

RESEARCH ARTICLE

ASSESSMENT OF PERSONAL ENTREPRENEURIAL COMPETENCIES OF UNIVERSITY OF MINDANAO GRADUATING BUSINESS STUDENTS

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ABSTRACT - Business management students are expected either to become entrepreneurs or intrapreneurs – an individual who act like an entrepreneur in a specific business organization. This study investigates the personal entrepreneurial competencies of graduating business students in the lens of MSI's 10 Personal Entrepreneurial Competencies (PECs) for the purpose of curriculum development. The MSI's Personal Entrepreneurial Competencies questionnaire was utilized to determine the personal entrepreneurial competencies of graduating business students. The respondents were 132 graduating business students. ANOVA was used to determine the difference between the personal entrepreneurial competencies as well as the difference of PECs between programs (Marketing, Financial, Human Resource Management, and Business Economics). The graduating business students possess the competencies of an entrepreneur, either entrepreneurial or intrapreneurial. Hence, the University of Mindanao should supplement this through various programs and learning modalities that would sustain the development of students' entrepreneurial competencies.

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INTRODUCTION

Entrepreneurship has been widely recognized as significant for economic growth specifically job creation, innovation, and productivity (Memon et al., 2020; Ambad & Damit, 2016). Consequently, business students are expected to become future entrepreneurs as they are exposed to various practical and theoretical knowledge about entrepreneurship and business creation (Alusen, 2016). Unfortunately, business students are more inclined to look for employment opportunities as it offers satisfactory compensation and robust career growth (Li & Wu, 2019; Consignado, 2017). This can be the reason why the China Unemployment Report shows that graduates' involvement in entrepreneurship remains low (Li & Wu, 2019).

Entrepreneurial intentions have various antecedents. Most of the studies focus on personality traits, competencies, and education (Reyes, et al., 2018). Nonetheless, some researchers attempted to craft a competency-based model to predict entrepreneurial intention (Reyes et al., 2018). Such that, McClelland's 14 personal entrepreneurial competencies which outline the behaviors of successful entrepreneurs and the 10 personal entrepreneurial competencies (PECs) developed by Management System International comprised of McClelland and McBer as principal researchers have been recognized tools to describe entrepreneurial behavior (Alusen, 2016).

Personal Entrepreneurial Competencies (PECs) developed by MSI is popular research on human behavior which comprised of 10 personal entrepreneurial competencies known as (1) Opportunity Seeking, (2) Persistence, (3) Commitment to Work Contract, (4) Risk-Taking, (5) Demand for Efficiency and Quality, (6) Goal Setting, (7) Information Seeking, (8) Systematic Planning and monitoring, (9) Persuasion and Networking, and (10) Self-Confidence (Reyes et al., 2018; Alusen, 2016). Despite the popularity of this measurement, to date, there is limited literature that uses PECs as the basis for curriculum development for business courses at the tertiary level specifically in the local setting.

To augment the need to conduct this study, the University of Mindanao College of Business Administration Education (UM CBAE) regularly conduct employability survey to determine whether its graduates are employable. According to the latest employability survey for the school year 2018-2020, 75% of the CBAE graduates are employed which means that they are employable. But there is a limited study being conducted to determine the propensity of UM CBAE graduates to engage in entrepreneurship and start their own businesses. Thus, being a Higher Educational Institution (HEI), which offers business-related courses and programs, is an important tool to evaluate the entrepreneurial competencies of its students to determine whether they are entrepreneurial, thus may implement policies and programs that would help the graduates prepare not only to become a job seeker but also a job maker. This is in line with the application of the concept of intrapreneurship where an individual can act like an entrepreneur for the benefit of a specific organization in which he or she was involved (Raheem, 2019).

Likewise, it is a significant leap to examine the entrepreneurial characteristics of business students using PECs developed by MSI for the purpose of curriculum development, revision, review, and formulation. Hence, this research can provide valuable information about the entrepreneurial competencies of the student which is significant for the development of curriculum, programs, and policies that may enhance the students' entrepreneurial competencies, thus making them not only entrepreneurial but also "intrapreneurial"

This paper follows the IMRAD outline (Introduction, Methodology, Results and Discussion).

