

Level of Self-Assessed Entrepreneurial Competence of Students from Accountancy, Business and Management Programs

Mark Kevin Astrero¹ & Joyce Irene R. Velasco¹

¹ Faculty, Northeastern College, Santiago City, Philippines

Correspondence: Mark Kevin Astrero, Faculty, Northeastern College, Santiago City, Philippines.

doi:10.56397/JWE.2025.08.01

Abstract

Entrepreneurial competence in students is vital today, and especially for students taking Accountancy, Business, and Management (ABM) programs. This study evaluated the level of Personal Entrepreneurial Competencies (PECs) of ABM students in Santiago City, Philippines, an opening in the empirical literature for situationally embedded competency assessment in the Philippine educational landscape. Utilizing a quantitative-descriptive approach, the researchers surveyed 300 ABM students from Northeastern College, using validated tools for self-assessing and for learning competencies. It is noteworthy that 81.34% of the respondents exhibited at most satisfactory entrepreneurial skill, of which 34.67% exhibited outstanding skill. Higher proficiency levels were observed for the categories of Risk Taking (68.66%) Demand for Quality and Efficiency (68%), and Goal Setting (70.34%); highest proficiency levels allied well with the student's inclination to engage in entrepreneurial opportunities; meanwhile, a significant portion of students had only sufficiently moderate levels of competencies embraced in Opportunity Seeking (79.33%) and Persistence (74%); suggesting it may be prudent to introduce further contextual or experiential applications of the pedagogy. This study demonstrates the need for participatory, innovative education programs like mentoring, experiential learning, and redesigning the curriculum dedicated to taking the students from moderate to high entrepreneurial ability. In the Philippines' socio-economic context, the study emphasizes the importance of starting and growing new businesses as a route to self-employment and for sustainability.

Keywords: ABM, entrepreneurial competence, college students, business education, entrepreneurial mindset

1. Introduction

Recently, the topic of Personal Entrepreneurial Competencies (PECs) has been at the forefront of education, particularly in their relationship to Accountancy, Business and Management courses, and more generally, entrepreneurship

education. PECs are an essential component in the students' preparation for entrepreneurship and the success of business. These are defined as the personal traits, knowledge, abilities, and skills that an entrepreneur draws upon to develop, create, and manage business activities

and face challenges and opportunities in an entrepreneurial ecosystem. PECs cover a wide range of characteristics, like opportunity recognition, abiding by risks, innovation, and leadership skills, all of which play a key role in starting and running a successful entrepreneurial venture (Ahmad et al., 2010; Mitchelmore & Rowley, 2010) so understanding on the concept of personal entrepreneurial competencies with students will better improve those students' entrepreneurial skills and competence.

The role of Personal Entrepreneurial Competencies (PECs) in Accountancy, Business, and Management programs is clearly essential because of the relationship between PECs and entrepreneurial performance and business outcomes. Existing evidence demonstrates that entrepreneurs who possess adequate competencies are more able to accept the ambiguities of business environments, which allows them to have increased levels of success, survival rates, and sustainability in their business operations (Ahmad et al., 2010; Barazandeh et al., 2015; Mitchelmore & Rowley, 2010). In today's environment, where entrepreneurship is the key to stimulating future economic growth and employment, it is the responsibility of educational institutions to incorporate PECs into their programs for not only preparing students to be employed but also preparing them to create employment opportunities for others by creating entrepreneurial ventures (Mitchelmore & Rowley, 2013). Hence, it is timely to intentionally and systematically incorporate the development of personal entrepreneurial competencies into the wider business education paradigm.

On an international scale, the study of Personal Entrepreneurial Competencies indicates a rising recognition of the importance of entrepreneurial skills in everyone's educational achievement across economies. Evidence shows that entrepreneurial competencies enhance entrepreneurial intention and business preparedness in students, ultimately impacting national economic performance (Bagheri & Abbariki, 2016; "Evaluating Entrepreneurial Skills Needed by Business Education Students for Self-employment in Colleges of Education, Kano State", 2023). For example, research in educational systems in numerous different countries found that experiential learning practices improve students' entrepreneurial

competencies (Kyguolienė & Švipas, 2019). Both developed and developing countries share the sentiment that an overall education in the critical entrepreneurial competencies will bridge the gap between theory and practice in establishing businesses (Bonesso et al., 2018).

Studying the Personal Entrepreneurial Competencies in the context of the Philippines lends itself to research because the country is attempting to modify education to entrepreneurship education modalities progressively. According to Mendoza (2023), students in the Philippines' Accountancy, Business, and Management fields display personal entrepreneurial competencies at all levels of the spectrum, needing intervention. Moreover, given that small businesses and entrepreneurship are increasingly seen as viable pathways the economic self-sufficiency and sustainability in the country, it is critical to understand the PECs of students enrolled in these programs to help reflect better educational practices in line with the national development goals of entrepreneurship and to stimulate students in all these disciplines to create an entrepreneurial culture (Moraes et al., 2018).

Although Personal Entrepreneurial Competencies are acknowledged, gaps exist in research regarding the contextually relevant PECs that are relevant for students in the educational context of the Philippines. There have been some studies identifying a wide range of general entrepreneurial capabilities, it is evident that further inquiry needs to be conducted to specifically identify the PECs that pertain to local business environments, local culture, and social and economic issues regarding the local area of the Philippines (Hiên et al., 2019). Additionally, while the available empirical evidence does relate to varying ways that PECs have been associated with actual entrepreneurial behavior within specific areas of the Philippine context, the need for an identified cohesive body of contextualized research with associated rigor begins to expand existing literature (Mitchelmore & Rowley, 2010).

Possible action to address these gaps in knowledge might occur through developing context-specific educational programs to create individual Personal Entrepreneurial Competencies of the population of students studying Accountancy, Business, and Management. Potential interventions include experiential learning that provides opportunities

for internships, mentorship, and learning skills workshops anchored within the context of local businesses. For instance, creativity, spotting opportunity and risk in the educational context, is essential as it introduces students to educational content related to the local market needs, enabling them to utilize their entrepreneurial potential (Ahmad et al., 2010; Mendoza, 2023). In this sense, educational contexts can support emerging skills and/or embed skills with suitable practices within priority knowledge and experience. Educational contexts can help develop future entrepreneurs who could show practical outcomes in an increasingly competitive space.

In summary, it is vital to understand Personal Entrepreneurial Competencies when offering Accountancy, Business, and Management programs for the benefit of not only the students' personal development and career prospects but also for wider economic development. By filling existing research gaps and developing a more holistic education approach targeting PECs, higher education institutions can produce the next generation of entrepreneurs capable of dealing with complex issues in a growing business world, ultimately benefiting local and national economies.

1.1 Statement of the Problem

With the body of literature presented, this research aims to identify the level of personal entrepreneurial competencies of the Accountancy, Business, and Management students in Santiago City, Philippines. Thus, this study sought to answer the following research questions:

- 1) What is the entrepreneurial self-assessment score of the students in accountancy, business, and management programs?
- 2) What is the level of personal entrepreneurial competence of the students in accountancy, business, and management programs?

2. Review of Related Studies

The importance of personal entrepreneurial competencies (PECs) in Accountancy, Business, and Management (ABM) programs can significantly impact the curriculum and learning outcomes for future entrepreneurs. This review compiles a collection of articles on a variety of entrepreneurial competencies, including

Opportunity Seeking, Persistence, Commitment to Work Contract, Demand for Quality and Efficiency, Risk Taking, Goal Setting, Information Seeking, Systematic Planning and Monitoring, Persuasion and Networking, Self-confidence, and Correction Factor. Each section summarizes the definition of the competency that researchers have identified, as well as the research findings and recommendations based on the studies reviewed.

2.1 Personal Entrepreneurial Competencies

Opportunity seeking is defined as the capacity to recognize viable business opportunities in the marketplace. Lv et al. (2021) found that entrepreneurial education significantly increased students' willingness to seek opportunities and that learning entrepreneurial competencies and behaviors facilitated the adoption of a proactive parasitism that characterizes successful entrepreneurs. Similarly, Kusumawijaya & Astuti (2021) also noted that opportunity-seeking capability is connected to a person's characteristics, and suggested that opportunity-seeking competencies should be infused into the ABM curriculum to prepare students for future contexts.

Persistence is the capacity to continue despite setbacks and obstacles, which is important as an entrepreneur. Gunartin et al. (2023) emergently proved that persistence is a vital characteristic of successful SMEs, which provides another rationale for including persistence capacity training within ABM programming. Furthermore, Rico et al. (2020) provided evidence that educational frameworks that emphasize persistence developed greater resilience amongst business students, which indicates that education should intentionally promote persistence through experiential education and application.

Commitment to Work Contract encapsulates the commitment to carrying out the contractual obligation with regard to the commitment to work. According to Hutahut et al. (2024), commitment to work contracts is necessary to maintain the trust of stakeholders and to form a strong business relationship. It is indicated through their findings that engaging ethical considerations and commitment principles in the ABM education supports the development of graduates who are best prepared to fulfil obligations to committed work in

self-employment and entrepreneurial endeavors.

The demand for quality reflects the importance of having high standards for organizational outputs. According to Hasbiah (2023), increased emphasis on quality by micro-business owners will also lead to enhanced performance. The authors recommend that the ABM curriculum include quality management concepts to provide aspiring business leaders with a quality mindset.

Risk-taking and the willingness to participate in uncertain activities are often defined as risk-taking abilities, a core component of entrepreneurship. Development of risk tolerance will promote student entrepreneurial intentions and behavior (Kanaan-Jebna et al., 2022). Therefore, to address the risk-taking element of entrepreneurship, the ABM programs should introduce a risk management strategy and offer an entrepreneurial finance course to equip ABM students with the skills to address uncertainty in business equally.

Goal setting is the act of formulating goals and clarifying the action steps needed to accomplish those goals. In their study of the personal entrepreneurial competencies of business students, Istiqomah et al. (2022) found a significant association between good goal-setting practices and entrepreneurship success. They concluded that the educational models developed and implemented supported goal-setting practices for students and intended to provide students with a clearly defined vision and action plans towards their future entrepreneurship experiences.

Information seeking relates to the ability to access information relevant to one's decision-making. Sergeeva et al. (2021) found that searching for practical information enhances entrepreneurs' capacity to show innovation and improve problem-solving capacity. Therefore, ABM programs should consider incorporating information literacy and research methods, enabling students to gain knowledge.

Systematic planning encompasses orderly procedures to devise business intentions. Grewe and Brahm (2020) noted that systematic planning would facilitate students' entrepreneurial thinking. They expressed their support for ABM programs to include project-based learning opportunities in which

the systematic planning and monitoring processes would be integrated into those activities. Some form of education in this area would allow students to anticipate plans of action and to measure progress towards their goals related to a business.

Along with networking, persuasion is important in developing valuable business relationships. Mendoza et al. (2023) note that networking opportunities and persuasive ability are essential components of students' entrepreneurial capacities. To support this, ABM programs should develop networking opportunities/events and also provide workshops that focus on negotiation and communication skills relevant to entrepreneurship.

Self-confidence is one's belief in his/her ability to carry out a business idea successfully. Research demonstrates that self-confidence is a predictor of entrepreneurial success and is often a necessary means to address challenges, as stated by Hutasuhut et al. (2024). Based on this understanding, it would be necessary to build self-efficacy through mentorship programs, project-based learning, and positive reinforcement in ABM education to enhance students' self-confidence in their entrepreneurial pursuits.

