneurial competence (Marbelith Laydes Info et al., 2024).

In contrast, the lowest mean was observed for “My experience in the entrepreneurship course enhanced my creativity and ability to generate innovative business solutions” (M = 3.26, SD = 0.65), interpreted as Agree and Moderately Related. Although still positively rated, this result suggests that the impact of the course on creativity and innovation development is comparatively less pronounced. This may indicate that while experiential learning effectively strengthens practical and evaluative skills, it may not sufficiently emphasize creative ideation processes. Literature suggests that enhancing creativity and innovation requires more structured design-thinking approaches, reflective activities, and iterative problem-solving exercises to fully develop students’ innovative capacities (Endarwati, Shaikha, & Pramuka, 2023).

Overall, the findings in Table 7 highlight that entrepreneurship education is particularly effective in developing experiential and evaluative competencies, while also indicating a need for stronger instructional strategies to further enhance creativity and innovation among students.

The Educational Knowledge of the Respondents in terms of Skills

Indicators	Mean	SD	Description	Interpretation
I can use logical reasoning to evaluate complex information.	2.79	0.78	Agree	Moderately Related
I am effective at identifying the root cause of a problem.	3.29	0.64	Strongly Agree	High Related
I am capable of clearly and persuasively expressing my ideas in written reports and emails.	3.40	0.54	Strongly Agree	High Related
I am skilled at actively listening to colleagues.	3.51	0.61	Strongly Agree	High Related
I am proficient in working effectively within a team to achieve a shared goal.	3.40	0.70	Strongly Agree	High Related
I can generate novel to original ideas for improving existing processes or products.	3.12	0.84	Agree	Moderately Related
I am comfortable with experimenting, suggesting unconventional approaches to tasks.	2.80	0.81	Agree	Moderately Related
I am effective at finding, evaluating in using information from digital sources.	2.74	0.83	Agree	Moderately Related
I am capable of quickly learning and mastering new software or technological tools.	2.82	0.83	Agree	Moderately Related

I can manage my own workload, set priorities, able to meet deadlines without constant supervision.	3.38	0.72	Strongly Agree	High Related
AVERAGE MEAN	3.13	0.73	Agree	Moderately Related

This table presents an overall mean score of 3.13 (SD = 0.73) for educational knowledge in terms of skills, interpreted as Agree and categorized as Moderately Related. This indicates that respondents perceive their skills development as moderately connected to their educational experiences. The result suggests that while students generally demonstrate competence in several skill areas, certain domains—particularly digital literacy and higher-order cognitive skills—may require further enhancement through more targeted instruction and practice. Supporting literature emphasizes that digital literacy, critical thinking, and self-directed learning skills significantly influence student engagement and academic performance, especially in technology-enhanced learning environments (Seyum Getenet, Cattle, & Redmond, 2024).

Among the indicators, the highest mean was obtained for “I am skilled at actively listening to colleagues” (M = 3.51, SD = 0.61), interpreted as Strongly Agree and High Related. This finding indicates that respondents exhibit strong confidence in their interpersonal communication and active listening abilities. It highlights the importance of collaborative competencies in fostering effective teamwork and constructive learning interactions. Research underscores that communication and collaboration skills are essential 21st-century competencies that contribute to improved problem-solving, group performance, and overall learning outcomes in both academic and professional settings (Mahmud, Fatima, Lashari, & Waheed, 2023).

In contrast, the lowest mean was observed for “I am effective at finding, evaluating, and using information from digital sources” (M = 2.74, SD = 0.83), interpreted as Agree and Moderately Related. Although still positively rated, this result suggests that respondents feel less confident in their digital information literacy skills compared to interpersonal skills. This indicates a developmental gap in the ability to efficiently locate, assess, and apply digital information for academic and practical use. Contemporary research stresses that digital literacy is a critical competency for academic success and lifelong learning, and therefore must be intentionally strengthened through curriculum integration and instructional support (Scheel et al., 2022).

Overall, the findings in Table 8 highlight a stronger inclination toward interpersonal skills among respondents, while also pointing to the need for enhanced focus on digital literacy and information-processing skills to better align students’ competencies with the demands of modern, technology-driven learning environments.