Framework

Encapsulated in Figure 1 is the conceptual framework of this investigation which summarizes the overall objective of this study.

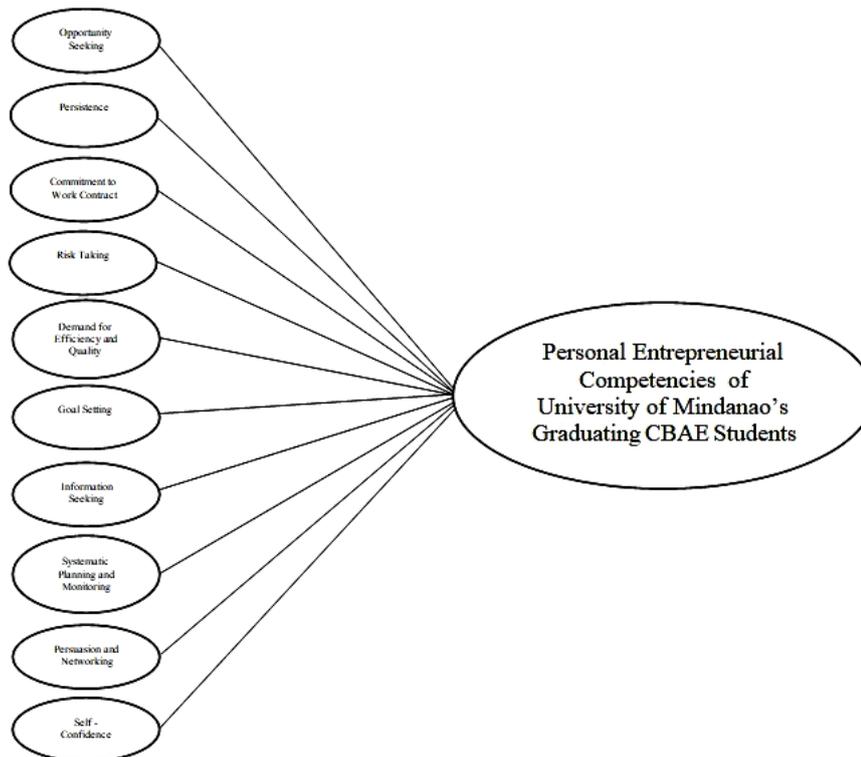


Figure 1. MSI's ten (10) personal entrepreneurial competencies

LITERATURE REVIEW

Various models are being used in order to measure individuals' personal entrepreneurial competencies. But the widely used model is the MSI's measure of Personal Entrepreneurial Competencies (Alusen, 2016). This model comprises the following measures: (1) Opportunity Seeking, (2) Persistence, (3) Commitment to Work Contract, (4) Risk-Taking, (5) Demand for Efficiency and Quality, (6) Goal Setting, (7) Information Seeking, (8) Systematic Planning and monitoring, (9) Persuasion and Networking, and (10) Self-Confidence (Reyes et al., 2018; Alusen, 2016).

Opportunity Seeking is defined as the ability of an individual to weaponise any circumstance and exploit it in his or her favor either via creating business or career development (Alusen, 2016). Likewise, opportunity-seeking involves the individual's skill in determining any possible circumstance that he or she can use for personal or societal benefits (Reyes et al., 2018).

Persistence is an important ability of every entrepreneur as it involves the person's ability to not give up and continue believing in his confidence that he or she can accomplish things which is within his or her mind (Asta & Liudas, 2019). Furthermore, the ability of an individual to fight for what he or she wants is an excellent show of persistence, hence allowing him or her to overcome any obstacles (Reyes et al., 2018).