A broad effort to foster personal entrepreneurial competencies, as a part of ABM programs, is essential in developing the entrepreneurs of the future. ABM students must perform competencies that include, but are not limited to: opportunity seeking; persistence; commitment; demand for quality; willingness to take risks; goal setting; information seeking; systematic planning; persuasiveness; self-confidence; and correction. This review suggests that they must embed these competencies in formal curriculum development and teach them as competencies so students can practice, build upon, learn, and use them as they move along their entrepreneurial journey.

2.2 PECs in Context

The increasing studies researching personal entrepreneurial competencies (PEC) in Accountancy, Business and Management (ABM) courses is noticeable within the research area of entrepreneurship education. Many studies are focused on trying to understand students' self-reflection of PECs, which expands the area of literature as they focus on understanding

ways educational practice fosters the development of mindsets and competencies in student entrepreneurialism.

Hoang et al. (2020) researched the positive relationship between entrepreneurship education and entrepreneurial intentions in Vietnam, noting the indirect mediation of the self-efficacy and learning orientation factor. The study indicated that students participating in structured entrepreneurship education could develop a positive attitude regarding entrepreneurship by demonstrating improved competencies. Interestingly, this aligns with the data indicating students showed higher levels of self-evaluative reflection, indicating structured, entrepreneurship-focused education can foster the development of competencies, and the education can use existing forms of reflection with more structure.

Yi and Duval-Couetil (2021) researched the influence of references to entrepreneurship education on students' self-efficacy and proactiveness. They recommended that there be standards regarding the evaluation of entrepreneurship education. They noted that increased self-efficacy is fundamental to building entrepreneurial intentions. The results of their study highlight that students' self-assessments relating to their competencies are relative to students' educational experiences in entrepreneurship (Yi & Duval-Couetil, 2021). This evidence affirms that reflective assessments can be a meaningful proxy of students' confidence and self-efficacy in an entrepreneurial context.

Firmansyah et al. (2020) evaluated an entrepreneurship education program that included non-classroom experiences and reported significant improvements in students' entrepreneurial self-efficacy (Firmansyah et al., 2020). The researchers defined a relationship between students' competency appraisals and the program under investigation. To conclude, the study augmented the evidence supporting that entrepreneurship education programs that would provide students opportunities for practical application in an educational context can develop students' entrepreneurial skills and self-evaluative standards.

Research by Aulia & Badawi (2023) backed up these results. They revealed that self-efficacy moderated the link between entrepreneurship education and students' interest in

entrepreneurship. It was suggested that students with high self-efficacy showed interest in entrepreneurship after education, thereby validating the self-reflection role in developing entrepreneurial intent (Aulia & Badawi, 2023). This suggests a need for an appropriate educational context that allows for self-reflection.

Fröhlich and Welppe (2024) took a different approach and examined self-selection dynamics in entrepreneurship education. They noted that false self-assessments could impact educational programs' (perceived) impact. They examined the role of strong evaluation frameworks to help understand self-selection biases, as self-selection could allow for a better understanding of self-evaluated know-how (Fröhlich & Welppe, 2024). This study explored the necessity of applying appropriate frameworks to evaluate personal competencies correctly.

Boldureanu et al. (2020) engaged in a different discussion by examining how genuine entrepreneurial models in higher education serve effective entrepreneurial education. They proposed that exposure to genuine examples of entrepreneurial practices enhances the students' self-evaluated entrepreneurial competencies. The qualitative assessment of their research findings showed students frequently reflected on experiential learning examples to evaluate their competence, and they confirmed the existence of a link connecting experiential learning and self-evaluation responses (Boldureanu et al., 2020). This would be a clear shift in education systems, incorporating success stories as a necessary part of the curriculum.

Setiawan et al. (2023) considered how entrepreneurship education helps improve students' entrepreneurial self-efficacy, focusing on the cognitive development processes involved in developing entrepreneurial self-efficacy. Their conclusions implied that the cognitive incentive of positively guided self-evaluation could help students be better prepared to face real-time entrepreneurial challenges and increase their perceived capabilities (Setiawan et al., 2023). This further supports the argument for embedding reflective practices in educational paradigms.

Briegas et al. (2021) examined the satisfaction of teachers and students, based on their entrepreneurial programs. They measured the relationship between satisfaction as a teacher, in

terms of students' learning about their entrepreneurial competencies. Briegas et al. (2021) found that effective teaching can positively influence a better level of self-evaluation from students and also impact their confidence and engagement with entrepreneurship. Briegas et al. (2021) suggest that educators play an important role in shaping how students view their competencies and career intentions.

Ping & Yee (2024) developed an assessment model on college students' competencies in innovation and entrepreneurship. Their study highlighted that students benefit from a consistent approach to assessment, whereby assessment feeds into students' self-understanding and self-evaluation of being 'entrepreneurial'. Based on their findings, Ping and Yee (2024) made a case for individualized education plans for students, enabling them to build a more holistic self-evaluation of competencies.

From these studies, we see an emerging theme that asserts that students' ability to self-assess through entrepreneurship education has practical implications for students' entrepreneurial intentions and entrepreneurial competencies. The studies called for educators and educational institutions to provide students with experiential learning opportunities, eliminate self-selection bias, and build learning experiences and learning environments that better support students' self-evaluation activities as accountancy, business, and management students.

3. Methodology

This chapter describes the research design, research instrument, population, data collection, and data analysis in order to achieve the research objectives. The study's main goal was to determine the degree of personal entrepreneurial abilities among accounting, business, and management students.

3.1 Research Design

The quantitative-descriptive method was the research design used in this study. The quantitative method focused on obtaining quantifiable data about the ABM Students' entrepreneurial self-assessed scores and personal entrepreneurial competencies. It contained particular themes, such as students' personal entrepreneurial competencies and entrepreneurial self-assessment scores. The

ability to accurately and objectively measure variables makes a complete, detailed study that indicates or shows trends and patterns. In this method, the researcher has established the respondents' personal entrepreneurial competency level. On the contrary, descriptive research is a basic form of research that identifies specific characteristics of a phenomenon. The method is the best for establishing how capable students are in the business, management, and accounting disciplines concerning entrepreneurial capabilities. A questionnaire was used as the primary tool for data collection.

3.2 Locale of the Study

This study was conducted in Santiago City, Philippines, with students majoring in accounting, business, and management at Northeastern College. Northeastern College is located in Villasis, Santiago City, Philippines. It has been shaped under the guidance of Dr. Tomas C. Bautista. The school has a leading standard of being nurturing and competitive. NC offers many graduate and undergraduate programs in accounting, business, and management, including a BS in hospitality management, a BS in business administration, a BS in accountancy, and a BS in management accounting. The location was chosen because the requirements of the study were satisfied, and the purpose of the research study is to focus on the students' entrepreneurial capabilities.

3.3 Respondents of the Study

This research project intends for the student participants to be enrolled in business, management, and accounting degrees. The respondents in the study have been identified according to several criteria to ensure that the study is accurate and relevant. The student participant must be enrolled in any ABM program during the first semester of 2025. These criteria were adequate to achieve the study objectives and provide part of the selection process.

Stratified random sampling with a random selection of participants within each stratum was utilized to produce inclusivity and ensure the collection of relevant, quality data within context. Participants were randomly selected from across all sub-groups to represent the stratifications and minimize sampling error. This process has increased the accuracy and reliability of the study. In the participant

recruitment process, the researcher took an absolute approach to maximize quality and capture efficient data to collect the needed data, improving the inclusivity of all ABM sub-strata. As a result, the sample population criteria in the table below provide the population sample based on these criteria:

Table 1. Sample Size

Accountancy, Business and Management Programs	Population	Sample
BS Hospitality Management	731	182
BS Accountancy	97	24
BS Business Administration	378	94
Total	1206	300

A systematic method was followed to determine the total number of survey subjects for this study. The researcher first obtained information regarding Northeastern College's ABM program participants so that the numbers used were relevant to this population. The project identified the overall population for the research group by calculating the total number of all ABM students from each selected program.

The researcher then used the Raosoft sample size calculator to establish the sample size for the study. This software used vital factors, including total population, margin of error, confidence level, and response distribution to derive a final sample that would be statistically valid and reliable.

The researcher calculated a weighted average for each program by taking the size of the population to ensure that the sample represented the distribution of ABM students at Northeastern College. The weighted average for each program was then multiplied by the total sample size calculated by Raosoft to assign it appropriately. This method gave an accurate and representative sample because the number of responders for each program would have a ratio of the overall population. This rigorous method gave an honest result because the researcher intended to have a foundational understanding of the students in the selected programs.

3.4 Research Instrument

The researcher used research tools acquired from Liberal (2017) and Vican and Viletic (2013). The researcher has organized this tool into three sections. The first section has the profile of the respondents, including the program they are affiliated with. The Entrepreneurial Self-Assessment Survey, developed by Vican and Viletic (2013), with 20 items, was used to identify entrepreneurial traits. The second section utilized the Entrepreneurial Self-assessment Survey to identify the entrepreneurial potential of the respondents. The last section presented the entrepreneurial potential of the respondents. The questionnaire was developed by Liberal (2017) and consisted of 55 questions focusing on an entrepreneur's different competencies. This tool has targeted students enrolled in the business, management, and accounting programs during the first semester of 2025.

Furthermore, 25 respondents met the required parameters who participated in a pilot test that the researcher developed. The pilot stage evaluated the appropriateness of the phrasing and intelligibility of the survey's content for the intended audience; this method examined the instrument's feasibility, relevancy, and intelligibility. The pilot test participants were not included in the final sample to avoid possible bias while maintaining the authenticity and integrity of the data collection process. The pilot test participants aided the researcher in correcting misunderstandings or compromises in the survey before proceeding with the full data collection.

3.5 Data Gathering Procedure

The purpose of the data collection process for this study was to collect solid and trustworthy data from the students studying management, business, and accounting. Participants were able to answer to the survey at any time and from any location using the devices of their choice because it was mainly administered online, utilizing a digital tool. Eliminating time and place restrictions improves accessibility and promotes involvement. English was the language of the accessible online survey. This guarantees that respondents, irrespective of their preferred language, may interact with the survey comfortably.

Following survey closure, the collected data were imported into statistical analysis tools from the survey instrument. This involves checking

for mistakes and incorrect input, such as hurried or repetitive responses. This step was followed by the data analysis. The data was analyzed using descriptive statistics to display the demographic information and general replies of the survey respondents.

When the research was concluded, a final report containing a summary of all findings will be submitted. This study findings also includes the data interpretation and statistical analysis. The results that stood out most in terms of participants' entrepreneurial capabilities were primarily discussed in the conclusions presented. The final report findings may be disseminated to stakeholders and participants. If warranted, the conclusions may be disseminated via papers, journals, and conferences.

Therefore, as a result of following the extensive data collection process, the study ensured the information collected was valid, relevant, and sufficient to identify ABM students' entrepreneurial competencies.

3.6 Data Analysis

The collected data was treated by the researcher using various statistical methods.

- 1) In this study, categorical data were presented using the frequency distribution approach, which indicated the frequency of

each response. The data in parts 1, 2, and 3 of the questionnaire were arranged using this tool.

