



Publisher

<http://jssidoi.org/esc/home>

PREDICTORS OF ENTREPRENEURIAL ATTITUDE AMONG ADMINISTRATORS OF SELECTED COMMUNITY COLLEGES AND UNIVERSITIES IN LEYTE

Jereco Jims J. Agapito ^{1*}, Liza Lorena C. Jala ², Rosemarie Cruz-Español ³, Anthony G. Esguerra ⁴

^{1,2,3,4} College of Business Administration, Graduate School of Business, University of the Visayas, Cebu City, 6000 Cebu Colon Street, Republic of the Philippines

E-mails: ^{1*}jerecojims_agapito@uv.edu.ph; ²ljala@uv.edu.ph; ³cbadean@uv.edu.ph; ⁴anthonyesguerra71@gmail.com

Received 15 June 2022; accepted 18 October 2022; published 30 Decemeber 2022

Abstract. The school administrators adopted an "Entrepreneurial Attitude" approach to run the school profitably. Furthermore, administrators who embrace successful entrepreneur techniques were able to attain and establish an effective school, as the literature says. Using a descriptive survey method, this study determined the factors that affect the entrepreneurial attitudes of school administrators and faculty in selected universities and colleges in the 4th congressional district of Leyte through model generation. Hierarchical regression analysis showed that cognition is the most dominant and significant predictor of entrepreneurial attitude, which generated two models. An emergent model can enhance the lens to see a better picture of what school administrators should prioritize in improving their school management strategy. A simple model equation can be a foundation for enhancing someone's entrepreneurial attitude. A critical takeaway from the simple equation model was that enhancing someone's cognition can help school administrators transform their entrepreneurial mindset and attitude.

Keywords: Entrepreneurial attitude; school administrators; hierarchical regression; aptitude; boundaries; cognition; Leyte; Philippines

Reference to this paper should be made as follows: Agapito, J.J.J., Jala, L.L.C., Cruz-Español, R. 2022. Predictors of entrepreneurial attitude among administrators of selected community colleges and universities in Leyte. *Insights into Regional Development*, 4(4), 36-51. [http://doi.org/10.9770/IRD.2022.4.4\(3\)](http://doi.org/10.9770/IRD.2022.4.4(3))

JEL Classifications: L16, L53, L31

Additional disciplines: political sciences, sociology, psychology, educology

1. Introduction

The economy has always been an unstable environment with evolving demands for human needs and wants. This demand provides opportunities for the community to develop and create innovative products and services. For the past years, the 4th congregational district of Leyte has experienced economic development with various emerging businesses such as the existing agriculture, energy supply, and other company offering essential commodities. Entrepreneurship is widely recognized as a crucial component in creating job opportunities, economic growth, and the strength of small businesses and academic institutions.

One of the industry's driving elements is entrepreneurship. In education, entrepreneurship is critical in encouraging all students to become more entrepreneurial (Hegarty et al., 2006). In the Philippines, the CHED views entrepreneurship education as a way to train people to become employers rather than workers when they graduate from college. It is envisioned that graduates would be educated and equipped with the required values and abilities to take business risks. However, the route to HEIs providing entrepreneurial education has been paved with numerous obstacles, including opposing philosophies and pedagogies. According to De Ocampo, Bagano, and Tan (2012), the ability to produce "entrepreneurs" has yet to be scientifically verified, but it will be felt in the following years. Furthermore, the future generation will be able to comprehend the context and significance of entrepreneurship.

Based on the study of Gibb and Hannon (2006), entrepreneurship education, or a narrow approach, i.e. education in starting and running businesses, and enterprise education, or a broad approach, with a focus on abilities that characterize entrepreneurs, such as opportunity seeking, initiative-taking, making things happen independently, problem-solving and risk-taking, commitment to work and tasks, and ability to cope with or enjoy uncertainty and opportunity seeking, initiative-taking. In general, the comprehensive approach is aimed at younger learners to provide opportunities for kids to acquire an entrepreneurial mindset. Entrepreneurship is defined broadly in Sweden and other Nordic countries, focusing on the process at individual and public levels (Sjøvoll and Pedersen, 2014). There seems to be widespread agreement in various nations that entrepreneurial education and training should encompass broad and limited knowledge (Leffler, 2009). In certain countries, such as the United States, the United Kingdom, and South Africa, the focus is mainly on limited knowledge, despite debates about giving more attention to the broader understanding (North, 2002).

In the Philippines, the innovation and the imperative of entrepreneurship in the educational setting are redefined in Ambisyon Natin 2040. Several countries share this vision, such as Sweden, where the New Swedish Education Act (2010) proposes that the concept of knowledge be given a broader meaning so that education can promote children's and student's overall personal development toward becoming active, creative, competent, and responsible individuals and citizens. That might include the ability to be creative and see opportunities, as well as the ability to take the initiative and put ideas into action, all of which are essential for establishing an entrepreneurial mindset. Entrepreneurship education programs foster an entrepreneurial mindset and the desire to pursue a career as an entrepreneur in the future (Souitaris, Zerbinati, & Al-Laham, 2007). The development of entrepreneurial vision should be at the heart of contemporary tertiary education for teachers, school officials, and students.

The individual who undertakes this is known as an "entrepreneur" (Martin & Osberg, 2007). While there are various definitions of entrepreneurship and entrepreneur in the literature, Richard Cantillon originated the two terms in 1755 and was generally acknowledged. Cantillon defined an entrepreneur as someone who accepts every risk after creating a purpose to make money and links the entrepreneur to the risk factor (Korkmaz, 2012).

Besides, Azim and Kahtani (2015) expressed that entrepreneurial people have different abilities, for example, correspondence, association, initiative, navigation, perceiving amazing open doors, organizing, using time effectively, and stressing the board, while Cooney (2012), then again, states that they have different abilities, for example, inside the discipline, risk-taking capacity, advancement, change direction, and assurance. These abilities add to the foundation that upholds the innovative capabilities of school administrators in authoritative terms. Simultaneously, they establish the main impetus of progress and advancement in light of drives (Fernald, Solomon, and Tarabishy, 2005). The reception of these perspectives and capabilities by school chairpersons is significant concerning expanding the entrepreneurial limit of their institutions. For instance, as per Kirkley (2017), enterprising school administrators are people who are fearless, aggressive, step up, and feel energy and excitement. Moving these characteristics to learning conditions and fields additionally adds to supportability given business and creation for schools. Simultaneously, the authority domain with entrepreneurial perspectives

makes the consciousness of seeing and getting the potential changes caused by difficult circumstances beforehand and defeating existing constraints (Xu, 2020).