Commitment to a work contract is the ability to fully exert by the individual of his or her effort in accomplishing things in a very timely manner (Duyan, 2019). Moreover, this concept refers to the competence of an individual in accomplishing the assigned organizational or entrepreneurial task (Schneider, 2017).

Risk-taking is the individual's ability to tolerate uncertainties and situation that has no guarantee (Gonzaga, 2019). Similarly, risk-taking involves treating uncertainties and ambiguity with confidence and composure as individuals believe that he or she can do it (Duyan, 2019).

Demand for Efficiency and Quality refers to individuals' skill of achieving the task in an excellent manner within or beyond what is expected by people or persons who assigned the task or responsibility (Alusen, 2016). Moreover, this concept refers to achieving the responsibilities within or beyond the target established by the organization (Minello, Scherer, & da Acosta Alves, 2014).

Goal Setting refers to the person's ability to set up the things that he or she wants to achieve or accomplish (Schneider, 2017). Also, arranging things that an individual wants to achieve in the future is one of the entrepreneurial competencies (Gonzaga, 2019).

Information Seeking involves gathering the much-needed data and information that can be used for proper decisions (Alusen, 2016). Likewise, information seeking is the skill of an individual to collect relevant information that will aid in coming up with correct decisions (Schneider, 2017).

Systematic planning and monitoring involve the evaluation of one's and the organization's actions and whether it is still aligned with the overall goals (Reyes et al., 2018). Moreover, it involves the systematic process of examining the policies being implemented to determine their alignment with overall goals (Duyan, 2019).

Persuasion and Networking involve the ability of an individual to connect and interact with other people thereby resulting in establishing networks and connections as well as encouraging people to partner with them (Asta & Liudas, 2019). Similarly, this concept refers to the individuals' skill in choosing the right person or entity that would provide maximum benefit to the organization (Gonzaga, 2019).

Self Confidence refers to a person's ability to steer down any challenges and achieve things within his or her plans (Schneider, 2017). Moreover, this concept translates into a person's behavior of overcoming all odds just to achieve the established goals and objectives (Duyan, 2019).

METHODOLOGY

Research Design

The research design of this study is non-experimental, using the adopted Personal Entrepreneurial Competencies questionnaire developed by MSI. A non-experimental research design prohibits the researcher to alter or manipulate the variables, but it enables the researcher to examine, describe and establish a relationship between the results (Bonds-Raacke & Raacke, 2014). Meanwhile, quantitative research primarily intends to make causal inferences concerning two or more variables of interest (Swart et al., 2019). This study was conducted at the University of Mindanao, Davao City, using an online quantitative survey questionnaire in English language and sent to targeted students. An online survey questionnaire was used to reach as many respondents as possible. The aim of the quantitative survey questionnaire is to collect detailed observations, opinions, and participants' assessments of their entrepreneurial competencies. The questionnaire was self-designed and it consists of closed-ended questions.

Research Respondent

This study was conducted in Davao City, Philippines. A purposive sampling technique was applied to select the appropriate respondents for this investigation since it focuses on specific characters particularly the department and the status of the students; CBAE and graduating students (Guarte & Barrios, 2006). The target population of this investigation is the CBAE students and only focused on graduating CBAE students of the University of Mindanao as the respondents. The researcher distributed the instrument to at least 80% of the graduating CBAE students in order to attain the objective of this investigation which is to assess the entrepreneurial competencies of the graduating students. There were 132 respondents for this research. This comprises 81% of the total CBAE graduating students as of November 2021.

Research Instrument

Data collection instruments such as questionnaires were used in gathering primary data. Best and Khan (2006) stated that if factual information is desired to be obtained, then a questionnaire should be used. The authors added that a questionnaire has a unique advantage when properly administered, and it can serve as the most appropriate and useful data gathering device in a research project.

The research instrument used for this investigation was adopted from MSI's Personal Entrepreneurial Competencies. Similarly, the scale to measure the variable of the study was also adopted from the said literature.

Nonetheless, in this study, due to the prohibited face-to-face data collection, questionnaires were administered online via Google Forms. Likewise, all IATF guidelines for data gathering were observed and implemented.