- 2) Sum Score: This statistical method, which adds the scores for each statement, was utilized in the second and third section of the questionnaire. The following table was used to interpret the overall score:

Table 2. Entrepreneurial Self-assessment Survey

Entrepreneurial Self-assessment Survey	
Scores	Interpretation
80-100	Outstanding ability to be an entrepreneur.
60-79	Satisfactory ability to be an entrepreneur.
40-59	Self-employment may not be an appropriate career.
0-39	Probably avoid entrepreneurship

- 3) PEC Scoring Sheet: The researchers also used the Personal Entrepreneurial Competence by Liberal (2017). The computation to determine the respondents' competence in various characteristics is described below:

Rating of Statements					Score	PECs
	+	+	-	+	6 = _____	Opportunity Seeking
(1)	(12)	(23)	(34)	(45)		
	+	+	-	+	6 = _____	Persistence
(2)	(13)	(24)	(35)	(46)		
	+	+	+	-	6 = _____	Commitment to work contract
(3)	(14)	(25)	(36)	(47)		
	+	+	+	-	6 = _____	Demand for Efficiency & Quality
(4)	(15)	(26)	(37)	(48)		
	-	+	+	+	6 = _____	Risk taking
(5)	(16)	(27)	(38)	(49)		
	-	+	+	+	6 = _____	Goal setting
(6)	(17)	(28)	(39)	(50)		
	+	-	+	+	6 = _____	Information seeking
(7)	(18)	(29)	(40)	(51)		
	+	+	-	+	6 = _____	Systematic planning & monitoring
(8)	(19)	(30)	(41)	(52)		
	-	+	+	+	6 = _____	Persuasion & Networking
(9)	(20)	(31)	(42)	(53)		
	-	+	+	+	6 = _____	Self-confidence
(10)	(21)	(32)	(43)	(54)		
	-	-	-	+	18 = _____	Correction Factor
(11)	(22)	(33)	(44)	(55)		

Figure 1. PEC Computation

After identifying the PEC scores, the researcher then interprets the respondents' level of competence using the table below:

Table 3. Personal Entrepreneurial Competencies Interpretation

Personal Interpretation	Entrepreneurial Competencies Interpretation
Scores	Interpretation
21-25	Very High Level of Competence
16-20	High Level of Competence
11-15	Moderate Level of Competence
6-10	Low Level of Competence
0-5	Very Low Level of Competence

4. Results and Discussion

This section presents the results of the data analysis, and the corresponding discussion based on the findings derived from the data gathered.

4.1 RQ1: Entrepreneurial Self-Assessment Score of the Students in Accountancy, Business, and Management Programs

Table 4. Level of Entrepreneurial Ability

Level of Entrepreneurial Ability	Frequency	Percentage
Outstanding Ability to be an Entrepreneur.	104	34.67
Satisfactory Ability to be an Entrepreneur.	140	46.67
Self-employment may not be an appropriate career for you.	44	14.67
You should probably avoid	12	4.00
Total	300	100.00

Table 4 shows a large number of students in Accountancy, Business, and Management (ABM) programs are exhibiting satisfactory entrepreneurial ability, as 81.34% (F=244) of students demonstrate at least a satisfactory capacity for entrepreneurship. This indicates a

strong foundational connectivity to the ABM curriculum and principles related to the teaching of entrepreneurship, reiterating that sustainability principles can facilitate business savvy in students. The results correspond with literature that claims entrepreneurship education promotes an environment conducive to developing entrepreneurial skills (Lie et al., 2022; Towers et al., 2020; Mohamad, 2023). More specifically, enhancing student engagement in business programs can significantly enhance the developing of entrepreneurial competencies by using creative learning activities for students (Pathan et al., 2023; Kristiawan et al., 2021).

Notably, the report shows that 34.67% (F=104) of students are classified as having exceptional potential, while 46.67% (F=140) have satisfactory entrepreneurial intention. Furthermore, this information is corroborated by the literature, which highlights that substantial exposure to training and education on entrepreneurship will build strong entrepreneurial mindsets (Bueno et al., 2023; BANATE et al., 2024). Studies show that students who undertake comprehensive entrepreneurship courses will have higher entrepreneurial self-efficacy, which is important in navigating the entrepreneurial space (Lie et al., 2022; Mohamad, 2023). In the Philippines, for example, organizations such as Cavite State University have already introduced entrepreneurship into their course delivery, which could be helpful in preparing students for self-employment and to contribute to their local economies (Banate et al., 2024).

Nonetheless, the data indicates that 14.67% (F=44) of students are operating in an environment where entrepreneurship may not be a good fit, and an additional 4% (F=12) advise students against entrepreneurial avenues. This group outlines the need for interventions of support aimed at enabling alternative career pathways. As research supports, groups aimed at career planning and facilitated skill development can be very valuable for students found to be hesitant or unprepared to engage in entrepreneurial opportunities ("Evaluating Entrepreneurial Skills Needed by Business Education Students for Self-employment in Colleges of Education, Kano State", 2023; Gheorghiu et al., 2022). There is considerable momentum in developing employability skills for students within the Philippine context, which are very much embedded in entrepreneurial education, capable of enhancing

students for alternative career trajectories (Khan et al., 2020).

Furthermore, despite most projects having a firm promise, the findings highlighted a need for a change in teaching practices in order to overall, but especially for students with low entrepreneurial intentions, provide the needed skills for the ever-fluctuating global economy. Educational programming should include experiential learning opportunities for all learners in entrepreneurship, as well as further mentorship opportunities, to allow for all students to either flourish in entrepreneurship or gain stable employment in the corporate sector (Steira et al., 2024).

In conclusion, while the data paints a very optimistic outlook regarding the entrepreneurial skillsets of ABM students, it also highlights an essential need to strengthen supports around more vulnerable populations of students struggling with these skills. Recommendations call for structural supports that not only foster entrepreneurial potential among the vast majority of students but also provide a way for those who may struggle with entrepreneurship to redirect their efforts into more appropriate areas that allow for a full-spectrum student development approach unique in the Philippine context.

4.2 Level of Personal Entrepreneurial Competence of the Students in Accountancy, Business, and Management Programs

Table 5. Level of Personal Entrepreneurial Competence: Opportunity Seeking Frequency Percentage

Level of Personal Entrepreneurial Competence: Opportunity Seeking	Frequency	Percentage
Very High Competence	0	0.00
High Competence	32	10.67
Moderate Competence	238	79.33
Low Competence	30	10.00
Very Low Competence	0	0.00
Total	300	100.00

Table 5 shows that most of the students who enrolled in Accountancy, Business, and Management (ABM) programs have a moderate

level of personal entrepreneurial competence in opportunity seeking which is meaningful in understanding the current entrepreneurial status of the Philippine setting. 79.33% (F=238) classified as having a moderate level of competence indicates the students have the necessary basic ability to recognize and act upon business opportunities that are relevant based on the changing nature of the current economy (Agustina et al., 2021; Saadat et al., 2021). The moderate competence provides a solid proposition for providing the students with more advanced entrepreneurial skills through tailored educational interventions.

In addition to this, having 10.67 % only (F=32), demonstrating high competency, is a possible avenue for improvement by the educational programs. Prior research indicates that entrepreneurship education can boost students' competencies, changing them from moderate to high competencies (Saadat et al, 2021; Magasi, 2022). In the Philippines, entrepreneurship education is meaningful, as suggested through studies indicating that it is a necessary contributor to developing entrepreneurial intentions in students (Agustina et al., 2021; Khairuddin et al., 2023). Current education systems can improve by engaging through methodologies such as experiential learning and mentoring programs that are effective in promoting entrepreneurship (Riyanti & Dewi, 2024; Oskoei, 2021).

Regarding the 10% (F=30) demonstrating low competence, this result shows a critical deficiency in the supportive frameworks and education provided to students. The literature shows that academic exposure to entrepreneurship, students may only be adequately exposed to entrepreneurship through academic, and not practically, means is insufficient (Kusumawati et al., 2023). So, it is recommended that institutions develop all-encompassing entrepreneurship curricula that incorporate practice-based insights and resources that would aid entrepreneurship practices (Cui et al., 2021; Kusmintarti et al., 2020).

The absence of learners in the very high or very low competence categories also signifies that skills remain embedded in a normalized environment, which encapsulates challenge and opportunity. It urges institutions to rethink how they deliver learning focused on a deeper breadth of competence, especially methods

which can be tailored to develop entrepreneurial capability (Geng et al., 2021; Looi & Maritz, 2021). Initiatives can include offerings such as business incubators and working with industry partners, which will advance practical experience and help the relevancy of students ascend to increased levels of competence (Mohamad & Hussain, 2021; Lutfiani et al., 2020).

To conclude, the analysis of the data shows the strengths and weaknesses in the entrepreneurial competencies of ABM students in the Philippines. It indicates a timely exigency for curricular improvements and the development of teaching strategies to aid students in advancing from moderate competencies to higher capacities. The transition is essential to strengthening the entrepreneurial ecosystem that supports addressing local and global economic conditions.

Table 6. Level of Personal Entrepreneurial Competence: Persistence

Level of Personal Entrepreneurial Competence: Persistence	Frequency	Percentage
Very High Competence	0	0.00
High Competence	51	17.00
Moderate Competence	222	74.00
Low Competence	27	9.00
Very Low Competence	0	0.00
Total	300	100.00

By interpreting the data in Table 6 pertaining to the persistence level among ABM (Accountancy, Business and Management) students' entrepreneurial competence, the most prominent finding is the 74% (F=222) of students who indicated moderate persistence. This general average resilience toward entrepreneurial challenges suggests there is a shared attribute of persistence among students. The findings are consistent with growing conversations in the literature about educating students in entrepreneurial competence through intentional education models emphasizing different competencies such as persistence, risk taking, and flexibility (Martínez & Ventura, 2020; Mendoza, 2023).

In the case of the Philippines and similar studies, academic institutions must ensure they implement, integrate, and improve entrepreneurial education in order to improve these competencies. For example, a study that included BSBA (Bachelor of Science in Business Administration) students from Lucena indicated that a formal process for education around competencies specific to entrepreneurship was determined necessary, affirming that a moderate number of students possessing persistence would likely provide a mechanism to develop further in entrepreneurial activities (Mendoza, 2023). If students find themselves in an environment ranging from competitive, uncertain, and challenging economic problems, and learning enables them to develop a strong entrepreneurial disposition, then if and when they experience similar environments, they have increased resilience and adaptability to move forward (Christina & Widjojo, 2023; Lie et al., 2022).

Additionally, only 17% (F=51) of the students were classified as high competent, indicating that while there are students who sustain a high level of persistence, they are in the minority. This finding is corroborated in the broader literature, where, although some students may have high entrepreneurial competencies, the majority should typically be expected to have moderate levels of competencies or the wish to perform at moderate levels (Iqbal et al., 2022). It is therefore important for education institutions to identify these students so that they can provide extra support/resources to accompany students with high persistence onto higher levels of entrepreneurial competencies through mentorships and experiential opportunities (Dangana et al., 2023; Rocha et al., 2023).

The lack of students in the very high and very low competency groups supports the idea of an overall positive environment that is not necessarily limiting or overly supportive of students in their entrepreneurial activities. This finding indicates a balanced educational ecosystem, wherein students are developing moderate competencies in relation to entrepreneurship. However, it suggests it is also necessary to begin interventions that can elevate students beyond the threshold to change the balance (Valencia-Arías et al., 2021; Chang et al., 2022). For example, educational strategies based on the social cognitive theory are helpful because they suggest that environments with

much entrepreneurial activity can have meaning effects on students' development of entrepreneurial competencies (Christina & Widjojo, 2023).