As Sajkiewicz and Pashiardis (2020) discussed, as far as training, school directors rouse authoritative change and development through the navigation and show their innovative jobs by attempting new techniques. Along these lines, acting with their enterprising jobs, the school chief can produce livelihoods and assets that will give the school their imaginative and innovative activities and assess these assets concerning academic purposes. Consequently, the school chairperson showing enterprising perspectives and abilities by leaving their usual range of familiarity and facing challenges, and going to the obscure and brimming with opportunities can separate this school chief from different principals (Sharma and Dave, 2011).

Toward this path, school directors' administration furnished with entrepreneurial perspectives empowers these pioneers to see valuable changes before others and handle these changes in an inventive and imaginative structure (Pashiardis and Brauckmann-Sajkiewicz, 2020; Brauckmann-Sajkiewicz and Pashiardis, 2022). For instance, as Pashiardis and Baker (1992) did not entirely set in stone in their trial research, issues that emerge in schools can be transformed into an opportunity to the school executive. Nonetheless, to foster the entrepreneurial perspectives of the staff and faculty, these administrators can offer their schools adaptable environs that are accepted to make a growth opportunity for themselves and their staff by enduring the different enterprising mix-ups and disappointments of the staff (Pashiardis and Brauckmann-Sajkiewicz, 2020). These are extremely basic for school administrators to govern schools effectively.

Every part expects compelling schools of society, whether the part of the school's local area of understudies, educators, organizations, chiefs, and agents or the completely local location from a more extensive perspective (Rasmita and Shadma, 2009). According to Gronn (2003), the number and character of graduates who are prepared for graduate school can start new businesses and are not paid on a month-to-month basis are given special consideration by the school district.

The role of the administrator is to manage various academic and non-academic activities. This is not limited to merely collecting school in daily operational activity, but also administrator embodied entrepreneurial mindset. An entrepreneurial attitude is needed for people doing business/entrepreneurship. A business or company must have the essential entities Owner, Managers, Workers, Products, and Clients/Customers to carry on or operate. From an outer perspective of a university or college, the owner is either government or private, managers are the school administrators and principals, the workers are the faculties (Teaching and non-teaching staff), the products are the students, and lastly, the Customers are the Industries. From the inner perspective, the owner is either Government or the Private, the managers are the school administrators, the workers are the faculties, the products are the programs, and the customers are the students.

Therefore, agreeably, the school administrators running a university or a college are not different from those running a company. Desravines (2014) who stated that the CEOs of schools were school administrators. School directors are like CEOs; they work decisively to enlist the perfect individuals, foster compelling faculties at all levels of their association or department, guarantee that their representatives are upheld and considered responsible for outcomes, foster frameworks to advance productive tasks, and develop a positive culture zeroed in on their vision for progress and create an effective school.

2. Formulation of the Conceptual Framework

The entrepreneurial attitude was introduced by Robinson et al. (1991). They underlined that attitude is better to describe entrepreneurs than personality traits or demography. They focused on achievement, self-esteem, personal control, and innovation. However, the research was intended for students' entrepreneurial propensity. Some

studies didn't include demographic profiles either and used other factors such as the need for achievement, autonomy/independence, creative tendency, the calculated risk taken, drive, and determination in determining the entrepreneurial attitude (Abun et al., 2021). Other researchers like Rohitha Rosario & David Potts (2016) used factors such as innovation characteristics, opportunity seeking, and risk-taking. They included the demographic profile as a factor in determining entrepreneurial attitude; however, based on their results, it has no significant relationship or is not a determinant of an entrepreneurial mindset. Those studies tried to include the demographic profile using multiple regression and interpreted it individually. This study attempted to have the demographic profile as one of the factors of the entrepreneurial attitude of school administrators solving collectively simultaneously. In this study, the researcher focuses on school administrators of selected universities and colleges in the 4th congressional district of Leyte with the factors that may impact their entrepreneurial attitude. The factors, which are the byproduct of an entrepreneurial mindset, are the following:

Demographic profile - the school administrator's socio-demographic profile, such as age, gender, civil status, years of service, affiliation, and academic rank

Skills and knowledge – Entrepreneurial skills and knowledge school administrators should be based on the study of Carpenter (2008), which are the following: commitment, determination, and perseverance; the need for achievement; opportunity orientation; internal locus of control; tolerance to uncertainty; risk-taking; innovation and creativity; optimism; leadership; and ability to direct their future.

Motivation – In motivation, this study will adopt the Herzberg Theory. The faculty, as per the Herzberg hypothesis, has two degrees of requirements: "sterile" needs, which are related to fair treatment in regions like organization strategy, managerial practices, and oversight; and "persuasive" needs, mainly concerned with opportunities for achievement, recognition, responsibility, and advancement. Employee requirements are met by both "hygiene" and "motivator" variables, but "motivators" offer the motivating power that may lead to higher performance.

Cognition – The study of Inbar (1980) will be adopted to understand school administrators. The cognition preferences of school administrators have also termed "memory for specific facts or terms", namely, application, recall, principle, and questioning.

Organization boundaries — Administrators' boundary actions alternate between internal and exterior school-related concerns. Druskat and Wheeler's (2003) typology in the school setting to get a complete knowledge of school administrators' activities, including border management as a foundation for examining school administrators' internal and external border activities. Internal relating exercises, for example, perspectives, such as building trust among workforce staff and showing decency to school individuals in the dynamic interaction; exploring for data about qualities and shortcomings, as well as the troublesome issues personnel staff face; chairmen start correspondence with school staff to acquire data about inside occasions, encounters, requirements to distinguish and explain data that may be helpful to the dynamic interaction; convincing activities, which incorporate designating authority, practising adaptability with school staff choices, and training; and Empowering exercises, which incorporate assigning authority, practising adaptability with school staff choices, and instructing.