Below is the tabular interpretation of Personal Entrepreneurial Competencies (Duyan, 2019).

Table 1. Interpretation of PEC Score

Personal Entrepreneurial Competency Score	Score
19 points and above	Strong
16 points to 18 points	Moderate
15 points and below	Weak

Statistical Tools

To determine the entrepreneurial competencies of the graduating CBAE students, the Personal Entrepreneurial Competencies Self-Rating Questionnaire Scoring Sheet was used. To get the personal entrepreneurial competencies of the selected respondents, the researchers grouped the respondents according to their program or course enrolled and utilized the mean of each program as the basis for interpretation of the respondents' personal entrepreneurial competencies. Likewise, to determine the difference between the PECs as well as the difference between major/program, the Analysis of Variance (ANOVA) was used.

RESULTS

Profile of the Respondents

Table 2 presents the profile of the respondents. Out of the 132 respondents, 59 students or 45% of the total respondents are from Financial Management program. On the other hand, 47 students or 36% of the total respondents are from Human Resource Management program. Meanwhile, 21 students or 16% of the total respondents are from Marketing Management program. Finally, 3 students or 2% of the total respondents are from Business Economics program. Only 1 student or less than 1% of the total respondents is disqualified from the list of official respondents as the authors confirmed that the student is not yet a candidate for graduation. This means that the respondents are unequally distributed. This is due to the total number of graduating students where the Financial Management program garnered the highest total.

Table 2. Profile of the Respondents

Majors	Frequency (n)	Percentage (%)
Financial Management Program	59	45%
Human Resource Management Program	47	36%
Marketing Management Program	21	16%
Business Economics Program	3	2%
Business Analytics Program (disqualified)	1	1%
Total	132	100%

Personal Entrepreneurial Competencies of Marketing Management Students

Figure 2 shows the personal entrepreneurial competencies score of marketing management students. As indicated, the marketing management students are goal setters (20.0) while being challenged in terms of risk-taking (17.5).

**Figure 2.** Personal entrepreneurial competencies score of marketing management students

Meanwhile, Table 3 shows that the PECs of marketing management students are significantly different from each other with $F=4.39$ and a p-value of less than 0.001.

Table 3. Differences in the PECs of marketing management students

Major	Statistic	p-value	Remark on differences among PECs
Marketing Management	4.39	< .001	Significant

Personal Entrepreneurial Competencies of Human Resource Management Students

Figure 3 shows the personal entrepreneurial competencies score of human resource management students. As indicated, human resource management students are bolder and more tenacious (20.0) while experiencing a similar challenge with marketing management students in terms of risk-taking ability (18.2).



Figure 3. Personal entrepreneurial competencies score of human resource management students

On the other hand, Table 4 indicates that the PECs of HR management students are significantly different from each other with $F=7.80$ and a p-value of less than 0.001.

Table 4. Differences in the PECs of human resource management students

Major	Statistic	p-value	Remark on differences among PECs
Human Resource Management	7.80	< .001	Significant

Personal Entrepreneurial Competencies of Financial Management Students

Figure 4 shows the personal entrepreneurial competencies of financial management students. As indicated, financial management students are inclined in setting their goals and targets (20.4) while experiencing similar challenges with other students from HR and MM programs in terms of their risk-taking ability (18.4).