By synthesizing these findings, it is evident that despite the fact that most students show moderate persistence, developing entrepreneurial education paradigms for the Philippines and similar contexts can produce better levels of entrepreneurial competencies. Using holistic educational frameworks can equip students for the challenges of entrepreneurship and give them confidence and resilience to deal with potential setbacks (Martínez & Ventura, 2020; Rocha et al., 2023).

Table 7. Level of Personal Entrepreneurial Competence: Commitment to Work Contract

Level of Personal Entrepreneurial Competence: Commitment to Work Contract	Frequency	Percentage
Very High Competence	0	0.00
High Competence	52	17.33
Moderate Competence	225	75.00
Low Competence	23	7.67
Very Low Competence	0	0.00
Total	300	100.00

The data on the entrepreneurial competence of Accountancy, Business, and Management (ABM) students suggest a moderate level of commitment to work contracts, with 75% (F=225) of the cohort having moderate competence. This indicates growing awareness amongst students about upholding professional commitments. However, it also highlights a significant need for improvement, especially in fostering a strong work ethic and reliability and accountability of that work ethic. The only 17.33% (F=52) of students demonstrating high competence, coupled with no students showing very high competence, suggests a clear gap in their preparation for entrepreneurial activities, or for career readiness. Finally, the 7.67% (F=23) of students who displayed low competence would likely have challenges with participating effectively in a business environment (Bolzani & Luppi, 2020; Ratković et al., 2022).

In the Philippine context, the role of entrepreneurship education and experience is essential in developing entrepreneurial competencies of students (Osei et al., 2022; Lim, 2021). Research indicates that participation in entrepreneurship education leads to an increase in students' entrepreneurial skills and intentions (Gunartin et al., 2023), especially with the increased emphasis on entrepreneurship as a vehicle for economic growth in the Philippines, and a noted lack of high and very high competency levels among ABM students. However, partnerships that engage students through entrepreneurship education studies have limited direct experiential student-led initiatives that expose students to actual entrepreneurial experiences, which could affect the students' high/very high competency level. Prior research identified many of the benefits of having students engaged in entrepreneurial projects, including higher levels of motivation and higher levels of intentionality around entrepreneurship (Velasco, 2021).

Additionally, entrepreneurial competencies are not limited to an academic background; entrepreneurial competencies involve critical abilities, including interpersonal skills, analytical skills, and flexibility, which are valuable in the world of today (Šimović, 2020; Destiana et al., 2023). In terms of entrepreneurial learning, beneficial learning would involve an educational approach that includes not only the theoretical side of entrepreneurial competencies, but also giving students various practical and experiential opportunities to set challenges to apply their knowledge, thus giving them a greater commitment to work contracts, and their overall preparation for entrepreneurial activities (Christina & Widjojo, 2023; Mohamad, 2023). Continuously addressing the competency issues identified in the data depends on systematic curriculum improvements and delivered staff training that will promote the development of valued competencies and skills.

Overall, the findings bring out several meaningful understandings of the ABM students' entrepreneurial competencies, highlighting the need for educational reform that allows for a more professional approach to the compulsory aspects of entrepreneurial responsibility. The moderate commitment level pertaining to work contracts points to a basic sense of understanding. However, it again shows the need for structured support systems

to develop a more conclusive work ethic. This is in tune with an educational model that is becoming popular around the world in facilitating and developing detailed entrepreneurial skills that will develop the economy through entrepreneurship, especially within contexts such as the Philippines, where entrepreneurship underpins job growth and creativity and innovation activities (“Level of Entrepreneurship Competence and Readiness Among Medical Students in A Private University in Shah Alam, Malaysia”, 2020).

Table 8. Level of Personal Entrepreneurial Competence: Demand for Quality and Efficiency

Level of Personal Entrepreneurial Competence: Demand for Quality and Efficiency	Frequency	Percentage
Very High Competence	18	6.00
High Competence	186	62.00
Moderate Competence	92	30.67
Low Competence	4	1.33
Very Low Competence	0	0.00
Total	300	100.00

Information recently obtained from a study of Accountancy, Business, and Management (ABM) students indicates a high level of entrepreneurial competence in ABM students, particularly with regard to demand for quality and efficiency. The report stated that a strong 62% (F=186) of the students demonstrated a high level of competence, plus another 6% were very high competence. The trend is indicative of a positive attitude towards working at a high standard and with productivity, which is commensurate with findings from current literature about the entrepreneurial mindset.

The high entrepreneurial orientation of ABM students corresponds with the affirmation evident in research conducted within the Philippine context that educational systems are increasingly doing more to encourage entrepreneurial skills and competencies. Juwairia et al. (2024), for example, highlight that entrepreneurial education creates a positive impact on students’ entrepreneurial intentions and that curriculum-based interventions can

increase students’ traits and skills, leading to greater involvement in entrepreneurial opportunities. Furthermore, both Juwairia et al. (2024) and Manafe et al. (2023) show how entrepreneurial education in an academic subject improves students’ self-efficacy regarding entrepreneurial intentions.

The data also show that 30.67% (F=92) of students are classified as showing moderate competence and intermediate recognition of the value of quality and efficiency, taking into account opportunities for additional development. According to the literature, this cohort would require increased engagement and support to both their competencies more consistently. Chang et al. (2022) note that academic institutions should allow students to grow in their excitement about the quality and productivity of various businesses by developing an entrepreneurial mindset, using new instructional approaches or methods.

Furthermore, only 1.33% (F=4) of ABM students are categorized as low competence, and there are none in the very low competence category. This is a good sign of positive awareness and application of concepts essential to entrepreneurship. However, this should be viewed in parallel with a statement by Juwairia et al. Juwairia et al. (2024), that after businesses have grown, students require continual nurturing of competencies to prepare them for the increasing challenges facing to entrepreneurial landscape.

To summarize, while the data indicates a hopeful prospect of the competency levels of ABM students in the quality and efficiency perspective, it also indicates the need to keep working to develop these skills. Ongoing commitment to the entrepreneurial education and innovative practice is essential to helping more students transition into higher competency percentages, enabling their entrepreneurial capability.

Table 9. Level of Personal Entrepreneurial Competence: Risk Taking

Level of Personal Entrepreneurial Competence: Risk Taking	Frequency	Percentage
Very High Competence	22	7.33
High Competence	184	61.33

Moderate Competence	93	31.00
Low Competence	1	0.33
Very Low Competence	0	0.00
Total	300	100.00

The data pertaining to the entrepreneurial propensity of Accountancy, Business, and Management (ABM) students illustrates a predominance of high competence in risk-taking behaviors, with 61.33% (F=184) rated as having high competence and 7.33% (F=22) rated as very high. This suggests the students possess an entrepreneurial mindset based on their capacity to take calculated risks, a key characteristic of an entrepreneur. Research shows this mindset is instrumental in developing entrepreneurial intention and activity (Vargas-Martinez et al., 2023; Ahmed et al., 2020).

In addition, the 31% (F=93) of students classified as moderate competence indicates a cohort that takes a more careful entrepreneurial stance. While this could indicate this group makes better decisions, it also represents a potential area for development, including confidence and decision-making development. Research indicates entrepreneurship education may have a significant influence on students' attitudes and competencies, possibly motivating students away from moderate competence and toward higher competence levels through an educational intervention (Aslam, 2022; Ahmed et al., 2020). The faculty member's description of the students with respect to the low competency groups is also noteworthy, as the very low and low competency groups were quite negligible; 0.33% (F=1) is low competence; none in the very low when compared to the findings of students in other geographical contexts where a risk-averse disposition is remains a barrier toward entrepreneurial activities (Lakmal & Fernando, 2023). This is particularly the case for the Philippines, where there is increasing recognition of the role of entrepreneurial education to effectively promote positive risk-taking and practical innovative thinking among youth (Belmonte et al., 2022; Paudel & Ranabhat, 2024).

The results also align with wider evidence that individual attitudes and perceived behavioral controls shape entrepreneurial intentions. The Philippine situation has an important emphasis on embedding entrepreneurial principles within

academic curricula, attracting students to a culture of entrepreneurship. The integration of academic entrepreneurship principles would not only enhance students' skills, but it also aligns with the government's intentions to develop entrepreneurship as a conduit for economic growth and resilience (Belmonte et al, 2022; Ndofirepi, 2020). The emphasis on entrepreneurial intentions demonstrates a growing acceptance of risk appetite amongst students, shaped by the role of the curriculum and the educational context in developing innovative thinking and risk-taking behaviors and attitudes (Vargas-Martínez et al, 2023; Borges et al, 2021).

There is a good opportunity to optimize ABM student entrepreneurial readiness by developing strong mentoring programs to support those only moderately competent. Mentorship, along with concrete entrepreneurial experiences, has the potential to increase their belief in their ability to take risks and make decisions that entrepreneurs must make (Aslam, 2022; Ahmed et. al, 2020).

Table 10. Level of Personal Entrepreneurial Competence: Goal Setting

Level of Personal Entrepreneurial Competence: Goal Setting	Frequency	Percentage
Very High Competence	44	14.67
High Competence	167	55.67
Moderate Competence	87	29.00
Low Competence	2	0.67
Very Low Competence	0	0.00
Total	300	100.00

The finding that a sizeable portion of Accountancy, Business, and Management (ABM) students are proficient at goal setting is important evidence for understanding how prepared ABM students will be for entrepreneurship. The finding that 55.67% (F=167) of students had high competence and 14.67% (F=44) had very high competence in goal setting indicated their ability to set specific and realistic goals, and this distinguishes their holistic success in entrepreneurship. This corroborates research that highlights the

importance of goal-setting for entrepreneurs, providing they have the means to make plans, if necessary, and monitor and orchestrate their thoughts, ideas, and actions (Tatpuje et al., 2021; Boldureanu et al., 2020).

In the Philippines, these competencies indicate the outcome of localized entrepreneurship education interventions that are aimed at bolstering students' preparedness to engage with business challenges. Research has shown that entrepreneurial education is a valuable contribution to students' intentions of becoming entrepreneurs (Osei et al., 2022; Campos, 2022). Entrepreneurial education is able to sharpen students' goal-setting abilities and help them develop more of an entrepreneurial mindset. Of concern is the fact that 29% of students with moderate competency in goal-setting means that we need to frame educational interventions better to support this skill development. This means that many of the students are working well in developing entrepreneurial skills, but some additional training and mentoring may help enhance their skills (Noor & Malek, 2021; Ahmed et al., 2020).

Interestingly, only a small proportion of other students ($F=2$, $P=0.67\%$) were considered low in competence, and none were identified as having very low competence in goal setting. This indicates that generally, ABM students have a sound background, with studies suggesting that engaging in quality entrepreneurship education significantly increases student confidence in an entrepreneurial career (A.M. & Allen, 2022; Colombelli et al., 2022). Additionally, the role of entrepreneurship education, through real-life experiences due to entrepreneurship, has been noted to improve student entrepreneurial skills and intentions (Ahmed et al., 2020; Colombelli et al., 2022). This is an interesting situational significance with regard to the Philippine educational environment as polyester entrepreneurial initiatives are being contextualized into educational curricula to combat unemployment and promote economic development (Igwe et al., 2021; Belmonte et al., 2022).