From the study of Kirby and DiPaola (2011), outside relating exercises are those where the school director addresses the school to outer partners to get sufficiently close to and secure assets and backing, as well as supervise the outside business matters for data collection or occasions that could impede or assist the school with accomplishing its targets. Building positive associations with outer partners, for example, understanding their power designs and game plans, as well as keeping up with positive associations with student guardians and the local area; collaborating and helping out essential networks beyond the school; limiting traversing exercises can safeguard the school from information excessiveness by exploring and looking for facts from outside partners to

distinguish significant ecological happenings and imparting this fact to employees. Practical exercises include getting outer help for the school by going about as a channel and facilitator.

Family and social boundaries – The family and social boundaries adopted from the "Work-Family Boundary" study of Allen et al. (2014). It gathered several studies suited for the integration and segmentation of family, social, and work-related aspects, such as the extent to which individuals need to keep work and family jobs discrete, inspiration to get across work and family areas (Matthews and Barnes-Farrell. 2010) and how much individuals permit breaks starting with one job then onto the next (Kossek et al. 2012).

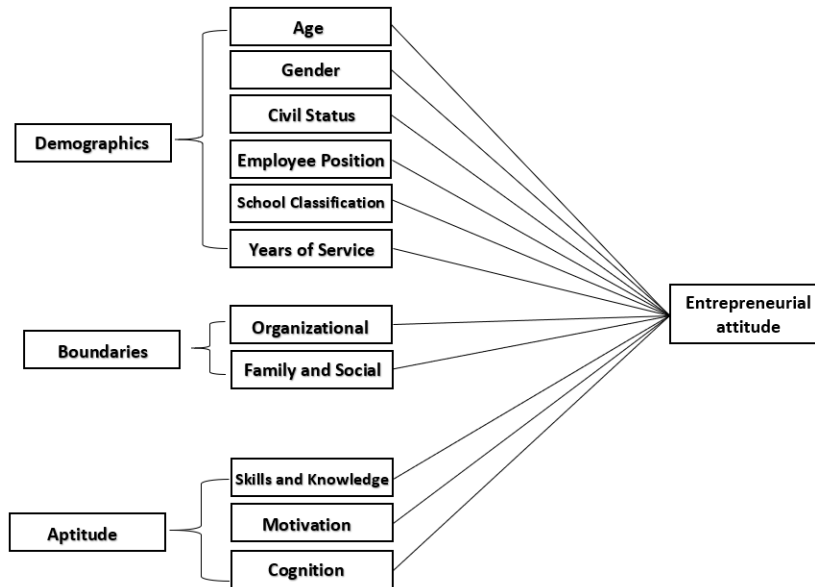


Figure 1. Factors of the entrepreneurial attitude of school administrators

Figure 1 shows that age, gender, civil status, years of service, affiliation, and academic rank are in the Demographics set as Block 1, and motivation, cognition, skills, and knowledge are in the Aptitude set as Block 2. Organizational and family, and social care in Boundaries set as Block 3. They are all interconnected to the dependent variable, entrepreneurial attitude. This study determined the factors that impact the entrepreneurial attitudes of school administrators and faculty in selected universities and colleges in the 4th congressional district of Leyte, which generated models. To summarize, it is proposed that:

H_0 : There were no factors associated entrepreneurial attitude of the school administrators of selected universities and colleges in the 4th congressional district of Leyte.

3. Methodology

Samples. To test our hypothesis, the data were collected from the few private and state universities and community colleges within the 4th District of Leyte. There are 6 municipalities and 1 City within the research area. There were 22 out of 25 school administrators (University/College Presidents, Vice Presidents, Board of Regents, and Campus directors) and 87 out of 100 faculty members, which yielded a total response rate of 87.2 per cent. This rate was higher than the previous response rate reported for an online web survey (see, e.g. Robinson, et al., 1991, Abun, 2021).

Methods. This study utilized a descriptive cross-sectional survey design to determine the factors that determine the entrepreneurial attitude of school administrators and faculty of selected universities in the 4th District of Leyte. Setting inclusion and exclusion criteria to narrow the participants of this study. All administrators in key positions of their respective institutions were included in this study. Those faculties who expressed willingness to participate were also included. However, if they signified not to participate were automatically excluded. This study contained five (5) questions about the factors (knowledge and skills, motivation, cognition, organization boundaries, and family and social boundaries) intended for the school administrator adopted from several articles. And the entrepreneurial attitude questionnaire with Thirty (30) questions for both faculty and school administrator has been adopted from the Personal Entrepreneurial Competencies (PECs) questionnaire.

Measures. These survey questionnaires underwent content validity and reliability testing to verify if the instrument measured what it intended. With a rating scale of four, from 4 = totally agree to 1= totally disagree. The dependent variable was the entrepreneurial attitude, and the independent variables were demographic, boundaries and Aptitude. Hierarchical regression was used to measure which among the independent variables is the significant factor.

Ethical Considerations. Before the research began, the protocol was reviewed and approved by the university's Research Ethics Committee (REC). The researcher ensured that all information from the respondents was treated with strict confidentiality. Respondents' names were not reflected in the file for data analysis. Instead, only the numbers corresponding to their names in the source code can be seen. The source code had the researcher only. The gathered data was only accessible to the researcher and statistician.

4. Results and Discussion

The data obtained were analyzed using jamovi 1.6.23. Aside from its convenience, the purpose of using jamovi 1.6.23 was to test the relationship pattern between the variables in the research model by estimating the parameters in the outer and inner models. Based on the result, school administrators were dominantly male, and most of them were married. This is only an indication that for someone to become an administrator, they need to count many years of service. School administrators are not for youngsters; the more mature the person is, the more they become bold enough to become an administrator. Most of the school administrators are teaching; this is reasonable because most do not want teaching to be left behind since that's their first job and passion, after all. The results also revealed that demographic profile contributes significantly as a factor or a predictor in entrepreneurial attitude collectively and individually.