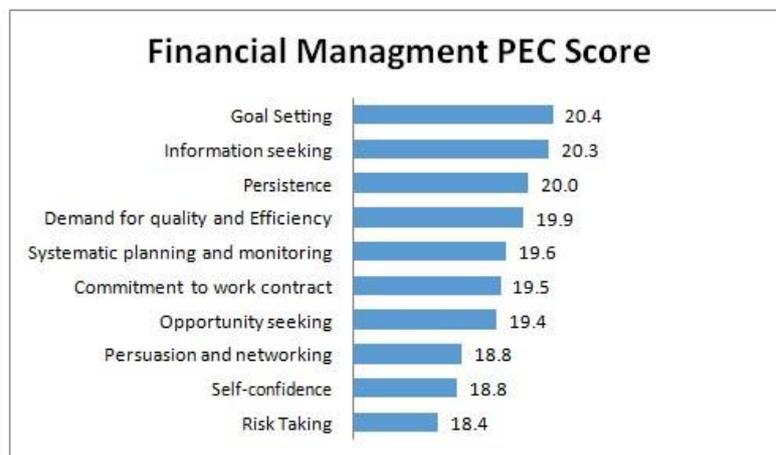


Figure 4. Personal entrepreneurial competencies score of financial management program

On the other hand, Table 4 indicates that the PECs of HR management students are significantly different from each other with $F=7.80$ and a p-value of less than 0.001.

Table 5. Differences in the PECs of financial management students

Major	Statistic	p-value	Remark on differences among PECs
Financial Management	12.00	< .001	Significant

Personal Entrepreneurial Competencies of Business Economics Students

Figure 5 shows the personal entrepreneurial competencies of business economics students. As indicated, business economics students are more confident with themselves (20.2) while facing difficulties in seeking opportunities for themselves (18.04).



Figure 5. Personal entrepreneurial competencies score of business economic students

On the other hand, Table 6 presents that the PECs of business economics students are significantly different from each other with $F=4.08$ with a p-value of 0.005.

Table 6. Differences in the PECs of business economic students

Major	Statistic	p-value	Remark on differences among PECs
Business Economics Management	4.08	< .005	Significant

Significance difference of PECs when evaluated according to major/program

As indicated in Table 7, the ten (10) PECs are not significant with each other when the respondents are evaluated based on their major or program.

Table 7. Significance difference of PECs in terms of major/program

PEC	Statistic	p-value	Remark on differences among majors
Opportunity seeking	.148	.930	Not significant
Persistence	.302	.824	Not significant
Commitment to work contract	.333	.802	Not significant
Demand for quality and Efficiency	.923	.454	Not significant
Risk Taking	1.516	.214	Not significant
Goal Setting	2.026	.114	Not significant
Information seeking	3.232	.057	Not significant
Systematic planning and monitoring	.538	.665	Not significant
Persuasion and networking	.447	.720	Not significant
Self-confidence	1.384	.251	Not significant

Overall Personal Entrepreneurial Competencies of CBAE Graduating Students

Presented in Table 8 are the personal entrepreneurial competencies (PECs) of CBAE graduating students. There are ten (10) personal entrepreneurial competencies as indicated by MSI. These are (1) Opportunity Seeking, (2) Persistence, (3) Commitment to Work Contract, (4) Risk-Taking, (5) Demand for Efficiency and Quality, (6) Goal Setting, (7) Information Seeking, (8) Systematic Planning and monitoring, (9) Persuasion and Networking, and (10) Self-Confidence. Based on the results, *goal-setting* garnered the highest PEC rating (strong) while *risk-taking* garnered the lowest PEC rating (moderate). To be specific, *goal setting* garnered a PEC score of 20.61 (strong), *information seeking* garnered a PEC score of 20.52 (strong), *persistence* garnered a PEC score of 20.34 (strong), *commitment to work contract* garnered a PEC score of 20.08 (strong), *systematic planning and monitoring* garnered a PEC score of 19.77 (strong), *opportunity seeking* garnered a PEC score of 19.65 (strong), *demand for quality and efficiency* garnered a PEC score of 19.62 (strong), *self-confidence* garnered a PEC score of 19.61 (strong), *persuasion and networking* garnered a PEC score of 19.30 (strong), and *risk-taking* garnered a PEC score of 18.56 (moderate).