In addition, the elevated levels of competence in goal setting may be impacted by individual factors such as family background and social capital, especially with Filipino students, where these aspects are critical in developing entrepreneurial intentions (Osei et al., 2022). This underscores how social networks and

educational opportunities are linked, which highlights the need to bridge the gap between community support and entrepreneurship education, providing students with educational, emotional, and practical support to help them succeed and flourish (Ahmed et al., 2020; Campos, 2022).

To summarize, the results regarding the entrepreneurial competencies of ABM students in goal setting show that there is a favorable trajectory in terms of preparing to take entrepreneurially orientated action, yet there is still a substantial need for flexibility and structured support systems to develop them further, particularly for moderately competent participants. A collaborative response from educators, policymakers, and other stakeholders would be to develop aligned and effective entrepreneurship education that not just teaches the essential skills but also develops an entrepreneurial mindset, which will enable students to develop their business aspirations further.

Table 11. Level of Personal Entrepreneurial Competence: Information Seeking

Level of Personal Entrepreneurial Competence: Information Seeking	Frequency	Percentage
Very High Competence	41	13.67
High Competence	176	58.67
Moderate Competence	79	26.33
Low Competence	4	1.33
Very Low Competence	0	0.00
Total	300	100.00

Considering the data indicating that Accountancy, Business, and Management (ABM) students have various entrepreneurial competencies, especially in relation to information seeking, is important. The data used revealed that 58.67% of students showed high competence, and 13.67% ($F=41$) indicated they displayed very high competence. A majority of these students are actively gathering information necessary to make informed entrepreneurial decisions, which is a fundamental skill used in the business context. Martínez and Ventura attributed the presence of

significant entrepreneurial competencies to good educational practice and their specific intention to help develop those competencies in their students, so they assisted their capacity for enterprise (Martínez & Ventura, 2020).

In addition, if there is a 26.33% (F=79) proportion of students scoring moderate competence, there is a gap that, through targeted interventions, could be closed. Previous research by Ojo and Okwilagwe noted that entrepreneurship education plays an essential role in increasing student knowledge and skills with respect to entrepreneurship and may support students with moderate competencies to take their research and entrepreneurial activities to the next level (Ojo & Okwilagwe, 2024). Moreover, while only 1.33% (F=4) of students report low competence (and zero in the very low category), this is consistent with Promma et al. (2023), who found that a favorable learning environment can foster the development of entrepreneurial skills (Promma et al., 2023).

Many empirical findings in various educational contexts can also substantiate the strong entrepreneurial capabilities of ABM students in the Philippine context. For example, according to Iqbal et al., the supportive campus learning environment is a mediator of entrepreneurial competencies, claiming students flourish in an environment that supports proactive learning and critical learning engagement (Iqbal et al., 2022). This framework supports the belief that the educational environment is an essential factor influencing student outcomes in entrepreneurship.

Furthermore, a wider consideration of the value of entrepreneurial education is illustrated by the effectiveness of various teaching methods. Research into different teaching methods, such as experiential learning and project-based learning (citing Khaerunnisa et al), shows a strong correlation between experiential and project-based learning pedagogies with student problem-solving and research abilities (Khaerunnisa et al., 2024). This might suggest experimenting with new teaching strategies to engage the remaining 26.33% (F=79) of the students who demonstrate moderate competence.

In conclusion, the information-seeking competency information gathered from the performance of ABM students is encouraging. It

highlights the effectiveness of current strategies for information literacy education. It does, however, also point to areas where education intervention may gain further competencies, and supports a holistic approach to entrepreneurship education that involves diverse pedagogical approaches in a supportive learning environment.

Table 12. Level of Personal Entrepreneurial Competence: Systematic Planning and Monitoring

Level of Personal Entrepreneurial Competence: Systematic Planning and Monitoring	Frequency	Percentage
Very High Competence	28	9.33
High Competence	180	60.00
Moderate Competence	85	28.33
Low Competence	7	2.33
Very Low Competence	0	0.00
Total	300	100.00

The information presented shows that a substantial number of Accountancy, Business, and Management (ABM) students have high entrepreneurial competence in systematic planning and monitoring (F=180, P=60.00%, high competence). This is consistent with an increasing number of studies on components of entrepreneurial competencies, or competence (for example, accounting), for higher levels of overall entrepreneurial success; specifically, studies on students from various higher education institutions indicated the success of entrepreneurship education for student competencies reinforced the correlation between systematic planning and monitoring with an increase in entrepreneurial success (Lv et al., 2021).

As it pertains to the Philippines, the excellent performance of ABM students in systematic planning can reflect how local universities are adopting increasingly relevant and practical frameworks of entrepreneurial education. The literature has emphasized the importance of aligned curricula and innovative and engaging pedagogical practices that allow for real-world applications to better gauge understanding of

required entrepreneurial skills. For example, applying entrepreneurship education has been effective with Filipino students who have had the opportunity to obtain critical skills even when they do not take formal business courses (Iwu et al., 2021).

Moderate competence among 28.33% (F=85) of the students suggests at least a basic understanding of these skills. It acknowledges that while they understand them, these students will need to develop their total competency further. This is supported by several studies indicating the need for a sharply contextualized, ongoing process and content with entrepreneurial education to take the students' skills to a higher level (Edralin & Pastrana, 2023). Thus, educators in the Philippines must offer more structured and comprehensive programs that fill in the gaps of planning and monitoring skills for their students so that they would not be limited in their future careers as "entrepreneurs" (Edralin & Pastrana, 2023).

Notably, only 2.33% (F=7) of students categorized as having low competence highlights the efficacy of current educational efforts in the region. This is part of an overall trend among institutions that further acknowledge the importance of fostering entrepreneurial competencies as an essential component of career preparedness. The nascent positive developments in the Philippines' educational landscape, where such a system is evolving to be more experiential and geared towards entrepreneurial education, echoes what has been found internationally: having strong support systems and a rich and diverse curricular is vital for developing entrepreneurial competencies in students (Christina & Widjojo, 2023; Huang et al., 2021).

In conclusion, the results regarding ABM students' strengths in systematic planning and monitoring reflect an important trend within Philippine higher education in entrepreneurship provision. The results suggest that educational institutions should not only capitalise on students' strengths, but should also acknowledge the need for students with moderate and low competencies to be adequately supported and developed, so that the future workforce is thoroughly prepared.

Table 13. Level of Personal Entrepreneurial Competence: Persuasion and Networking

Level of Personal Entrepreneurial Competence: Persuasion and Networking	Frequency	Percentage
Very High Competence	37	12.33
High Competence	175	58.33
Moderate Competence	82	27.33
Low Competence	6	2.00
Very Low Competence	0	0.00
Total	300	100.00

The data discussed indicates the entrepreneurial competencies of Accountancy, Business, and Management (ABM) students, primarily highlighting their perceived strengths in networking and persuasion. While 58.33% (F=175) of students are perceived to be highly competent in these areas, these results represent an important emerging confidence that is part of a greater shift that will assist with achieving success in business in contemporary contexts (Cano et al., 2022). In fact, the ability to network and persuade is emerging as a key entrepreneurial skill, and especially in the case of the Philippines' apprehension of social capital and family networks, the findings of this research suggest students are gaining more confidence in their own network and persuasion competencies (Osei et al., 2022).

The 27.33% (F=82) of student responses in moderate/competence indicates that students generally have foundational skills that could be developed further in entrepreneurial education. Comprehensive entrepreneurship education could increase their skills based on several aspects of entrepreneurship education (Lie et al., 2022; Iqbal et al., 2022). The low percentage of students with low competence (F=6, P=2%) indicates that there is an environment to develop these entrepreneurial skills, perhaps influenced by educational opportunities and socio-economic contexts that encourage entrepreneurship (Castro et al., 2023; Wibowo et al., 2023).

Additionally, the absence of students in the very low competence category suggests that ABM students are overall competent in understanding and developing entrepreneurial relationships, which is a key aspect of the Philippine business landscape where the success of businesses

operates primarily on personal connections and community ties (Osei et al., 2022; Cano et al., 2022). Programs aimed at building the competencies that could be developed by applying the existing competencies and cultivating a more robust entrepreneurial mindset could enhance these strengths even further. Educators are the conduits of the competencies, and their impact cannot be underestimated. The link between effective pedagogy and positive intentions to become an entrepreneur has been borne out in the literature (Bueno et al., 2023).

In summary, the results highlight the need for ongoing development of entrepreneurship education to foster the capabilities of ABM (accountancy, business and management) students both in learning and in practice — as students engage with networked and persuasive skills relevant to entrepreneurship; this will further strengthen the ABM students' skillsets as they become engaged in professional roles and to contribute to the Philippine economy (Castro et al., 2023; Osei et al., 2022; Cano et al., 2022).

Table 14. Level of Personal Entrepreneurial Competence: Self-confidence

Level of Personal Entrepreneurial Competence: Self-confidence	Frequency	Percentage
Very High Competence	28	9.33
High Competence	173	57.67
Moderate Competence	92	30.67
Low Competence	7	2.33
Very Low Competence	0	0.00
Total	300	100.00

The information on the entrepreneurial self-confidence of Accountancy, Business, and Management students presents a bright view of Filipino youth engagement in entrepreneurship. Some reported 57.67% (F=173) of students showing high competence in entrepreneurial self-confidence and 9.33% (F=28) demonstrating very high competence. This would suggest that students have positive self-beliefs about their ability to take on the risks of entrepreneurship, which has positive relationships with entrepreneurial intentions and outcomes

(Krishnawati et al., 2023; Juwairia et al., 2024).

The finding that 30.67% (F=92) of students exhibit moderate competence implies a level for further development. The role of higher education institutions in developing an entrepreneurial mindset that supports risk-taking, innovation, and the intention of business start-ups cannot be overstated. The existence of entrepreneurship education is linked to increased students' self-efficacy and preparedness, enhancing their entrepreneurial attitudes (Wardana et al., 2020; Cahyani et al., 2022). This is very pertinent in the Philippines, where the Department of Education has progressively integrated entrepreneurship into curricula, with the goal of making students more aware and other education stakeholders develop new economic functions in the future (Belmonte & Lira, 2023).

Surprisingly, only 2.33% (F=7) of students reported inadequate competence as a statement of their entrepreneurial self-confidence. This is in accordance with previous research, which shows that entrepreneurship education has a significant effect on self-efficacy and entrepreneurial alertness, and will increase engagement in entrepreneurial activities (Miço & Cungu, 2023; Saadat et al., 2021).

In a worldwide situation, there is a construct of the relationship between emotional intelligence, an entrepreneurial mindset, and educational outcomes. Positive emotional competencies can lead to enhanced entrepreneurial intentions by students. Studies have shown that targeted entrepreneurial education enhances these competencies so students can make better decisions when faced with business decisions (Krishnawati et al., 2023; Manafe et al., 2023). Therefore, creating an entrepreneurial climate within colleges, particularly in courses that ABM students utilize, may result in increased entrepreneurial interests and actions that can facilitate economic growth (Wesarat et al., 2022).

Finally, the research provides evidence of an affirmative stance on entrepreneurial self-confidence for ABM students. This growth may also be supported through the existing framework and pedagogical approaches. Ongoing focus on developing entrepreneurial education geared toward developing entrepreneurial skills as well as an entrepreneurial mindset is needed to maximize Filipino Youth as prospective entrepreneurial

global players to support economic development aspirations.

