



A Business Model Framework for Doctor of Philosophy (PhD) in Entrepreneurship for Filipinos

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A business model framework generally describes the corporate organisation or management structure or may generally outline company policies. An organisation might develop a framework to achieve a particular goal, or an innovation framework may outline policies, procedures, and management changes the company will use to achieve innovation and growth. This study focused on the search for a business model framework suited for the proposed PhD in Entrepreneurship for Filipinos. Using a qualitative design, data was collected from documentary analysis of Commission on Higher Education (CHED) memorandum orders, documentary analysis of foreign literature and entrepreneurship programs of international schools; textual analysis of top entrepreneurial gurus from TEDx events; interviews; and focus group discussions in academic sectors, business sectors and the government sector, all from Region V. Results show that a PhD in Entrepreneurship is guided by the new CHED Memorandum orders and the new directions of Philippine Education. Also, the global trends in entrepreneurial education are gearing towards experiential learning, technological innovation, and building innovative infrastructures. Moreover, there are various required competencies needed to become successful, the global business sector provides an entrepreneurial DNA model: builder, opportunist, specialist, and innovator. Lastly, a business model framework shall serve as a guide in the offering of a PhD in Entrepreneurship that will strengthen the knowledge and skills of Filipinos. Collaboration among the government, business, and academic sectors is needed to improve the entrepreneurial direction of Filipinos.

Keywords: *Business Model Framework; PhD in Entrepreneurship; Global Trends; Entrepreneurial Competencies.*



Introduction

With the accelerating pace of globalisation of the knowledge-based economy, the business sector is constantly changing. These changes require new advances, new growth, and new laws to meet the demands of change. With the advent of these fast-changing technologies, the challenge for entrepreneurs to move forward is a must.

In the Philippines, entrepreneurship is viewed as important to empower the poor, enhancing production, and as an impetus to innovation. Likewise, the Philippine Development Plan (PDP) reinforces the thrust on entrepreneurship through trade and investment to achieve the government's goal of economic development and job creation. Based on the plan, measures for macro-economic stability, employment, trade and investment, agribusiness, power-sector reforms, infrastructure, competition, science and technology, and anti-corruption are being pursued to strengthen Philippines's competitiveness and to contribute to job creation (Philippine Development Plan (PDP) 2017-2022).

The CHED Memorandum Order No. 15 series of 2019, Policy, Standards, and Guidelines for Graduate programs were formulated to adapt to the changing landscape and perspectives in the past decades. These changes demand new or enhanced competencies among students to meet the requirements set by globalisation, regional integration, internationalisation of higher education, and the Fourth Industrial Revolution. Students must be able to optimally use 21st-century skills in their daily work and professions, thereby strengthening the nation's innovation, research and development. However, it calls for commitment to raise standards, particularly in PhD for entrepreneurship among Filipinos. To this end, the researcher has conceptualised this study as a basis in formulating a business model framework for a PhD in Entrepreneurship.

The business model is a blueprint describing how an organisation operates. Just as an architect prepares blueprints to guide the construction of a building, an entrepreneur designs a business model to guide the creation of an enterprise. A manager also might sketch a business model to help visualise how an existing organisation operates (Clark, Osterwalder, & Pigneur, 2012).

It was noted that at present, there is no higher educational institution offering a PhD for entrepreneurship in the Philippines. Thus, this prompted the researcher to conduct a study on a business model framework for a PhD in Entrepreneurship responsive to the demands of global competitiveness.

Objectives

This study proposed a business model framework for a PhD in Entrepreneurship for Filipinos. Specifically, it sought to answer the direction set by the Commission on Higher Education



(CHED) in the offering of a PhD in Entrepreneurship for Filipinos; the global trends in entrepreneurship education in universities and colleges considering the following key result areas along with curriculum, faculty, learning facilities and learners; and the required competencies in entrepreneurship, as known to the academic sector, business sector and government sector.

Materials and Methods

Qualitative research was employed in the study by way of documentary analysis to determine the direction set by the Commission on Higher Education (CHED) in the offering of a PhD in Entrepreneurship, the global trends in entrepreneurship education in universities and colleges, considering the curriculum, faculty, learning facilities, and learners. Focused group discussions and interviews were conducted to determine the required competencies in entrepreneurship as known to the academic sector (first group), the business sector (second group), and the government sector (third group). To validate the answers of the three groups of Filipino respondents, international entrepreneurs, through the TEDx events in different locations in the United States, were also included in the study. Three YouTube videos were analysed through textual analysis of their speech.

Results and Discussions

The proposed business model framework for a PhD in Entrepreneurship were steered to satisfy the objectives of this research study.

1. CHED Memorandum Order (CMO) No. 18 Series of 2017: Revised Policies, Standards, and Guidelines for Bachelor of Science in Entrepreneurship.