Table 1. Administrators' Opinion about Organizational Boundaries

Statements	Mean $\pm$ SD	Interpretation
Communicate general objectives to the member of the organization	3.18 $\pm$ 0.96	Agree
Set general organizational objectives	3.18 $\pm$ 0.96	Agree
Empowering personnel in various organizational activities	3.27 $\pm$ 0.98	Strongly Agree
Provide fair opportunities in the decision-making process	3.14 $\pm$ 1.04	Agree
Establish a positives relationship between the organization and stakeholders through collaborative activities	3.18 $\pm$ 1.05	Agree
General WM	3.19 $\pm$ 1.00	Agree
1.0 – 1.75 SD	1.76 – 2.50	D
	2.51 – 3.25	A
	3.26 – 4.00	SA

Administrators strongly agree that there is a need to empower university personnel in various organizational activities (Table 1). All the rest agreed that general objectives must be set and communicated to them clearly, which in a way, provides opportunities for them to make their own decisions in a way that establishes suitable relational activities among stakeholders. Delegation and empowerment in the workplace go hand in hand, making

them understand what tasks they are responsible for; they take ownership of their work and thus will not create mediocre work but the best. This also allows the administrator to monitor their progress less because you have trusted their competency to get the job done. Although some might disagree with this because many thoughts that giving employees free rein to do whatever they want might mean that there is too much freedom. However, this can be improved when the administrator clearly defines project boundaries and the results expected of the employees to produce. This, in turn, help reinforce the standard of quality.

But they cannot be trusted fully on everything, too. The administrator must provide a clearly-defined pool of resources and tools and demonstrate to the workers how to utilize and access those resources as required. Furthermore, constantly promote open communication and inform them that the administrators are accessible for brainstorming sessions at any time. By outsourcing the task and establishing ground rules, they may begin to cultivate a more casual, informal atmosphere. If an employee needs to work from home or has a more flexible schedule, work with them to make it happen. This gives students the idea that the school is more concerned with their personal lives than nitpicking regulations.

Consequently, empowerment is not a gift that an employer may bestow or withdraw at any time. While little modifications are acceptable, workers will feel empowered if they know their autonomy might be removed at any time. While outstanding achievement should be acknowledged, all employees should have the same fundamental privileges to promote workplace unity and inclusion.

Table 2. Administrators' Opinion about Family and Social Boundaries

Statements	Mean $\pm$ SD	Interpretation
Set a goal of accomplishing a task within working time before leaving the workplace	3.23 $\pm$ 0.97	Strongly Agree
Manage work and personal concerns and communication	3.14 $\pm$ 1.04	Agree
Allocate time for family and social gatherings	3.14 $\pm$ 1.08	Agree
Manage work and personal emergencies	3.05 $\pm$ 1.00	Agree
Establish work and personal life balance	3.05 $\pm$ 1.09	Agree
General WM	3.12 $\pm$ 1.04	Agree
1.0 – 1.75 SD	1.76 – 2.50	D
	2.51 – 3.25	A
	3.26 – 4.00	SA

School administrators strongly agree that setting goals for accomplishing tasks are imperative in thinning the boundaries between work and family (Table 2). Setting a plan for achieving a mission is a direct time management action; this item is ranked 1. According to Keiling (2021) Keeping track of what you need to do and when you need to do it may be easier if you stay organized. Being well-organized includes having an up-to-date calendar, quickly accessing particular files, keeping a clean environment, and taking exact, detailed notes. To be realistic about how much can be completed in a single day. Starting the day with an impossible-to-complete to-do list can only result in tension, irritation, and a lack of concentration. Setting priorities is also essential in accomplishing the task. Meeting deadlines or establishing one for oneself if a job lacks one. Otherwise, it's too easy to lose track of a project or let it slip through our fingers (see Table 3).

Table 3. Entrepreneurial Attitude of the Respondents

ENTREPRENEURIAL ATTITUDE		Admin	Admin w/ teaching	Teachers	p- value
Opportunity seeking	Acting and grabbing new opportunities even in the most problematic and hopeless situations.	2.75	3.00	3.05	.663
	Doing things before being asked or forced by the events.	2.75	2.89	2.95	.838
	Acting to extend the organization to new areas of opportunities	2.88	2.89	2.91	.995
Persistence	Taking repeated action or switching to an alternative strategy to meet a challenge or overcome an obstacle.	3.00	2.92	3.04	.883
	Taking personal responsibility for the performance necessary to achieve organizational goals and objectives.	2.88	2.85	2.93	.945
	Standing up straight and not giving up even during the most challenging times.	2.75	2.85	2.94	.842
Commitment to work contract	Being able to meet a deadline.	2.88	2.96	3.01	.933
	Making a personal sacrifice or expending extraordinary effort to complete the job.	2.62	2.96	2.95	.674
	Striving to keep the market satisfied and placing long-term goodwill over short-term gain.	3.00	3.00	2.96	.983
Risk-taking	Taking the chances to do something which is out of my comfort zone.	3.00	3.07	3.05	.983
	Deliberately calculating risks and evaluating alternatives.	3.00	2.89	3.00	.883
	Taking a risk at any risk-taking behaviour: from high risk-taking or moderate risk-taking to low risk-taking.	2.75	2.89	2.99	.736
Demand for efficiency and quality	Commitment to standard and giving quality services.	2.88	2.81	2.94	.858
	Working without errors and without wasting time, money, and energy.	2.50	2.96	2.88	.525
	Acting to do things that meet or exceed standards of excellence.	2.88	2.96	3.08	.766
Goal seeking	Setting goals and objectives that are personally meaningful and challenging.	2.75	3.22	3.07	.638
	Articulate clear and specific long-range goals.	3.13	2.96	2.93	.890
	Setting measurable short-term objectives.	2.88	3.04	2.97	.906
Information seeking	Personally, seeking information from the constituent	2.88	2.74	3.01	.490
	Doing personal research on how to provide the best administrative services.	2.88	2.89	3.08	.639
	Consulting external experts for technical advice.	3.00	2.93	3.04	.881
Systematic planning and monitoring	Planning by breaking large tasks down into time-constrained sub-tasks.	2.88	2.93	3.07	.746
	Revising plans considering feedback on performance or changing circumstances	2.88	2.67	3.11	.128
	Keeping financial records and using them to make decisions.	3.00	2.93	2.96	.980
Persuasion and networking	Using key people as agents to accomplish goals and objectives.	3.00	2.81	2.93	.863
	Using deliberate strategies to influence or persuade others.	3.00	3.00	3.00	.999
	Acting to develop and maintain organization business contracts.	3.00	2.85	3.05	.666

In terms of entrepreneurial attitude per dimension of personal entrepreneurial competencies such as opportunity seeking, persistence, commitment to work contract, risk-taking, demand for efficiency and quality, goal seeking, information seeking, systematic planning and monitoring, persuasion, and networking, there is no significant difference between faculty and school administrators. Many researchers suggest that an entrepreneurial attitude is meant for not only school administrators but also faculty.