Table 8. Personal entrepreneurial competencies of CBAE graduating students

Personal Entrepreneurial Competencies (PECs)	Overall	Rank
Opportunity Seeking	19.65	6
Persistence	20.34	3
Commitment to Work Contract	20.08	4
Demand for Quality and Efficiency	19.62	7
Risk Taking	18.56	10
Goal Setting	20.61	1
Information Seeking	20.52	2
Systematic Planning and Monitoring	19.77	5
Persuasion and Networking	19.30	9
Self Confidence	19.61	8

Personal Entrepreneurial Competencies Profile Sheet of CBAE Graduating Students

Indicated in Table 9 is the personal entrepreneurial competencies profile sheet of CBAE graduating students. Based on the results, 9 out of 10 PECs garnered a score of 19 points and above with a particular exception of risk-taking which scored 18.56 which means that the CBAE graduating students possessed the personal competencies of entrepreneurs.

Table 9. PEC Profile Sheet of CBAE Graduating Student

Program	PEC	0	5	10	15	20	25
CBAE	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					██████████	
		0	5	10	15	20	25

DISCUSSION

Personal Entrepreneurial Competencies of Marketing Management Students

Marketing management students are expected to land a job where transformation is highly imminent, thus they should have adaptive skills and competencies of an entrepreneur in order to survive (Wisconsin Department of Public Information, 2022). Likewise, like other business management students, students from marketing management must have the competencies of an entrepreneur for them to be ready to face the real world of marketing, particularly in the creation of effective marketing strategies and marketing plans (Bhagat, 2021). Thus, learning and equipping marketing management students with the competencies of an entrepreneur would surely make them more qualified for their job.

Personal Entrepreneurial Competencies of Human Resource Management Students

Human resource management is an important component for every organization i.e., the human resource manager should have the skill to steer leadership and confidence to its people to achieve common goals of the organization (Narula & Chaudhary). Similarly, shaping human behavior is one of the key components of a human resource management program. Doing this would require entrepreneurial competencies such as persistence, persuasion, and networking (Orakwu & Iguisi, 2020). Thus, it is empirical for human resource management practitioners to have entrepreneurial competencies in order to fully steer the most important resource of an organization towards the achievement of the organization's common goal.

Personal Entrepreneurial Competencies of Human Financial Management Students

Effective financial management and entrepreneurial skills are a vice-versa requirement for business management students. In fact, financial management is an important aspect of business management for entrepreneurs and entrepreneurial skills are important for effective financial management (Entrepreneur Magazine, 2006; Association of Chartered Certified Accountant, 2016). Further, goal setting, particularly setting financial goals, is an important skill for every financial management student which can be applied both in personal and business organizations (Association of Chartered Certified Accountant, 2016). Thus, some entrepreneurial competencies are significant in building well-qualified financial managers.

Personal Entrepreneurial Competencies of Business Economics Students

Similar to other business management programs, economists can become good entrepreneurs. Their knowledge in treating uncertainties with economic data and statistics helps them create a decision that would minimize the impact of such (Jorge-Moreno et al., 2011). Similarly, one of the career opportunities for business economics students is to engage in entrepreneurship and business creation, making entrepreneurial competencies an integral part of their success in such kind of endeavour (CHED, 2017). Thus, the importance of entrepreneurship and economics, and vice versa, must be given emphasis thereby encouraging business economics students to learn more about determining their entrepreneurial competencies.

Personal Entrepreneurial Competencies of CBAE Students

As indicated in the results shown in Chapter 3, there are ten (10) personal entrepreneurial competencies being examined to determine the personal entrepreneurial competencies of CBAE graduating students. These are (1) Opportunity Seeking, (2) Persistence, (3) Commitment to Work Contract, (4) Risk-Taking, (5) Demand for Efficiency and Quality, (6) Goal Setting, (7) Information Seeking, (8) Systematic Planning and monitoring, (9) Persuasion and Networking, and (10) Self-Confidence.

Based on the results, CBAE graduating students have strong competency with regard to opportunity seeking. This means that the students are highly participative and active in examining any gaps or issues in the environment that has a possibility to transform it into a business enterprise (Alusen, 2016). Moreover, the CBAE graduating students showed strong persistence. This means that the students are tenacious and will not give up easily on their personal goals when they encounter a significant obstacle (Asta & Liudas, 2019). Likewise, the CBAE graduating students show strong competency when it comes to commitment to a work contract. This means that the students are committed to things that they perceived as right and important to their endeavour or discipline (Asta & Liudas, 2019).