The proposed PhD in Entrepreneurship has no supporting CHED Memorandum since the program is at the proposal stage yet. Most PhD programs in the country follow the policies, standards, and guidelines of the bachelor's degree as its point of take-off. In the case of a PhD in Entrepreneurship, it can utilise the Commission on Higher Education's (CHED's) initial standard for an undergraduate entrepreneurial program through the CHED Memorandum Order (CMO) No. 18 Series of 2017: Revised Policies, Standards and Guidelines for Bachelor of Science in Entrepreneurship. It specifies the core competencies expected of BS Entrepreneurship graduates, regardless of the type of institution they graduated from. This can be used as the basis for future standards of CMO for a PhD in Entrepreneurship.

It is also important that due to the policy standard set by the CMO No. 36 Series of 1998, that if possible, there should be vertical articulation between the undergraduate and graduate levels of a discipline. This means that the baccalaureate, masters, and doctoral degrees must all be in the same field. The standard of vertical articulation is part of the CHED Policies and Standards



Guidelines (PSGs), which serve as the basis for evaluating all Philippine Higher Education Institutions (PHEIs). It was set up as a standard to ensure superior educational and administrative quality in the Philippines. Hence, the use of CMO for BS Entrepreneurship can be used as the basis for the proposed program for PhD in Entrepreneurship.

CMO 18 S. 2017 stipulates that the program is to minimise the failed ventures of entrepreneurs through a combination of classroom training and experiential learning. BS Entrepreneurship program will provide aspiring entrepreneurs to acquire skills, values, and attitudes that will increase their chances of success (CMO 18 series of 2017, Nature of the Field of Study). It is the goal of the program that the graduate of BS Entrepreneurship can set up a business, manage, and operate, and assume a managerial position in the field of business development corporate planning and other related positions in the corporate of public organisations or non-government organisations, within two to five years after graduation. Table 1 shows the undergraduate level themes reflected in CMO No. 18, s. 2017 relevant to PhD in Entrepreneurship.

Table 1. Themes Reflected in CMO No. 18 S. 2017 Relevant to PhD in Entrepreneurship

Themes	Code	Reference
Increasing capacity for success in ventures	CT1	CMO18, s2017, 5.2
Outcomes(/Competency)-based approach	CT2	CMO18, s2017, 6.3
Preferred functional capacities (as manager)	CT3	CMO18, s2017, 5.3
Estimated preferred period of success	CT4	CMO18, s2017, 5.3
Mixed learning approach	CT5	CMO18, s2017, 5.2

Legend: CT – CHED Theme

CT1 – Increasing capacity for successful ventures

In Section 5.2, the target outcome for a BS Entrepreneurship graduate is to have minimised failed ventures. Many entrepreneurs have achieved great success without the benefit of formal training. However, for every successful new business that we see, there are many more failed ventures that we never hear about. Through its combination of classroom training and experiential learning, the BS Entrepreneurship program will help aspiring entrepreneurs acquire skills, values, and attitudes that will ***increase their chances of success***.

CT2 – Outcomes Competency-based Approach

In Section 6.3, specifically, according to the CMO, the greater chances of success may be guaranteed when the student can conduct a self-assessment to determine the level of entrepreneurial competencies, analyze/scan the environment to determine business opportunities and develop their profitability profiles from which entrepreneurial ventures can be selected, prepare business plan, mobilize the necessary human, financial, logistical, and



technical resources to implement the business plan, prepare and comply with the requirements for business operations, and apply entrepreneurial management to any organization other than its own enterprise.

CT3 – Preferred functional capacities (as managers)

In Section 5.3, one of the program goals of the BS Entrepreneurship course is for graduates to be able to assume a managerial position in the field of business development, corporate planning, and other related positions in corporate or public organisations or non-government organisations. Managerial functions include planning, organising, directing (leading), and controlling (Koontz and O'Donnell, 2006). The functions are also considered as a cycle and must be used until the process has achieved its target or goals of the organisation.

CT4 – Estimated preferred period of success

In Section 5.3, the program goal or *estimated preferred period of success* and *competencies* for a graduate is within 2-5 years after graduation. After that period, the graduate can set up a business and manage and operate a business.

CT5 – Mixed learning approach

In Section 5.2, a mixed learning approach is the targeted goal to acquire entrepreneurial competencies, as classroom training and experiential learning, students will acquire skills, values, and attitudes to increase the potential success of ventures.

2. The global trends in entrepreneurship education in universities and colleges, considering the following key result areas: curriculum, faculty, administrative personnel/human resources, learning facilities, and learners.

It is important to note the global trends in entrepreneurship education in determining a business model that would be used as a guide for a pioneering PhD in Entrepreneurship in the Philippines. To answer this problem, three studies on entrepreneurship education were analysed and used thematic analysis in its presentation. Included in the thematic analysis are course offerings in three top entrepreneurship schools in the US. Table 2 shows the global trends in entrepreneurship education undergraduate level.