5. Conclusions

Based on the study, 81.34% of ABM students demonstrated satisfactory or excellent entrepreneurial capability. This shows a strong potential and foundational readiness for students to pursue entrepreneurial careers, which safeguards the importance and relevance of entrepreneurship education for ABM students.

In terms of a variety of entrepreneurial attributes, including opportunity seeking, persistence, commitment to work contract, quality and efficiency, risk-taking, goal setting, information seeking, planning and monitoring, persuasion and networking, and self-confidence, the majority of students demonstrated moderate to high competence. This indicates potential, but there is considerable room for growth and development, specifically by moving students with moderate competency levels to high.

The distribution of PECs data provided by the respondents suggests that most of the students are competent at either the moderate or high levels. In contrast, very few students are skilled at either the very high or very low ends of the scale. This indicates that most of these students are still developing their entrepreneurial competencies and will benefit from more experiential and practical learning, even though there is no critical gap.

On the whole, students had lower competencies in risk-taking, demand for quality and efficiency, and goal-setting traits. The fact that students had better scores on these traits is encouraging, as they are crucial for engaging in entrepreneurial action, following through with strategies, and sustaining businesses in the long run.

Students had moderate levels of competencies, developed opportunity-seeking and persistence traits. The fact that these traits were not as highly developed by students suggests that attention is needed to support proactive business exploratory behaviors and long-term sustainability skill development.

It must be noted that the majority of students demonstrated a high level of self-confidence when responding to the self-confidence, as self-efficacy is a mindset that is important for initiating and sustaining a business. However,

with approximately 33% being self-confidence is only to a moderate level, some form of supplementary connection to successful mentorship and exposure may also be helpful when adopting a self-efficacy lens.

Results support the developing recognition for the positive contribution of entrepreneurship education to students' developing competence within ABM programs. A valuable point of interest was that, students need to continue to improve learning opportunities to develop high-level entrepreneurial competencies through supporting entrepreneurship curriculum design and delivery with more engaging experiential learning, real-world business experiences, incubator, and networking experiences, will not only develop robust entrepreneurial capacities for student learning but also have a positive impact on their environment to develop new sustainable business growth prospects.

6. Recommendations

Based on the findings of this study, a number of recommendations are presented to develop the personal entrepreneurial competencies (PEC) of students in Accountancy, Business and Management (ABM) programs.

First, it is highly recommended that educational institutions increase the opportunities for experiential learning, such as student-run enterprises, business incubator participation, and participation in startup simulation projects. These activities will provide students with meaningful engagement in actual business scenarios that will help them develop their skills in opportunity seeking, persistence, and risk-taking.

Second, the ABM curriculum may be enhanced with competency-based learning modules to address other areas, as illustrated by the students who ranked moderate competencies in opportunity recognition and commitment to work demands.

Third, instructional strategies could be expanded to include more case study analysis, project-based learning activities, and simulation activities so that students can better transform knowledge into practice.

In addressing the needs of students who exhibit moderate to low levels of competence, there needs to be access to systematic mentoring and coaching experiences. This can include pairing

students with an entrepreneur or someone successful in industry as a mentor, who can serve as a role model and provide support, or providing regular mentoring opportunities to support competency development. Regular coaching sessions and exercises that facilitate student reflection can enhance self-awareness and learning of entrepreneurial competence.

Additionally, there will need to be provision of support for the 19% of students who indicated low entrepreneurial potential. These students may benefit from career counseling services that allow them to consider alternative career options that are aligned with their areas of strength, including those areas that they may not have previously considered as career options. The development of bridging programs that develop an entrepreneurial background in students will also be necessary for these students. In particular, students need to be coached to develop fundamental skills such as goal setting, managing risk, and mastering the risk-taking process.

Faculty training must also be prioritized in the face of varying degrees of competency in the PEC domains. Professional development training on entrepreneurship education should be delivered to provide teachers with appropriate research-driven strategies for teaching students' entrepreneurial skills. Valuable collaboration among faculty of other disciplines can develop a close-knit community of practices to build upon and share efforts for developing PEC.

To assist in creating a "brewing entrepreneurial mindset," it would also be beneficial to build a culture of entrepreneurship on campus, emphasizing entrepreneurship-related events and community projects. The opportunities for students to participate in pitch competitions, entrepreneurship fairs, and expos will motivate them to exercise, articulate, and develop competency in novel ways. Events can also legitimize and celebrate students acting entrepreneurially, building on growth mindset principles and encouraging others to take similar action in the future.

Lastly, it would be advantageous for future research to look at longitudinal studies to examine the development of PEC over time. Suppose students continue to practice their PEC after college. Follow-up studies to understand facets of entrepreneurship education's long-term

impact thoroughly will also inform the development of entrepreneurship education curriculum and policy in the Philippines and potentially elsewhere.

References

- A.M., A. & Allen, M. (2022). Instructional approaches, entrepreneurial competencies development, and business education students' intention to be self-employed after graduating from degree-awarding institutions in Rivers State. *International Journal of Entrepreneurship and Business Innovation*, 5(2), 42–59. <https://doi.org/10.52589/ijebi-avlpxbo>
- Agustina, T., Fitdiarini, N., & Heru, A. (2021). Entrepreneurial intentions of accounting and management students. *Berdikari Jurnal Inovasi Dan Penerapan Ipteks*, 9(1), 1-13. <https://doi.org/10.18196/berdikari.v9i1.10646>
- Ahmad, N., Ramayah, T., Wilson, C., & Kummerow, L. (2010). Is the relationship between entrepreneurial competency and business success contingent upon the business environment?. *International Journal of Entrepreneurial Behaviour & Research*, 16(3), 182-203. <https://doi.org/10.1108/13552551011042780>
- Ahmed, T., Chandran, V., Klobas, J., Liñán, F., & Kokkalis, P. (2020). Entrepreneurship education programmes: how learning, inspiration and resources affect intentions for new venture creation in a developing economy. *The International Journal of Management Education*, 18(1), 100327. <https://doi.org/10.1016/j.ijme.2019.100327>
- Ali Iliyasu, & Daramola, R. (2023). Evaluating entrepreneurial skills needed by business education students for self-employment in colleges of education, Kano State. *Futurity Education*, 111-121. <https://doi.org/10.57125/fed.2023.06.25.07>
- Aslam, S. (2022). Impact of entrepreneurship education on students' entrepreneurial inclination: a case of public sector universities. *Pakistan Journal of Educational Research*, 5(1). <https://doi.org/10.52337/pjer.v5i1.432>
- Aulia, M. & Badawi, A. (2023). The influence of entrepreneurship education, use of social media, and availability of information against entrepreneurial interests of female

- students with self-efficacy as a moderating variable. *International Journal of Economics and Management*, 1(01), 7-18. <https://doi.org/10.54209/iem.v1i01.2>
- Bagheri, A. & Abbariki, M. (2016). Competencies of disabled entrepreneurs in Iran: implications for learning and development. *Disability & Society*, 32(1), 69-92. <https://doi.org/10.1080/09687599.2016.1268524>
- BANATE, R., ADRALES, S., BACLI, S., CANCEL, R., GUARIN, M., & SAGAL, H. (2024). Entrepreneurial development activities and business skills enhancement of business administration students of Cavite State University- Tanza Campus. *International Journal of Research in Education, Humanities and Commerce*, 05(01), 120-135. <https://doi.org/10.37602/ijrehc.2024.5110>
- Barazandeh, M., Parvizian, K., Mehdi, A., & Khosravi, S. (2015). Investigating the effect of entrepreneurial competencies on business performance among early-stage entrepreneurs, Global Entrepreneurship Monitor (GEM 2010 survey data). *Journal of Global Entrepreneurship Research*, 5(1). <https://doi.org/10.1186/s40497-015-0037-4>
- Belmonte, Z. & Lira, P. (2023). Factors influencing engineering students to choose techno-entrepreneurship as a career: An implication for better learning. *International Journal of Evaluation and Research in Education (Ijere)*, 12(1), 268. <https://doi.org/10.11591/ijere.v12i1.22925>
- Belmonte, Z., Cruz, C., Castro, P., Estoesta, L., Mitra, E., & Lira, P. (2022). Factors influencing technopreneurial intention among undergraduate engineering students in the Philippines. *Journal of Engineering Education Transformations*, 36(1), 148-157. <https://doi.org/10.16920/jeet/2022/v36i1/22146>
- Boldureanu, G., Ionescu, A., Bercu, A., Bedrule-Grigoruță, M., & Boldureanu, D. (2020). Entrepreneurship education through successful entrepreneurial models in higher education institutions. *Sustainability*, 12(3), 1267. <https://doi.org/10.3390/su12031267>
- Bolzani, D. and Luppi, E. (2020). Assessing entrepreneurial competences: insights from a business model challenge. *Education + Training*, 63(2), 214-238. <https://doi.org/10.1108/et-04-2020-0072>
- Bonesso, S., Gerli, F., Pizzi, C., & Cortellazzo, L. (2018). Students' entrepreneurial intentions: the role of prior learning experiences and emotional, social, and cognitive competencies. *Journal of Small Business Management*, 56, 215-242. <https://doi.org/10.1111/jsbm.12399>
- Borges, A., Lopes, J., Carvalho, C., Vieira, B., & Lopes, J. (2021). Education is a key to the growth of entrepreneurial intentions. *Education + Training*, 63(6), 809-832. <https://doi.org/10.1108/et-03-2020-0052>
- Briegas, J., Citarella, A., Iglesias, A., Ballester, S., Marínez, A., & Castro, F. (2021). Exploring teachers' satisfaction and students' entrepreneurial competencies in four entrepreneurial programs carried out in Extremadura (Spain) schools. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.484103>
- Bueno, R., Guzman, B., Aquino, J., Chico, S., Zilva, D., & Gaddi, Z. (2023). Assessment on the entrepreneurial intentions of grade 12 students in San Felipe Neri catholic school. *Cognizance Journal of Multidisciplinary Studies*, 3(7), 268-278. <https://doi.org/10.47760/cognizance.2023.v03i07.019>
- Cahyani, U., Hanafi, S., & Masruri, S. (2022). The nexus between university support and entrepreneurial mindset: does entrepreneurship education matter?. *Indonesian Journal of Business and Entrepreneurship*. <https://doi.org/10.17358/ijbe.8.3.351>
- Campos, K. (2022). Fostering entrepreneurial education and unravelling the conundrum of entrepreneurial intention: a conceptual and empirical insight. *Ijebd (International Journal of Entrepreneurship and Business Development)*, 5(4), 735-738. <https://doi.org/10.29138/ijebd.v5i4.1903>
- Cano, J., Kie, H., Chioco, A., Fusingan, R., Matulac, K., Sabio, Z., ... & Pat-i, R. (2022). Entrepreneurial attitude and intention of ABM senior high school learners. *International Journal of Multidisciplinary Applied Business and Education Research*, 3(5), 817-827. <https://doi.org/10.11594/ijmaber.03.05.10>
- Castro, D., Daing, C., & Ramos, R. (2023).