Furthermore, the CBAE graduating students showed a strong competency when it comes to the demand for efficiency and quality. This means that the students exhibit passion in performing tasks and responsibilities assigned to them to ensure that the outcome is of the highest satisfaction (Duyan, 2019). Similarly, the CBAE graduating students displayed a strong competency in terms of goal setting. With this, students are active in setting up their goals and objectives as long as it is significant for their attainment of success (Duyan, 2019; Asta & Liudas, 2019). Correspondingly, the CBAE graduating students manifested a strong competency with regard to information seeking. This means that the students are

active in searching for relevant information for their own consumption and benefit specifically when it comes to the decision-making process (Alusen, 2016; Duyan, 2019).

Furthermore, the CBAE graduating students revealed a strong competency when it comes to systematic planning and monitoring. With this, the students are actively monitoring substantial changes in circumstances and openly revised their strategies in order to achieve the desired outcomes and objectives (Asta & Liudas, 2019). Also, the CBAE graduating students indicated a strong competency with regard to persuasion and networking. This means that the students are highly active in developing strategies in order to influence other people as a way of achieving personal goals and objectives (Asta & Liudas, 2019). Finally, the CBAE graduating students manifested a strong competency when it comes to self-confidence. This means that the students are highly confident, especially during difficult times, such as facing opposition from other people, as long as it will give benefit, success, and satisfaction in the future (Alusen, 2016; Duyan, 2019; Asta & Liudas, 2019).

Of all the ten (10) personal entrepreneurial competencies, only risk-taking garnered a moderate rating. This means that the students recognize uncertainties but will examine some factors and considerations before taking or performing actions (Alusen, 2016; Asta & Liudas, 2019).

Personal Entrepreneurial Competencies Profile Sheet of CBAE Graduating Students

As indicated in the results, out of ten (10) personal entrepreneurial competencies, only risk-taking exhibits a moderate rating while all other competencies exhibit a strong rating. This means that the CBAE graduating students possessed the qualities and competencies of becoming an entrepreneur although some of them sometimes hesitate and will examine and review some factors first before performing specific actions. This is an important development for business students since they are expected to become business managers or start-up owners (University of Alabama, 2021). Likewise, it is important for business students to exhibit entrepreneurial competencies regardless of if they are going to land a job or start their own business since the business environment is constantly evolving and persons with entrepreneurial mindsets and competencies are highly suited (Okyireh et al., 2018).

CONCLUSION AND IMPLICATIONS

In conclusion, the results showed that marketing management students can clearly set their goals while encountering a major obstacle in terms of their risk-taking ability. Similarly, it can be concluded that human resource management students are tenacious and persistent while experiencing a challenge in dealing with uncertainties. Further, financial management students are similar to human resource management students where they can clearly set their goals while experiencing a challenge in dealing with ambiguous situations. Finally, business economics students have high confidence but experience challenges in dealing with uncertainties. Overall, the CBAE graduates possess the competencies of an entrepreneur, thus making them both entrepreneurial and intrapreneurial. The following recommendations are being formulated based on the results of this investigation.

The College of Business Administration must embark on curriculum revision to include entrepreneurship subjects/courses for all business management students. In the implementation of GE 11 (Entrepreneurial Mind) course, personal entrepreneurial competencies must be included and/or given emphasis in order to introduce its importance, thus providing awareness to business students about the importance and significance of entrepreneurship to their respective careers. The College of Business Administration Education must include entrepreneurial engagements for its students by creating programs, activities, and initiatives, particularly in the formulation of the course syllabus and other materials for entrepreneurship subjects. Future researchers, who would like to examine this field of endeavour, must consider this paper as one of their references and the basis for doing such.

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