The Educational Knowledge of the Respondents in terms of Reinforced Learning

Indicators	Mean	SD	Description	Interpretation
My coach/instructor gives prompt, specific positive feedback when I complete an entrepreneurial task (e.g., pitch, market analysis).	3.06	0.82	Agree	Moderately Related
Regular reinforcement (praise, constructive recognition) from instructors increases my confidence to try new business ideas.	3.15	0.72	Agree	Moderately Related
The Coaching feedback I receive clearly links specific behaviors (networking, planning, pitching) to desired entrepreneurial competencies.	3.25	0.64	Agree	Moderately Related
When instructors reinforce small improvements, I am motivated to continue practicing entrepreneurial skills.	3.31	0.60	Strongly Agree	High Related

Corrective feedback (guided advice after mistakes) helps me improve my entrepreneurial problem-solving abilities.	3.31	0.67	Strongly Agree	High Related
Reinforcement practices in my entrepreneurship courses are personalized to my learning needs.	3.30	0.70	Strongly Agree	High Related
Reinforcement (feedback, mentoring) helps me retain and apply practical business procedures learned in class.	3.22	0.73	Agree	Moderately Related
Reinforcement-based activities (iterative coaching, recognition) encourage me to take calculated risks in entrepreneurial tasks.	3.20	0.73	Agree	Moderately Related
Feedback and reinforcement are applied consistently and fairly across students in my entrepreneurship program.	3.21	0.76	Agree	Moderately Related
Overall, the coaching and reinforcement I receive have measurably improved my practical entrepreneurial competencies this term.	3.24	0.74	Agree	Moderately Related
AVERAGE MEAN	3.23	0.71	Agree	Moderately Related

This table presents an overall mean score of 3.23 (SD = 0.71) for educational knowledge in terms of reinforced learning, interpreted as Agree and categorized as Moderately Related. This finding indicates that respondents perceive reinforcement strategies and instructional feedback within their entrepreneurship courses as moderately supportive of their skill development. It suggests that students acknowledge the importance of coaching, mentoring, and evaluative feedback in strengthening their learning process; however, they may also perceive that these reinforcement practices are not yet fully consistent, sufficiently timely, or adequately individualized. In line with this, prior research emphasizes that timely, clear, and constructive feedback is essential in enhancing learning quality, maintaining student engagement, and improving overall academic outcomes in higher education contexts (Lumadi, 2023).

In terms of specific indicators, the highest mean scores were obtained for “When instructors reinforce small improvements, I am motivated to continue practicing entrepreneurial skills” and “Corrective feedback (guided advice after mistakes) helps me improve my entrepreneurial problem-solving abilities” (M = 3.31, SD = 0.60–0.67), both interpreted as Strongly Agree and High Related. This indicates that respondents respond most positively to reinforcement approaches that recognize incremental progress and provide structured, corrective guidance after mistakes. Such findings highlight the importance of positive reinforcement and guided feedback in sustaining learner motivation and strengthening entrepreneurial competencies. Consistent with this, research shows that specific and actionable feedback that emphasizes progress and clearly directs improvement significantly enhances student motivation, confidence, and skill acquisition in academic settings.

On the other hand, the lowest mean was observed for “My coach/instructor gives prompt, specific positive feedback when I complete an entrepreneurial task” (M = 3.06, SD = 0.82), interpreted as Agree and Moderately Related. Although still positively rated, this suggests that respondents are comparatively less satisfied with the immediacy and specificity of the feedback they receive. It implies that while reinforcement is present in the learning environment, its delivery may not always be timely or sufficiently detailed to maximize its instructional value. Literature in educational technology and instructional design highlights that delayed, general, or non-specific feedback can weaken its effectiveness, underscoring the need for prompt, clear, and task-specific responses to better support learner engagement and confidence.

Overall, the results in Table demonstrate that reinforced learning contributes meaningfully to entrepreneurial skill development, particularly when feedback is constructive and improvement-oriented. However, strengthening the consistency, promptness, and specificity of instructional feedback could further enhance its effectiveness in promoting deeper learning, sustained motivation, and improved entrepreneurial performance among students.