- Academic performance and attitude towards entrepreneurship education among grade twelve students. *American Journal of Social Development and Entrepreneurship*, 1(1), 28–39.
<https://doi.org/10.54536/ajsde.v1i1.1103>
- Chang, A., Chang, D., & Chen, T. (2022). Detecting female students transforming entrepreneurial competency, mindset, and intention into sustainable entrepreneurship. *Sustainability*, 14(20), 12970.
<https://doi.org/10.3390/su142012970>
- Christina & Widjojo, H. (2023). A comprehensive entrepreneurship education model based on social cognitive theory. *Jurnal Manajemen Teori Dan Terapan | Journal of Theory and Applied Management*, 16(2), 339-355.
<https://doi.org/10.20473/jmtt.v16i2.44034>
- Colombelli, A., Panelli, A., & Serraino, F. (2022). A learning-by-doing approach to entrepreneurship education: evidence from a short intensive online international program. *Administrative Sciences*, 12(1), 16.
<https://doi.org/10.3390/admsci12010016>
- Cui, J., Sun, J., & Bell, R. (2021). The impact of entrepreneurship education on the entrepreneurial mindset of college students in China: the mediating role of inspiration and the role of educational attributes. *The International Journal of Management Education*, 19(1), 100296.
<https://doi.org/10.1016/j.ijme.2019.04.001>
- Dangana, J., Nafiu, A., & Isienyi, R. (2023). Evaluating entrepreneurship education for the acquisition of entrepreneurial competencies among tertiary institution students in Kogi State, Nigeria. *Asian Journal of Economics, Business and Accounting*, 23(14), 105-115.
<https://doi.org/10.9734/ajeaba/2023/v23i141009>
- Destiana, D., Yandes, J., Santosa, A., & Fadillah, S. (2023). The effect of entrepreneurial competence on business success through entrepreneurial motivation as an intervening variable. *Jurnal Manajemen*, 14(1), 99.
<https://doi.org/10.32832/jm-uika.v14i1.9786>
- Devi, Ashveni & Ghazi, Hasanain & Ariffin, Indang Ariati & Shukri, Mohd. (2020). Level of entrepreneurship competence and readiness among medical students in a private university in Shah Alam, Malaysia. *Journal of Entrepreneurship and Business*, 8(1).
<https://doi.org/10.17687/jeb.0801.07>
- Edralin, D. & Pastrana, R. (2023). Technical and vocational education and training in the Philippines: in retrospect and its future directions. *Bedan Research Journal*, 8(1), 138–172.
<https://doi.org/10.58870/berj.v8i1.50>
- Entrepreneurship test. (n.d.). Psychology Today.
<https://www.psychologytoday.com/us/tests/career/entrepreneurship-test>
- Firmansyah, F., Rahayu, W., & Nurjannah, N. (2020). Evaluation of the entrepreneurship education program through the extracurricular activities of the student company. *Jurnal Penelitian Dan Evaluasi Pendidikan*, 24(1).
<https://doi.org/10.21831/pep.v24i1.19783>
- Fröhlich, M. and Welp, I. (2024). Self-selection into entrepreneurship education and implications for evaluation. *Entrepreneurship Education and Pedagogy*, 8(2), 294-328.
<https://doi.org/10.1177/25151274241247834>
- Geng, B., Huang, T., Jiang, X., Lin, N., Gao, G., & Fan, L. (2021). The analysis of the innovation consciousness of college student entrepreneurs under the teaching concept of Chinese excellent traditional culture. *Frontiers in Psychology*, 12.
<https://doi.org/10.3389/fpsyg.2021.717336>
- Gheorghiță, M., Ghelbet, A., Bulgaru, V., & Scripcenco, A. (2022). The importance and necessity of entrepreneurial education for students within the textile and polygraphy faculty: research study. *Journal of Social Sciences*, V(1), 13-24.
[https://doi.org/10.52326/jss.utm.2022.5\(1\).02](https://doi.org/10.52326/jss.utm.2022.5(1).02)
- Grewe, U. & Brahm, T. (2020). Development of entrepreneurial competences in mini-companies at schools. *Education + training*, 62(7/8), 917–931.
<https://doi.org/10.1108/et-08-2019-0186>
- Hasbiah, S. (2023). The influence of entrepreneurial competence and personal independence on business success in micro businesses in the Tamalate sub-district, Makassar City. *Indonesian J. of. Bus. and entrepreneurship res.*, 1(2), 107-112.
<https://doi.org/10.62794/ijober.v1i2.145>
- Hiên, H., Quân, T., & Hào, D. (2019). Influence of entrepreneurial competencies of women

- entrepreneurs on the performance of small and medium enterprises in Thua Thien Hue province. *Hue University Journal of Science, Economics and Development*, 128(5B). <https://doi.org/10.26459/hueuni-jed.v128i5b.5010>
- Hoang, G., Le, T., Tran, A., & Du, T. (2020). Entrepreneurship education and entrepreneurial intentions of university students in Vietnam: the mediating roles of self-efficacy and learning orientation. *Education + Training*, 63(1), 115–133. <https://doi.org/10.1108/et-05-2020-0142>
- Huang, Y., An, L., Wang, J., Chen, Y., Wang, S., & Wang, P. (2021). The role of entrepreneurship policy in college students' entrepreneurial intention: the intermediary role of entrepreneurial practice and entrepreneurial spirit. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.585698>
- Hutasuhut, S., Aditia, R., Thamrin, T., & Syamsuyurnita, S. (2024). Enhancing small industrial enterprise performance: the influence of entrepreneurial competence, education, and self-efficacy. *Al-Ishlah Jurnal Pendidikan*, 16(1), 43-53. <https://doi.org/10.35445/alishlah.v16i1.4190>
- Igwe, P., Okolie, U., & Nwokoro, C. (2021). Towards a responsible entrepreneurship education and the future of the workforce. *The International Journal of Management Education*, 19(1), 100300. <https://doi.org/10.1016/j.ijme.2019.05.001>
- Iqbal, J., Asghar, M., Asghar, A., & Waqar, Y. (2022). Impact of entrepreneurial curriculum on entrepreneurial competencies among students: the mediating role of the campus learning environment in higher education. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.950440>
- Istiqomah, I., SUPARJI, S., & Marniati, M. (2022). The important role of entrepreneurship readiness in education. *Studies in Philosophy of Science and Education*, 3(2), 70-81. <https://doi.org/10.46627/sipose.v3i2.314>
- Iwu, C., Opute, A., Nchu, R., Eresia-Eke, C., Tengeh, R., Jaiyeoba, O., ... & Aliyu, O. (2021). Entrepreneurship education, curriculum, and lecturer competency as antecedents of student entrepreneurial intention. *The International Journal of Management Education*, 19(1), 100295. <https://doi.org/10.1016/j.ijme.2019.03.007>
- Juwairia, J., Wardana, L., & Maharani, S. (2024). Determinants of entrepreneurial education on entrepreneurial intention with entrepreneurial mindset as a moderating variable on vocational students. *Journal of Applied Business Taxation and Economics Research*, 3(4), 343–353. <https://doi.org/10.54408/jabter.v3i4.274>
- Kanaan-Jebna, A., Alabdullah, T., Ahmed, E., & Ayyasamy, R. (2022). Firm performance and the impact of entrepreneurial education and entrepreneurial competencies. *Business Ethics and Leadership*, 6(2), 68–77. [https://doi.org/10.21272/bel.6\(2\).68-77.2022](https://doi.org/10.21272/bel.6(2).68-77.2022)
- Khaerunnisa, S., Fauziyah, A., & Nurfitriya, M. (2024). The effect of the project-based learning method on creative problem-solving in students of the entrepreneurship study program, Indonesian University of Education. *Jurnal Indonesia Sosial Teknologi*, 5(4), 1464-1475. <https://doi.org/10.59141/jist.v5i4.1034>
- Khairuddin, Z., Sauh, S., & Asmaai, M. (2023). Entrepreneurship education at higher learning institutions (HLI): policy mismatch and recommendations. *Malaysian Journal of Business Economics and Management*, 27-33. <https://doi.org/10.56532/mjbem.v2i1.8>
- Khan, R., Mubaraz, S., Luomakoski, J., & Heikkilä, J. (2020). Students' perception of business idea generation: a case of entrepreneurial hackathon. *14th International Technology, Education and Development Conference*. <https://doi.org/10.21125/inted.2020.0563>
- Krishnawati, N., Nurihsan, J., Budimansyah, D., & Nurdin, E. (2023). The role of entrepreneurship education in shaping students' emotional and cognitive competencies for entrepreneurship. *International Journal of Learning Teaching and Educational Research*, 22(2), 262-280. <https://doi.org/10.26803/ijlter.22.2.15>
- Kusmintarti, A., Ismanu, S., Riawanti, N., & Anshori, M. (2020). Design of an entrepreneurship learning model with a practice approach to build students' entrepreneurship values. *Advances in Economics, Business and Management*

- Research.
<https://doi.org/10.2991/aebmr.k.200415.022>
- Kusumawati, F., Santosa, C., & Hasibuan, H. (2023). The perception of non-economics and business major students towards the compulsory entrepreneurship course: Have the learning outcomes of the course been achieved?. *Gema Wiralodra*, 14(3), 1541-1547.
<https://doi.org/10.31943/gw.v14i3.547>
- Kyguolienė, A. and Švipas, L. (2019). Personal entrepreneurial competencies of participants in experiential entrepreneurship education. *Management of Organisations Systematic Research*, 82(1), 37-51.
<https://doi.org/10.1515/mosr-2019-0012>
- Lakmal, W. & Fernando, H. (2023). Evaluation of entrepreneurial intentions of the Sri Lankan youth generation with special reference to the Kurunegala district. *Sri Lankan Journal of Banking and Finance*, 6(2), 103-123.
<https://doi.org/10.4038/sljb.v6i2.50>
- Li, P. (2024). Entrepreneurial education, entrepreneurial ability, and entrepreneurial intention of college students: basis for entrepreneurial competency framework. *International Journal of Research Studies in Education*, 13(3).
<https://doi.org/10.5861/ijrse.2024.24612>
- Liberal, A.E.E. (2007). Appraising and developing yourself for an entrepreneurial career. (Eds.) Maghiran, T., Librando, P., Esguerra, D., & Recio, D. In *Introduction to Entrepreneurship*. Quezon City: Small Enterprises Research and Development Foundations, Inc. In cooperation with UP-ISSI. pp: 43-44.
- Lie, L., Guo, M., Huang, J., & Yang, J. (2022). Research on the effect of an entrepreneurial environment on college students' entrepreneurial self-efficacy: the mediating effect of entrepreneurial competence and the moderating effect of entrepreneurial education. *Sustainability*, 14(11), 6744.
<https://doi.org/10.3390/su14116744>
- Lim, C. (2021). The effect of the quality of entrepreneurship education and students' participation on entrepreneurial competence and entrepreneurial intention. *Asia-Pacific Journal of Convergent Research Interchange*, 7(7), 37-49.
<https://doi.org/10.47116/apjcri.2021.07.04>
- Looi, K. & Maritz, A. (2021). Government institutions, entrepreneurship education, and entrepreneurship education programmes in Malaysia. *Education + Training*, 63(2), 271-291.
<https://doi.org/10.1108/et-07-2020-0217>
- Lutfiani, N., Rahardja, U., & Manik, I. (2020). Peran inkubator bisnis dalam membangun startup pada perguruan tinggi. *Jurnal Penelitian Ekonomi Dan Bisnis*, 5(1), 77-89.
<https://doi.org/10.33633/jpeb.v5i1.2727>
- Ly, Y., Chen, Y., Sha, Y., Wang, J., An, L., Chen, T., ... & Huang, L. (2021). How entrepreneurship education at universities influences entrepreneurial intention: mediating effect based on entrepreneurial competence. *Frontiers in Psychology*, 12.
<https://doi.org/10.3389/fpsyg.2021.655868>
- Magasi, C. (2022). The influence of entrepreneurship education on entrepreneurial intentions. *International Journal of Research in Business and Social Science* (2147-4478), 11(2), 371-380.
<https://doi.org/10.20525/ijrbs.v11i2.1701>
- Manafe, M., Ohara, M., Gadzali, S., Harahap, M., & Ausat, A. (2023). Exploring the relationship between entrepreneurial mindsets and business success: implications for entrepreneurship education. *Journal on Education*, 5(4), 12540-12547.
<https://doi.org/10.31004/joe.v5i4.2238>
- Martínez, S. and Ventura, R. (2020). Entrepreneurial profiles at the university: a competence approach. *Frontiers in Psychology*, 11.
<https://doi.org/10.3389/fpsyg.2020.612796>
- Mendoza, E. (2023). Examining the entrepreneurial competence of BSBA students across various business schools in Lucena in the 2021-2022 academic year. *Edu. Lrng. Dvp. Ntn*, 1(1), 26-37.
<https://doi.org/10.26480/eldn.01.2023.26.37>
- Miço, H. & Cungu, J. (2023). Entrepreneurship education, a challenging learning process towards entrepreneurial competence in education. *Administrative Sciences*, 13(1), 22.
<https://doi.org/10.3390/admsci13010022>
- Mitchellmore, S. & Rowley, J. (2010). Entrepreneurial competencies: a literature review and development agenda. *International Journal of Entrepreneurial Behaviour & Research*, 16(2), 92-111.