According to Gibb and Hannon (2006), faculty with an entrepreneurial attitude play a critical role in establishing entrepreneurial ways of thinking and behaving in students or in encouraging the development of students' entrepreneurial competencies. To attain this purpose, it was recommended that faculty serve as entrepreneurial

role models for learners. According to a previous study, entrepreneurial abilities and a good attitude toward entrepreneurship are required to improve entrepreneurial learning among students (Hytti & O'Gorman, 2004).

Table 4. Step 1-Model Coefficients - Entrepreneurial Attitude

Predictor	B	<i>p</i>	β	R ²	ΔR^2
Step 1				0.732	0.732
Age	-0.0625	0.093	-0.7854		
Gender	-0.2914	0.275	-0.1615		
Civil Status	-0.0470	0.855	-0.0327		
Employee Position	0.4196	0.044	0.3591		
School Classification	0.6694	< .001	0.8035		
Years of Service	0.0509	0.191	0.5710		

Age, gender, civil status, employee position, school classification, and years of service collectively explained 73.2% of the variance in entrepreneurial attitude (Table 4). School classification ($\beta = 0.8035$, $p = < .001$) and employee position ($\beta = 0.3591$, $p = .044$) were significantly associated to entrepreneurial attitude. School classification has a big impact on the entrepreneurial attitude of school administrators.

State colleges and universities offering more programs than private and community colleges can trigger administrators to increase their entrepreneurial attitude since they need to accommodate more students to be a high-performing school. High-performing school is not an easy task. Administrators in comprehended schools will put more effort than lower ones (Gritter, 2006). The administrator position also has a significant impact on their entrepreneurial attitude. In the administrative domain, there are different positions. Some school administrators handle executive positions; however, their school rank is low, affecting their managerial performance. Others are assigned as administrators but do not enjoy the benefits of it. According to Zhao and Hughes (2020), school administrators can perform excellent tasks and effectively govern the school if they have a high or acceptable position.

Table 5. Step 2-Model Coefficients - Entrepreneurial Attitude

Predictor	B	<i>p</i>	β	R ²	ΔR^2
Step 2				0.979	0.247
Age	-0.0236	0.070	-0.2960		
Gender	0.0464	0.583	0.0257		
Civil Status	-0.0627	0.435	-0.0436		
Employee Position	0.1135	0.108	0.0971		
School Classification	0.1193	0.071	0.1433		
Years of Service	0.0217	0.106	0.2434		
Organizational Boundaries	0.5234	0.005	0.5491		
Family and Social Boundaries	0.2839	0.054	0.3082		

When organizational boundaries and family and social boundaries were added to the model, the R^2 increased to 97.9% (Table 5). This means that the addition of the two predictors uniquely collectively explained an additional 24.7% of the variance in the dependent variable. Organizational boundaries is significantly correlated to entrepreneurial attitude ($\beta = 0.5491$, $p < .05$). There are things that need to have a consultative matter and permission to the other administrators and faculty from other departments of the school before take into action which act as a boundary because there are some personnel within the organization or even the organization that need to call in softy approach. School is an organization and as an organization, boundaries are always influenced by its surroundings. As Santos and Eisenhardt (2005) stated boundaries are the demarcation between an organization and its environment. Organizational boundaries have an impact on the entrepreneurial attitude of the school administrators because organizational boundaries offer a unique lens on how environments operate and relate to organizations.

Table 6. Step 3-Model Coefficients - Entrepreneurial Attitude

Predictor	B	p	β	R^2	ΔR^2
Step 3				0.987	0.008
Age	-0.00728	0.604	-0.0915		
Gender	-0.03787	0.677	-0.0210		
Civil Status	-0.07987	0.320	-0.0556		
Employee Position	-0.05383	0.586	-0.0461		
School Classification	0.08532	0.294	0.1024		
			0.0819		
Years of Service	0.00730	0.603			
Organizational Boundaries	0.55401	0.078	0.5813		
Family and Social Boundaries	0.27667	0.149	0.3004		
Skills and Knowledge	-0.83242	0.188	-0.8615		
Motivation	0.10509	0.593	0.1094		
Cognition	0.76273	0.050	0.7849		

Aptitudes such as skills and knowledge, motivation, and cognition were added to the model; the R^2 increased to 98.7% (Table 6). Which collectively added 0.8% of the variance in the dependent variable on the entrepreneurial attitude. Cognition on the other hand ($\beta = 0.7849$, $p = .05$) was a positively significant predictor in relation to entrepreneurial attitude. This means that acquiring knowledge and skills in entrepreneurship is important in building an entrepreneurial attitude. Aptitude is a measurable aptitude for learning and skill in a given field or subject that may be learned or innate. Interest articulates Aptitude, shown in current performance, which is projected to increase with instruction over time (Rahman, 2014). In his experiment, the aptitude test of the faculty and administrator shows abstract reasoning, verbal reasoning, numerical reasoning, creativity, and critical thinking skills, all of which are aggregates of cognition, supporting the finding of this study. Kumar (2014) also concluded that teaching and administrative ability, especially cognition, are the strongest predictors of faculty and school principal performance. The methodological gap: based on the result of the study, collectively, demographic appeared to be a predictor. However, demographic is generally a predictor of entrepreneurial attitude (Robinson et al., 1991, Abun et al. 2021). It is intriguing that skills, knowledge, and motivation are not a predictor of the

entrepreneurial attitude of school administrators. It only implies that an individual must already obtain those traits before being an administrator. Obviously, in an administrative domain, all leaders should enhance their cognitive skills, such as logical reasoning, visual processing, and sustained and selective attention, as they manage an effective school. Adding more factors to the regression inherently improves the fit. Therefore, in the succeeding steps, there are predictors in the previous actions which no longer significant; it's just contributed a percentage to fit a new considerable variable.

Conclusion

In organizational boundaries, personnel empowerment is something on the distinction of any organization or institution. Although administrators understand the importance of personnel empowerment, there may be barriers to its implementation. The most imperative of all as far as demographic, boundaries, and Aptitude are concerned is cognition. In result of the study, two models were generated. First, it is emergent model, which can be used to enhance the lens to see better picture of what school administrators should prioritized in improving their school management strategy. In addition, a simple equation model that can be a foundation formula for improving someone's entrepreneurial attitude.