The Entrepreneurial Competencies of the Business Owners

Indicators	Mean	SD	Description	Interpretation
I actively look for new business ideas or opportunities in everyday situations	3.29	0.69	Strongly Agree	High Related
I have a strong ability to spot gaps or unmet needs in the market.	3.26	0.73	Agree	Moderately Related
I enjoy constantly searching for information about new trends and technologies.	3.22	0.78	Agree	Moderately Related
I am determined to overcome major obstacles to achieve my business goals.	3.39	0.60	Strongly Agree	High Related
I willingly make personal sacrifices to ensure the success of a venture.	3.45	0.54	Strongly Agree	High Related
When a task is difficult, I persist and avoid giving up easily.	3.44	0.58	Strongly Agree	High Related
I carefully plan out the steps and resources needed before starting a project.	3.44	0.60	Strongly Agree	High Related
I am effective at organizing different resources (financial, human, technical) for a venture.	3.22	0.69	Agree	Moderately Related
I systematically monitor and adjust my activities to stay on track.	3.29	0.64	Strongly Agree	High Related
I am comfortable taking calculated risks after weighing the potential outcomes.	3.82	3.19	Strongly Agree	High Related
I often take the first step and initiate action without being prompted.	3.44	0.71	Strongly Agree	High Related
I prefer to learn from practical experience rather than only theory.	3.49	0.66	Strongly Agree	High Related
I can easily build and maintain a strong, trustworthy network of professional contacts.	3.40	0.67	Strongly Agree	High Related
I can effectively negotiate agreements and resolve conflicts with partners or customers.	3.45	0.62	Strongly Agree	High Related
I am good at clearly articulating my business vision and ideas to others.	3.58	0.56	Strongly Agree	High Related
I can foresee long-term challenges and opportunities in my industry.	3.47	0.60	Strongly Agree	High Related
I frequently think about new or different ways to deliver value to customers.	3.40	0.67	Strongly Agree	High Related
I can adapt my overall strategy quickly when external conditions change.	3.37	0.70	Strongly Agree	High Related
I have high confidence in my ability to start and manage a successful business.	3.44	0.66	Strongly Agree	High Related
I actively seek feedback on my performance and use it for self-improvement.	3.54	0.60	Strongly Agree	High Related
AVERAGE MEAN	3.42	0.77	Strongly Agree	High Related

This table presents the overall entrepreneurial competencies of the business owners, yielding an average mean score of 3.42 (SD = 0.77), interpreted as Strongly Agree and categorized as Highly Related. This indicates that respondents generally perceive themselves as highly competent across key entrepreneurial dimensions such as planning, decision-making, persistence, networking, and risk-taking. The result reflects a strong level of self-confidence in managing and sustaining business operations. Consistent with this finding, previous studies emphasize that entrepreneurial competencies—particularly opportunity recognition, strategic planning, and decision-making—are critical determinants of venture success and long-term sustainability (Silveyra-León, Rodríguez-Aceves & Baños-Monroy, 2023).

In terms of specific indicators, the highest mean was recorded for “I am comfortable taking calculated risks after weighing the potential outcomes” (M = 3.82, SD = 0.19*), interpreted as Strongly Agree and High Related. This indicates that respondents exhibit strong confidence in assessing potential risks and making informed decisions, a core characteristic of successful entrepreneurship. It highlights risk-taking as a well-developed competency among the respondents. Supporting literature shows that the ability to take calculated risks, when combined with sound judgment and decision-making skills, significantly enhances entrepreneurial performance, innovation capacity, and adaptability in rapidly changing business environments (Hassan, Khan & Asif, 2022).

Conversely, the lowest mean was observed for “I enjoy constantly searching for information about new trends and technologies” (M = 3.22, SD = 0.78), interpreted as Agree and Moderately Related. Although still positively rated, this suggests that respondents are comparatively less engaged in continuous environmental scanning and updating of knowledge on emerging market trends and technologies. This may indicate a need to further strengthen their proactive information-seeking behavior. Research highlights that continuous market scanning and awareness of technological and industry developments are essential entrepreneurial competencies that enhance opportunity recognition, innovation, and strategic positioning in competitive markets (Al-Tit, 2021).

Overall, the findings in Table 10 suggest that while respondents demonstrate strong overall entrepreneurial competencies—particularly in risk-taking and decision-making—there remains room for improvement in areas related to continuous learning and trend monitoring. Strengthening these competencies may further enhance their ability to identify opportunities and sustain competitive advantage in dynamic business environments.

Test of Significant Difference between the Respondents’ Profiles in Entrepreneurial Competencies

Category	Mean	F-value	p-value	Decision	Interpretation
Type of Business	2.39	2.884	.040	Reject Ho1	Significant
Location	1.65	.156	.694	Accept Ho1	Not Significant
Years in Business	2.84	.378	.824	Accept Ho1	Not Significant

This table presents the test of significant differences in entrepreneurial competencies when grouped according to selected business profile variables. In terms of Type of Business, the results revealed a mean of 2.39, an F-value of 2.884, and a p-value of 0.040, which is lower than the 0.05 level of significance. This indicates that there is a statistically significant difference in entrepreneurial competencies based on the type of business operated by the respondents. The finding suggests that entrepreneurial competencies vary across industries, as different business types require distinct skill sets, decision-making approaches, and operational strategies. This implies that entrepreneurs adjust their competencies depending on the specific demands and challenges of their respective sectors. Supporting this, Almeida (2021) emphasized that entrepreneurial competencies—such as opportunity recognition, planning, and persistence—are context-dependent and are shaped by the nature of the business environment in which entrepreneurs operate.