- <https://doi.org/10.1108/13552551011026995>
- Mitchellmore, S. & Rowley, J. (2013). Entrepreneurial competencies of women entrepreneurs pursuing business growth. *Journal of Small Business and Enterprise Development*, 20(1), 125–142. <https://doi.org/10.1108/14626001311298448>
- Mohamad, A. (2023). Developing entrepreneurial skills among university students: a case of student entrepreneurial attachment project. *International Journal of Professional Business Review*, 8(1), e01088. <https://doi.org/10.26668/businessreview/2023.v8i1.1088>
- Mohamad, N. & Hussain, N. (2021). Entrepreneurial readiness among female students: Does the effectiveness of time management matter in attempting businesses?. *International Journal of Academic Research in Business and Social Sciences*, 11(12). <https://doi.org/10.6007/ijarbss/v11-i12/11821>
- Moraes, G., Iizuka, E., & Pedro, M. (2018). Effects of entrepreneurial characteristics and university environment on entrepreneurial intention. *Revista De Administração Contemporânea*, 22(2), 226-248. <https://doi.org/10.1590/1982-7849rac2018170133>
- Ndofirepi, T. (2020). Relationship between entrepreneurship education and entrepreneurial goal intentions: psychological traits as mediators. *Journal of Innovation and Entrepreneurship*, 9(1). <https://doi.org/10.1186/s13731-020-0115-x>
- Noor, N. & Malek, E. (2021). An application of the theory of planned behavior in determining student entrepreneurship intention. *Jurnal Intelek*, 16(1), 207-214. <https://doi.org/10.24191/ji.v16i1.382>
- Ojo, M. and Okwilagwe, E. (2024). Assessment of entrepreneurship education knowledge acquisition, change of attitude to entrepreneurship, and skills acquisition in entrepreneurship among university undergraduates in south-western Nigeria. *European Journal of Theoretical and Applied Sciences*, 2(1), 713-723. [https://doi.org/10.59324/ejtas.2024.2\(1\).64](https://doi.org/10.59324/ejtas.2024.2(1).64)
- Osei, C., Nti, N., & Garcia-Castro, M. (2022). The influence of family business and social capital on entrepreneurial intentions among female university students in the Philippines. *Ijebd (International Journal of Entrepreneurship and Business Development)*, 5(3), 465-475. <https://doi.org/10.29138/ijebd.v5i3.1827>
- Oskoei, M. (2021). The effect of entrepreneurship education on the ability to recognize entrepreneurial opportunities (case study: technical and vocational training centres in Sari City). *International Journal of Social Science and Human Research*, 04(05). <https://doi.org/10.47191/ijsshr/v4-i5-07>
- Pathan, P., Ishak, N., Nisar, N., & Pathan, S. (2023). What matters in enhancing entrepreneurial skills in science: an exploratory study of science teachers' understanding and teaching practices of entrepreneurial skills?. *Psychology in the Schools*, 61(2), 618–630. <https://doi.org/10.1002/pits.23072>
- Paudel, B. & Ranabhat, D. (2024). Entrepreneurial intention of management students in Pokhara university. *Nepalese Journal of Insurance and Social Security*, 6(1), 28–36. <https://doi.org/10.58665/njiss.37>
- Ping, Y. & Yee, C. (2024). Design of college students' innovation and entrepreneurship education quality evaluation model based on grey relational degree algorithm. *Proc. SPIE 13213, International Conference on Image Processing and Artificial Intelligence*, 1321338. <https://doi.org/10.1117/12.3035512>
- Pratikto, H., Winarno, A., & Restuningdiah, N. (2023). The role of entrepreneurial competencies: successful key SMEs, a literature review. *International Journal of Professional Business Review*, 8(7), e01955. <https://doi.org/10.26668/businessreview/2023.v8i7.1955>
- Promma, W., Salamad, M., Aujirapongpan, S., Imjai, N., Suwannal, P., & Taojoo, T. (2023). Influential factors on entrepreneurial competencies in Thai community development program students: a study in higher education institutions. *Tem Journal*, 2188-2196. <https://doi.org/10.18421/tem124-29>
- Ratković, T., Šlogar, H., & Šokčević, S. (2022). Entrepreneurial competencies of university students. *Economics & Sociology*, 15(4), 129-145. <https://doi.org/10.14254/2071-789x.2022/15-4>

/6

- Rico, M., Llamazares, M., Cruz, T., Jiménez, A., Herrero, Á., Cámara, C., ... & Eguizábal, J. (2020). Entrepreneurial interest and entrepreneurial competence among Spanish youth: an analysis with artificial neural networks. *Sustainability* 12, 1351. <https://doi.org/10.20944/preprints202001.0263.v1>
- Riyanti, Y. and Dewi, R. (2024). The influence of entrepreneurship education, entrepreneurial motivation, and income expectations on entrepreneurial interest. *JMET*, 2(2), 276-283. <https://doi.org/10.61277/jmet.v2i2.144>
- Rocha, A., Moraes, G., Vodă, A., & Quadros, R. (2023). Comparative analysis of entrepreneurial intention models: self-efficacy versus entrepreneurial characteristics. *Ram Revista De Administração Mackenzie*, 24(4). <https://doi.org/10.1590/1678-6971/eramg230209.en>
- Saadat, S., Aliakbari, A., Majd, A., & Bell, R. (2021). The effect of entrepreneurship education on graduate students' entrepreneurial alertness and the mediating role of entrepreneurial mindset. *Education + Training*, 64(7), 892-909. <https://doi.org/10.1108/et-06-2021-0231>
- Sergeeva, T., Подболотова, М., Natyrova, E., Аверьянова, С., & Lobanov, I. (2021). Development of student entrepreneurial competence using the resources of social partnership. *SHS Web of Conferences*, 98, 02005. <https://doi.org/10.1051/shsconf/20219802005>
- Setiawan, M., Suwono, H., Nur, H., & Sulisetijono, S. (2023). Reflections on the success of biology entrepreneurship: a case study of developing student entrepreneurial self-efficacy. *Bio Web of Conferences*, 79, 13003. <https://doi.org/10.1051/bioconf/20237913003>
- Šimović, V. (2020). The factors affecting the level of digital entrepreneurial competences of university students. *Economic Analysis*, 53(2), 145-155. <https://doi.org/10.28934/ea.20.53.2.pp145-155>
- Šlogar, H., Stanić, N. I Jerin, K. (2021). SELF-ASSESSMENT OF ENTREPRENEURIAL COMPETENCIES OF STUDENTS OF HIGHER EDUCATION. *Zbornik Veleučilišta u Rijeci*, 9(1), 79-95. <https://doi.org/10.31784/zvr.9.1.5>
- Steira, I., Wigger, K., & Rasmussen, E. (2024). A variety of entrepreneurial skills are measured in the entrepreneurship education literature. *Education + Training*, 66(7), 755-776. <https://doi.org/10.1108/et-09-2023-0374>
- Tatpuje, D., Jadhav, V., & Ganbote, A. (2021). Comparative study on selected models of entrepreneurship education. *Sedme (Small Enterprises Development Management & Extension Journal) a Worldwide Window on Msme Studies*, 48(3), 272-284. <https://doi.org/10.1177/09708464211073486>
- Towers, N., Santoso, A., Sulkowski, N., & Jameson, J. (2020). Entrepreneurial capacity-building in HEIs for embedding entrepreneurship and enterprise creation – a tripartite approach. *International Journal of Retail & Distribution Management*, 48(8), 881-899. <https://doi.org/10.1108/ijrdm-06-2019-0185>
- Valencia-Arías, A., Arango-Botero, D., & Sánchez-Torres, J. (2021). Promoting entrepreneurship based on university students' perceptions of entrepreneurial attitude, university environment, entrepreneurial culture, and entrepreneurial training. *Higher Education Skills and Work-Based Learning*, 12(2), 328-345. <https://doi.org/10.1108/heswbl-07-2020-0169>
- Vargas-Martínez, M., Henríquez, J., Colón-Flores, N., & Domínguez-Valerio, C. (2023). Business environment, attitudes, and entrepreneurial intentions as antecedents of entrepreneurial inclination among university students. *Sustainability*, 15(16), 12280. <https://doi.org/10.3390/su151612280>
- Velasco, R. (2021). Final year project as impetus to entrepreneurial intention: a cross-cultural analysis. *The Research Probe*, 1(1), 55-78. <https://doi.org/10.53378/346502>
- Vican, D., & Vuletić, D. (2013). Self-assessment of Croatian elementary school pupils on the entrepreneurial initiative. *Management: journal of contemporary management issues*, 18(2), 57-79.
- Wardana, L., Narmaditya, B., Wibowo, A., Mahendra, A., Wibowo, N., Harwida, G., ...

- & Rohman, A. (2020). The impact of entrepreneurship education and students' entrepreneurial mindset: the mediating role of attitude and self-efficacy. *Heliyon*, 6(9), e04922.
<https://doi.org/10.1016/j.heliyon.2020.e04922>
- Wesarat, P., Benrit, P., Panrod, W., Tongsamsi, K., Useng, N., Kaewsaeng-on, R., ... & Tansui, D. (2022). Identifying students' entrepreneurial mindset for the Bachelor of Business Administration program, Faculty of Humanities and Social Sciences, Prince of Songkla University. *Kne Social Sciences*.
<https://doi.org/10.18502/kss.v7i14.11946>
- Wibowo, H., Bagis, F., & Kusuma, F. (2023). Comparative analysis of the student entrepreneurial interest inventory test. *Journal of Economics, Finance and Management Studies*, 06(07).
<https://doi.org/10.47191/jefms/v6-i7-07>
- Yi, S. & Duval-Couetil, N. (2021). Standards for evaluating impact in entrepreneurship education research: using a descriptive validity framework to enhance methodological rigour and transparency. *Entrepreneurship Theory and Practice*, 46(6), 1685-1716.
<https://doi.org/10.1177/10422587211018184>