Limitation of the Study

This research used few factors in demographics, boundaries and in Aptitude as an independent variable. The limited independent variables used in this research, may not fully represent the perspectives in terms of entrepreneurial attitude of the school administrators. This research used only three major independent variables such as socio-demographic profile, boundaries, and Aptitude may not be able to explain the factor that influences the entrepreneurial attitude of the school administrators. Thus, limited independent variables may affect the finalized result of the study.

Proposed Model for Entrepreneurial Attitude

Based on the statistical outcome, we can generate an entrepreneurial attitude model of illustration for visualization of factors per block and a mathematical model to predict the entrepreneurial attitude of school administrators. When the demographic, aptitude, and boundaries are statistically treated by individual and by pair referring to the previous results and their individual factors (Figure 2).

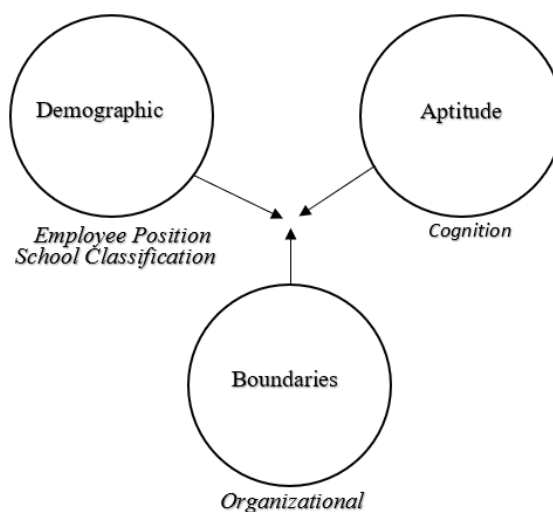


Figure 2. Merge Stage

We can create a Venn diagram that incorporated the demographics, boundaries, and Aptitude into one single figure. If demographic alone run by regression, it gives employee position and school classification as predictors. If Aptitude alone treated by regression, it gives cognition as predictor, and If boundaries, the organizational as the predictor. By doing it by pair, starting with demographic and boundaries, the gap "Organizational" emphasizes the significant predictor or the dominant predictor. If demographic and Aptitude, the gap tells void, meaning, there's no predictor. Since demographic does not have any connection to Aptitude. Aptitude can be obtained as long as you have the willingness to acquire it because Aptitude can be acquired. By pairing Aptitude and boundaries, organizational is still the predictor. If we merged it altogether, the demographic, boundaries and Aptitude, the dominant predictor is the cognition. That is why it placed at the center of the diagram. This emergent gave us a systematic understanding of associating those predictors with the school administrators into one single fig emergent (Model on entrepreneurial attitude/mindset based on the result of the study. In addition, emergent strategy is an action model that explains a corporate strategy and mindset that evolves over time as a company's aims and circumstances change. These methods occur when a company repeats a series of acts in order to build a habit pattern.

This model can also enhance the lens to see better picture of what school administrators should prioritized in improving their school management strategy. Other factors such as seminars and trainings can improve knowledge and skills in terms of entrepreneurial of school administrators as well as faculty. However, there is a specific aptitude which dominant. This specific aptitude, which can be seen at the center of the emergent model and can be acquired only by understanding through experience, thought and senses (Figure 3).

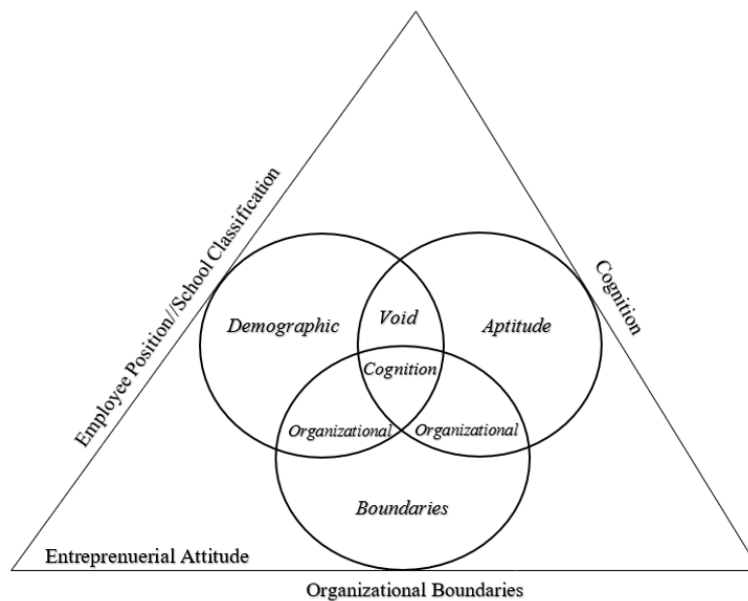


Figure 3. Emergent Model

Discussion of the Model

Mathematical models can be solved if they are correctly worded, which means that any dependent variable that has a significant association with entrepreneurial attitude may be expressed as a function of the independent variable, and therefore the assumptions' implications can be identified. The outcome of this study led to the formulation of Entrepreneurial Attitude Equation. A Simple Model of School Administrators Entrepreneurial Attitude. The model generated from the results of the study is simple and memorable, it just like reading the common formula function in linear algebra the “y is a function of x” or $Y = f(x)$.

Here, we read, entrepreneurial attitude is a function of cognition or entrepreneurial attitude is directly proportional to cognition. It means that the higher cognitive skills a person has, the more entrepreneurial attitude he or she has

$$E = f(C)$$

The equation demonstrates that entrepreneurial cognition differs from entrepreneurial attributes or other variables, which tend to seek for features that distinguish entrepreneurs from non-entrepreneurs, or school administrators from teachers, and then apply them to all scenarios. Entrepreneurial cognition focuses on the distinctive information processing, opportunity appraisal, thinking style, and decision-making processes of entrepreneurs in dynamic entrepreneurial contexts, and might explain why disparities in behavior outcomes occur at a deep level. According to Zhao et al., 2021, Thomas et al., 2019 and George et al., 2016 entrepreneurs' cognition will play an essential part in business model creation, and entrepreneurs will dictate how new enterprises choose their business models. In the part of school administration, the new ventures are the new programs. Today, “Industrial Revolution 4.0” time and thinking as well as innovation are fast. There are programs that are no longer marketable, or less marketable because of emerging new industries that need new specific skills. Our market or client is the industry that needs our product “the student”.