In contrast, the results for Location showed a mean score of 1.65, an F-value of 0.156, and a p-value of 0.694, which is greater than 0.05, indicating no significant difference in entrepreneurial

competencies based on business location. Likewise, Years in Business obtained a mean of 2.84, an F-value of 0.378, and a p-value of 0.824, also exceeding the 0.05 threshold, signifying no significant difference. These findings imply that neither the geographical location of the business nor the length of time it has been operating significantly influences the respondents’ perceived entrepreneurial competencies. This suggests that competencies are not necessarily dependent on external structural factors such as proximity or business longevity. In support of this, Akintayo et al. (2024) argue that entrepreneurial competencies are more strongly influenced by individual characteristics, learning experiences, and proactive behaviors rather than by location or years of operation.

Overall, the findings demonstrate that only the type of business significantly influences entrepreneurial competencies, while location and years in operation do not. This underscores the importance of industry-specific demands in shaping entrepreneurial skills such as strategic planning, risk management, networking, and resource allocation. As highlighted by Iskandar, Joeliaty, Kaltum, and Hilmiana (2022), entrepreneurial competencies are essential for achieving competitive advantage and improved performance, and they tend to evolve based on the specific requirements of the business environment rather than merely on operational duration or physical location.

Test of the Significant Relationship between Educational Knowledge and Entrepreneurial Competencies

Variable	Correlation Coefficient	p-value	Decision	Interpretation
<i>Educational Background and Entrepreneurial Competencies</i>	.031*	0.000	<i>Reject Ho2</i>	<i>Significant</i>
** <i>Correlation is significant at the 0.01 level (2-tailed).</i>	** <i>Correlation is significant at the 0.01 level (2-tailed).</i>	** <i>Correlation is significant at the 0.01 level (2-tailed).</i>	** <i>Correlation is significant at the 0.01 level (2-tailed).</i>	

Table shows a significant relationship between Educational Background and Entrepreneurial Competencies, with a correlation coefficient of 0.031 and a p-value of 0.000. This indicates that educational attainment has a measurable, albeit weak, influence on the entrepreneurial skills of respondents. Even a small correlation highlights that formal education contributes to the foundational knowledge and understanding necessary for entrepreneurial tasks, such as planning, decision-making, and opportunity identification. Silveyra-León, Rodríguez-Aceves, and Baños-Monroy (2023) found that structured entrepreneurial education enhances core competencies including problem-solving, risk management, and opportunity recognition.

The results suggest that while educational background is significant, its impact may be limited compared to other factors like practical experience, personal motivation, and exposure to business environments. Entrepreneurs often develop competencies through hands-on activities, internships, mentorships, and real-world business challenges. This aligns with findings by Almeida (2021), who emphasized that entrepreneurial competencies are shaped not only by formal education but also by experiential learning and contextual practice in business settings.

Overall, the study confirms that educational background is an important, but not sole, predictor of entrepreneurial competencies. It underscores the importance of combining formal education with practical and experiential learning to cultivate a well-rounded entrepreneurial skill set. Akintayo, Yusuf, and colleagues (2024) highlighted that entrepreneurial competency, including opportunity recognition, strategic

planning, and persistence, are strengthened when formal education is supplemented by real-world business experience.

The Test of Regression among the Educational Knowledge Highly Influences Entrepreneurial Competencies

	Unstandardized Coefficients (B)	Standardized Coefficients (β)	t-value	p-value	Interpretation
(Constant)	2.657	.620	4.284	.000	----
<i>Abilities</i>	.080	.119	.673	.503	Not Significant
<i>Experience</i>	.111	.106	1.043	.300	Not Significant
<i>Skills</i>	-.066	.129	-.515	.608	Not Significant
<i>Reinforced Learning</i>	.113	.105	1.069	.288	Not Significant
Model Summary: <i>R</i> ² =0.035; Adjusted <i>R</i> ² =-0.011; <i>F</i> -value=771 <i>p</i> -value=0.547 (Reject <i>H</i> ₀); Interpretation=Significant	Model Summary: <i>R</i> ² =0.035; Adjusted <i>R</i> ² =-0.011; <i>F</i> -value=771 <i>p</i> -value=0.547 (Reject <i>H</i> ₀); Interpretation=Significant				

This table presents the regression analysis examining the influence of Educational Knowledge, Abilities, Experience, Skills, and Reinforced Learning on Entrepreneurial Competencies. The model summary yields an *R*² of 0.035 and an adjusted *R*² of -0.011, indicating that the combined predictors explain only a very small proportion of the variance in entrepreneurial competencies. The *F*-value of 771 with a *p*-value of 0.547 suggests that the overall model is not statistically significant. This implies that, as a set, the included variables do not meaningfully predict entrepreneurial competencies. These findings are consistent with Park and Kim (2025), who emphasize that educational knowledge alone has limited explanatory power unless reinforced by experiential learning, mentorship, and real-world application.

In terms of individual predictors, none showed statistically significant effects on entrepreneurial competencies. Abilities (*B* = 0.080, β = 0.119, *p* = 0.503) and Skills (*B* = -0.066, β = -0.129, *p* = 0.608) did not significantly contribute to the outcome variable. Likewise, Experience (*B* = 0.111, β = 0.106, *p* = 0.300) and Reinforced Learning (*B* = 0.113, β = 0.105, *p* = 0.288) also demonstrated non-significant relationships. These results suggest that each component, when considered in isolation, is insufficient to exert a strong influence on entrepreneurial competencies. Park and Kim (2025) further explain that entrepreneurial capability is more effectively developed through the integration of knowledge, practice, feedback, and iterative learning processes rather than through isolated educational inputs.

Overall, the findings indicate that while educational knowledge and its related dimensions may contribute modestly to entrepreneurial development, their effect is limited when treated independently. Instead, their influence is more accurately understood as synergistic, requiring integration with experiential and applied learning approaches. This highlights the importance for educators and training institutions to design learning experiences that combine theory with practice, mentoring, and continuous reinforcement. As emphasized by Park and Kim (2025), such integrated approaches are essential in strengthening entrepreneurial readiness and enhancing competency development.

FINDINGS

The study examined the respondents' demographic profile, level of educational knowledge, and entrepreneurial competencies. The majority of respondents are engaged in mini-grocery and fresh produce businesses, indicating that small-scale retail enterprises remain the most common and accessible form of entrepreneurship. A considerable number of businesses are located outside the Poblacion area, which may be attributed to lower rental costs, reduced market congestion, and better space availability for operations. In terms of business longevity, respondents have been operating from as short as one month to more than 30 years, with most falling within the 2 to 20 years range, suggesting a generally stable and experienced entrepreneurial base.

Regarding educational knowledge, particularly in skills, respondents obtained a moderate mean score of 3.13. This indicates an average level of proficiency, with strengths observed in communication, teamwork, and active listening. However, lower competencies were noted in technical skills, digital literacy, and adaptability to new technologies. These findings suggest that while interpersonal skills are well developed and support day-to-day business interactions, there remains a gap in technological and adaptive capabilities that are increasingly essential in modern entrepreneurial environments. Similarly, reinforced learning obtained a moderate overall mean of 3.23, indicating that mechanisms such as feedback, mentoring, and recognition moderately support competency development. Although these strategies contribute positively to confidence, motivation, and skill retention, the variation in responses implies that reinforcement practices are not consistently implemented and may benefit from being more structured, systematic, and individualized.

In terms of educational knowledge in abilities and experience, respondents demonstrated generally high levels, particularly in planning, communication, teamwork, stress management, and the application of entrepreneurial concepts through hands-on learning. This reflects strong experiential grounding in managing business operations. However, when combined with skills and reinforced learning, results indicate only moderate development, with persistent weaknesses in digital literacy, creativity, and timely feedback mechanisms. Overall, this suggests a need for enhanced focus on innovation-driven skills, digital competence, and structured mentoring systems to further strengthen entrepreneurial capability.

The respondents' entrepreneurial competencies were generally high, with an overall mean of 3.42. Among the dimensions, risk-taking emerged as the highest-rated competency, while analytical and information-seeking behaviors were comparatively lower. Other competencies such as persistence, planning, networking, communication, and adaptability were also rated highly. These results indicate that respondents are generally confident in initiating and managing business activities, adjusting to changing conditions, and leveraging opportunities for business success. Overall, entrepreneurial competencies reflect the effective application of educational knowledge and experiential learning in real business contexts.