There should be a business model generation activities and analysis because, there are new openings of opportunities, and new emerging branches of skills. That is why schools are breaking down the main programs to catch up with the market needs. Like the three main programs of engineering (Electrical Engineering, Mechanical Engineering and Civil Engineering). REE (Electronic, Communication, IT, Software Developer, Robotics), RME (Biotechnology, Automotive, metallurgical, Nautical, Marine Engineering). There are school that even merge Electrical and Mechanical, the Electromechanical Engineering), Civil Engineering (Water engineering, environmental engineering, geodetic engineering).

Problems nowadays are very tough, on the part of administrators; they do endless efforts in managing quality education generating quality students as a product. Improving their entrepreneurial attitude by amplifying their cognition is one of the solutions in solving school related problems. The applications of their entrepreneurial cognition are determining the relevant programs and curriculum that are in need to be changed or abolished, creating plan for equitable educational opportunities, develop of rigorous and coherent curriculum, instruction and assessment systems. This mathematical model can be a foundation for the formulation of other models pertaining to predictors of the entrepreneurial attitude. A unique entrepreneurial environment drives the process of entrepreneurial cognition and reasoning that leads to the selection of a new venture's business model (Martins et al., 2015). Hence, the outcome of this study is not questionable at all. One important takeaway from this model is that enhancing someone's cognition can help them transform their entrepreneurial mindset and attitude.

References

- Abun, D., Magallanes, T., Ranay, F., Catbagan, N., Rodelyn, & Calairo, J. (2021). Entrepreneurial Values, Cognitive Attitude toward Business and Business Behavioural Intention of ABM Grade 12 and Fourth-Year Business Management Students: A Comparative Study. *Humanities and Social Science Research*, 4(1). <https://doi.org/10.30560/hssr.v4n4p16>
- Allen, T., & Cho, E., & Meier, L. (2014). Work-Family Boundary Dynamics. *Annual Review of Organizational Psychology and Organizational Behavior*. <https://doi.org/10.1146/annurev-orgpsych-031413-091330>
- Azim, M., & Al-Kahtani, A. (2015). Designing Entrepreneurship Education and Training Program: In Search of a Model. *Journal of Economics and Sustainable Development*. https://www.researchgate.net/publication/303683786_Entrepreneurship_education_and_training_A_Survey_of_Literature
- Beena, S. (1995). Determinants of Teacher effectiveness. Ambala Cantt: The Indian publications. <https://files.eric.ed.gov/fulltext/ED508977.pdf>
- Brauckmann-Sajkiewicz, S., & Pashardis, P. (2022) Entrepreneurial leadership in schools: linking creativity with accountability. *International Journal of Leadership in Education*, 25(5), 787-801. <https://doi.org/10.1080/13603124.2020.1804624>
- Carpenter, M. (2008). Entrepreneurship. Çanakkale: Pozitif Printing. [https://scholar.google.com.ph/scholar?q=Carpenter,+M.+\(2008\).+Entrepreneurship.+%C3%87anakkale:+Pozitif+Printing.&hl=en&as_sdt=0&as_vis=1&oi=scholar](https://scholar.google.com.ph/scholar?q=Carpenter,+M.+(2008).+Entrepreneurship.+%C3%87anakkale:+Pozitif+Printing.&hl=en&as_sdt=0&as_vis=1&oi=scholar)
- Cooney, T.M. (2012). Reducing Recidivism through Entrepreneurship Programmes in Prisons. *The International Journal of Entrepreneurship and Innovation*, 13(2). <https://doi.org/10.5367/ijei.2012.0074>
- De Ocampo, R., Bagano, A.J., & Tan, A.L. (2012). Culture of entrepreneurship versus employment. Paper presented at the 2012 5 th Taiwan-Philippines Academic Conference: Digital Humanities and Cultural Studies. <http://ddh.epage.au.edu.tw/bin/downloadfile.php?file=WVhSMFIXTm9MekkzTDNCMFIWODBNVEV3TjE4e>
- Desravines, J. (2014). What if we treated school principals like CEOs? <https://www.ozy.com/news-and-politics/what-if-we-treated-school-principals-like-ceos/32605/>
- Druskat, V.U., & Wheeler, J.V. (2003). Managing from the boundary: The effective leadership of self-managing work teams. *Academy of Management Journal*, 46(4). <https://doi.org/10.5465/30040637>
- Fernald, L.W. Jr., Solomon, G. T., & Tarabishy, A. (2005). A New Paradigm: Entrepreneurial Leadership. *Southern Business Review*, 30 (2). <https://digitalcommons.georgiasouthern.edu/sbr/vol30/iss2/3>
- George, N. M., Parida, V., Lahti, T., & Wincent, J. (2016). A systematic literature review of entrepreneurial opportunity recognition: insights on influencing factors. *International Entrepreneurship Management Journal*, 12. <https://doi.org/10.1007/s11365-014-0347-y>
- Gibb, A., & Hannon, P. (2006). Towards the entrepreneurial university. *International Journal of Entrepreneurship Education*, 4(1). http://www.ut-ie.com/articles/gibb_hannon.pdf
- Gritter, A. (2006). Great schools: Identifying higher-performing schools. Center for Educational Policy. <https://files.eric.ed.gov/fulltext/ED509478.pdf>
- Gronn, P. (2003). The new work of educational leaders: Changing leadership practice in an era of school reform. SAGE Publications Ltd <https://doi.org/10.4135/9781446216347>
- Hegarty, M., Montello, D., Richardson, A., Ishikawa, T., & Lovelace, K. (2006). Spatial abilities at different scales: Individual differences in aptitude-test performance and spatial-layout learning. *Intelligence*, 34. <https://doi.org/10.1016/j.intell.2005.09.005>
- Hytti, U. & O'Gorman, C. (2004). What Is 'Enterprise Education'? An Analysis of the Objectives and Methods of Enterprise Education Programmes in Four European Countries. *Education Training*, 46. <https://doi.org/10.1108/00400910410518188>
- Inbar, D.E. (1980). Organizational role climate: success-failure configuration in educational. *Journal of Educational Administration*, 18(2). <https://doi.org/10.1108/eb009829>