The correlation analysis revealed a significant but weak relationship between educational background and entrepreneurial competencies ($r = 0.031$, $p = 0.000$). This suggests that while formal education contributes to foundational entrepreneurial understanding such as planning, decision-making, and opportunity recognition, its direct influence on competency development remains limited. Instead, entrepreneurial competencies are more strongly shaped by practical experience, motivation, mentorship, and exposure to real-world business environments.

Similarly, the regression analysis shows that abilities, experience, skills, and reinforced learning collectively exert only a minimal influence on entrepreneurial competencies ($R^2 = 0.035$), and none of the individual predictors were statistically significant. This indicates that educational knowledge alone is not a strong predictor of entrepreneurial success. Rather, entrepreneurial competencies are more effectively developed when formal education is integrated with experiential learning, mentoring, continuous feedback, and practical application. Overall, the findings underscore the importance of adopting a holistic and practice-oriented approach to entrepreneurship education in order to strengthen entrepreneurial readiness and performance.

CONCLUSION

The study concludes that the entrepreneurial competencies of business owners are shaped by several influencing factors, with the type of business emerging as the most significant. Most respondents are engaged in retail enterprises such as mini-groceries and fresh produce stores, which are commonly chosen due to their accessibility, practicality, and relevance to community-based markets. These types of businesses not only reflect local demand but also provide continuous opportunities for skill application and development in day-to-day operations. In contrast, business location and years of operation were found to have no significant effect on entrepreneurial competencies, suggesting that external conditions alone do not strongly determine entrepreneurial capability. Rather, it is the nature of the business that more directly shapes the skills, behaviors, and experiences of entrepreneurs.

The findings further indicate that respondents demonstrate strong educational knowledge, particularly in key entrepreneurial skills such as planning, communication, teamwork, and stress management. In addition, experiential learning gained through hands-on business activities and actual market engagement plays a crucial role in enhancing their confidence, decision-making ability, and overall competence in managing entrepreneurial responsibilities.

Overall, the study reveals that entrepreneurial competencies among respondents are generally high, especially in areas such as risk-taking, persistence, networking, and adaptability. Although educational attainment shows a weak but significant relationship with entrepreneurial competencies, the results suggest that formal education alone is insufficient to fully develop entrepreneurial capability. Instead, competency development is strengthened through the integration of theoretical knowledge, practical experience, mentoring, and continuous learning. Therefore, a holistic development approach is essential in producing competent, resilient, and adaptable entrepreneurs who can sustain and grow their businesses in a competitive environment.

RECOMMENDATION

1. For the respondent profile—particularly in terms of type of business, location, and years in operation—support programs should prioritize the strengthening of retail entrepreneurship in non-central areas. This may be achieved by providing targeted guidance on strategic business location selection, effective business expansion planning, and long-term sustainability strategies. Both new and experienced entrepreneurs should be assisted in identifying growth opportunities while maintaining competitiveness within community-based markets.
2. In relation to educational knowledge, specifically skills development and reinforced learning, it is recommended that training programs be enhanced to emphasize digital literacy, technical competencies, and adaptive learning strategies. These should be complemented by structured feedback mechanisms and mentoring support to ensure continuous improvement and deeper development of entrepreneurial competencies.
3. Regarding abilities, experience, and experiential learning, stakeholders should promote active learning opportunities such as workshops, business simulations, and project-based activities. These approaches allow entrepreneurs to strengthen practical application, enhance creativity, and improve problem-solving skills through real-world or closely simulated business scenarios.
4. To further improve entrepreneurial competencies, targeted interventions such as data-driven decision-making workshops and market research training are recommended. These initiatives aim to strengthen analytical thinking, improve information-gathering skills, and support more informed business decisions. In addition, mentorship programs, internships, and increased exposure to real-world business environments should be encouraged to complement formal education and bridge the gap between theory and practice.
5. In terms of the relationship between educational knowledge and entrepreneurial competencies, it is essential to integrate theoretical instruction with hands-on experience, continuous feedback, and sustained mentoring. This integration ensures more effective and meaningful skill development.

6. Lastly, to address the most influential components of educational knowledge, comprehensive development programs should be designed to combine abilities, experience, skills, and reinforced learning with practical, real-world application. Such an integrated approach is vital in cultivating well-rounded, competent, and resilient entrepreneurs capable of sustaining and growing their enterprises.

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