- Keiling, J. (2021). 8 Tips to Help You Get Organized at Work. Keiling. <https://www.eannc.com/employees/eight-tips-to-help-you-get-organized-at-work>
- Kirby, M., & DiPaola, M. (2011). Academic optimism and community engagement in urban schools. *Journal of Educational Administration*, 49(5). <https://doi.org/10.1108/09578231111159539>
- Kirkley, W.W. (2017). Cultivating entrepreneurial behaviour: entrepreneurship education in secondary schools. *Asia Pacific Journal of Innovation and Entrepreneurship*, 11 (1). <https://doi.org/10.1108/APJIE-04-2017-018>
- Korkmaz, O. (2012). A Research on Determining the Entrepreneurialism Inclination of University Students: Bulent Ecevit University Example. Afyon Kocatepe University. *Journal of Economics and Administrative Sciences*, 14(2). <https://dergipark.org.tr/en/pub/akuiibfd/issue/1620/20306>
- Kossek, E., Ruderman, M., Braddy, P., & Hannum, K. (2012). Work-nonwork boundary management profiles: A person-centered approach. *Journal of Vocational Behavior*, 81 (1). <https://doi.org/10.1016/j.jvb.2012.04.003>
- Kumar, D. (2014). A Study of Job Satisfaction of B.Ed Trained Teachers Working at Primary Schools in Saharanpur District. *Journal of Indian Research*. <https://link.springer.com/content/pdf/10.1007%2F978-981-10-7551-3.pdf>
- Leffler, E. (2009). The Many Faces of Entrepreneurship: A Discursive Battle for the School Arena. *European Educational Research Journal*, 8. <https://doi.org/10.2304/eeerj.2009.8.1.104>
- Martin, R.L., & Osberg, S. (2007). Social Entrepreneurship: The Case for Definition. *Stanford Social Innovation Review*, 5(2), 29-39. <https://doi.org/10.48558/TSAB-FG11>
- Martins, L.L., Rindova, V.P., & Greenbaum, B.E. (2015). Unlocking the hidden value of concepts: a cognitive approach to business model innovation. *Strategic Management*, 9(1). <https://doi.org/10.1002/sej.1191>
- Matthews, R., Barnes-Farrell, J., & Bulger, C. (2010). Advancing measurement of work and family domain boundary characteristics, *Journal of Vocational Behavior*, 77(3). <https://doi.org/10.1016/j.jvb.2010.05.008>
- North, E. (2002). A decade of entrepreneurship education in South Africa. *South African Journal of Education*, 22(1). <https://www.ajol.info/index.php/saje/article/view/24894>
- Pashiardis, P., & Brauckmann-Sajkiewicz, S. (2020) Unravelling the business of educational leaders in times of uncertainty. *Educational Management Administration & Leadership*, 50 1(2). <https://doi.org/10.1177/17411432211055327>
- Rahman, A. (2014). Developing Teaching Aptitude Test: A Perspective of Bangladesh. *Green University Review of Social Sciences*, 1 (1). https://www.researchgate.net/publication/281437539_Developing_Teaching_Aptitude_Test_A_Perspective_of_Bangladesh
- Robinson, P., Stimpson, D., Huefner, J., & Hunt, H. (1991). An Attitude Approach to the Prediction of Entrepreneurship. *Entrepreneurship Theory and Practice*, 15(4) <https://doi.org/10.1177/104225879101500405>
- Santos, F., & Eisenhardt, K. (2005). Organizational Boundaries and Theories of Organization. *Organization Science*, 16. <https://doi.org/10.1287/orsc.1050.0152>
- Sharma, A., & Dave, S. (2011). Entrepreneurial Orientation: Performance Level. *SCMS Journal of Indian Management*, 8 (4) <https://www.scirp.org/%28S%28351jmbntvnsjt1aadkposzje%29%29/reference/referencespapers.aspx?referenceid=2780868>
- Sjøvoll, J. & Pedersen, O. (2014). Entrepreneurial mindsets in entrepreneurial schools. *European Scientific Journal*, <https://eujournal.org/index.php/esj/article/download/4070/3904>
- Souitaris, V., Zerbinati, S., & Al-Laham, A. (2007). Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. *Journal of Business Venturing*, 22(4). <https://doi.org/10.1016/j.jbusvent.2006.05.002>
- Thomas, N., Randolph, A., & Marin, A. (2019). A network view of entrepreneurial cognition in corporate entrepreneurship contexts: a socially situated approach. *Management Decision*, 58. <https://doi.org/10.1108/MD-11-2017-1195>

Xu, X. (2020). Introduction to Entrepreneurship: Methodologies and Practices. Springer Nature. https://books.google.com.ph/books?hl=en&lr=&id=tC3KDwAAQBAJ&oi=fnd&pg=PR5&dq=xu+2020+entrepreneurship&ots=4Gq9PJiKrR&sig=3g7QCTI ux08arJyAn3wBtYPliY&redir_esc=y#v=onepage&q&f=false

Zhao, W., Hughes, K. & Li, Y. (2020). Entrepreneurial alertness and business model innovation: the role of entrepreneurial learning and risk perception. SpringerLink. https://link.springer.com/article/10.1007/s11365-020-00637-2?error=cookies_not_supported&code=b858855f-533d-43b6-b5c9-ec7568f676f9

Data Availability Statement: More information and data can be obtained from the authors on a reasonable request.

Author Contributions: The authors contributed equally. All authors have read and agreed to the published version of the manuscript.

Jereco Jims J. AGAPITO

ORCID ID: <https://orcid.org/0000-0003-4084-6740>

Liza Lorena C. JALA

ORCID ID: <https://orcid.org/0000-0002-8233-4201>

Rosemarie CRUZ-ESPAÑOL

ORCID ID: <https://orcid.org/0000-0001-5039-566X>

Anthony G. ESGUERRA

ORCID ID: <https://orcid.org/0000-0002-3599-5146>

Make your research more visible, join the Twitter account of INSIGHTS INTO REGIONAL DEVELOPMENT:
@IntoInsights

Copyright © 2022 by author(s) and VSI Entrepreneurship and Sustainability Center
This work is licensed under the Creative Commons Attribution International License (CC BY).
<http://creativecommons.org/licenses/by/4.0/>