Table 2. Global Trends in Entrepreneurship Education

	Literature 1			Literature 2			Literature 3			School 1			School 2			School 3		
	I	R	C	I	R	C	I	R	C	I	R	C	I	R	C	I	R	C
Curriculum	GT1	GT1	GT1	GT5	GT5	GT5	GT6	GT6	GT6	GT9	GT9	GT10	GT12	GT12	GT12	GT11	GT11	GT11
Faculty	GT0	GT0	GT0	GT0	GT0	GT0	GT7	GT7	GT7	GT0	GT0	GT0	GT13	GT13	GT13	GT15	GT15	GT15
Administrative	GT0	GT0	GT0	GT0	GT0	GT0	GT0	GT0	GT0	GT0	GT0	GT0	GT0	GT0	GT0	GT15	GT15	GT15
Personnel / HR																		
Learning Facilities	GT1	GT1	GT1	GT4	GT4	GT4	GT4	GT4	GT4	GT0	GT0	GT0	GT14	GT14	GT14	GT2	GT2	GT2
Learners	GT3	GT3	GT3	GT3	GT3	GT3	GT8	GT8	GT8	GT3	GT3	GT3	GT3	GT3	GT3	GT3	GT3	GT3

Legend 1: I-Instruction R- Research C- Community

Legend 2: GT – Global Trends

The five key result areas are the bases of the Commission on Higher Education in the evaluation of undergraduate and graduate programs of higher education institutions in the Philippines.

The **curriculum** is an “academic plan,” which should include the purpose of the curriculum (i.e., goals for student learning), content, sequence (the order of the learning experience), instructional methods, instructional resources, evaluation approaches, and how adjustments to the plan will be made based on experience or assessment data (Stark, 2009).

The **faculty** consists of all tenure track or tenured faculty appointed at the Assistant, Associate, or Professor rank, who hold a terminal degree or equivalent in their discipline. Graduate faculty members are eligible to teach graduate courses and may direct and serve on master’s, specialist, and doctoral-level committees. To chair a doctorate level-committee, a graduate faculty member must engage in current and sustained scholarly, creative, or research activities, such as publications, performances, exhibitions, patents, inventions, and research grants. Likewise, a faculty with industry experience is necessary because they have a pulse on their current industries, understand the specific skills needed for jobs within a certain industry, and professors with industry experience can help narrow down the focus of the PhD program to primarily teach the most practical and relevant pieces of the pie. The bottom line to get an education from instructors with industry experience is that they are extremely knowledgeable about the type of work they still do or have done outside of an academic environment. Professors with industry experience have been exposed to a variety of situations and challenges in their work; they can communicate these experiences and how they specifically overcame them. Having access to



these types of professionals has countless benefits and can help students narrow their career focus and pursue their desired career paths.

The **administrative personnel** refer to the non-academic support staff and officers. They assist the faculty or academic personnel in instruction, research, and community that will equip the students in their academic learning.

The **learning facilities** may refer to state-of-the-art learning, and research facilities are a key ingredient for the delivery of high-quality programs such as classrooms and lecture halls of all sizes to accommodate the differing needs of group learning.

The **learners** are people who are trying to gain knowledge or skill in something by studying, practicing, or being taught. In this study, learners referred to students enrolled in graduate school.

Instruction (I), Research (R), and Community Extension (C) refer to the three important factors being monitored by the Commission on Higher Education in the evaluation of the programs of both the undergraduate and graduate curricula of the Higher Educational Institutions in the Philippines. Instruction includes the curricula and courses taught in the institutions. This also consists of the qualification of the faculty imparting knowledge to students. The research pertains to the written output published in refereed journals that aim to contribute to the advancement of knowledge, which will eventually help in the improvement of the Community Extension of the institution. Community Extension pertains to the activities (instruction, research, or community outreach) that will improve the quality of life of the people.

The code or themes are derived from the three kinds of literature and three schools that discussed the recent trends in entrepreneurial education in different schools globally. The themes are coded according to the literature and schools are enumerated and discussed thereafter. The discussion order is based on the literature and is categorised based on the four key result areas: curriculum, faculty, administrative personnel, learning facilities, and learners. Table 3 shows twenty (20) themes from the global trends of education for the undergraduate level.

Table 3. Global Trends Themes in Entrepreneurship Education

Themes	Code	Reference
Not mentioned	GT0	Literature 1,2,3 School 1,2
Innovation Infrastructure	GT1	Literature 1
Highly Customized Paths	GT2	School 3
Participation	GT3	Literature 1,2 School 1,2,3
Technology	GT4	Literature 2,3
Formal Education	GT5	Literature 2
Entrepreneurial Research	GT6	Literature 3
Practitioner	GT7	Literature 3
Show	GT8	Literature 3
Learn	GT9	School 1
Experience (global and local)	GT10	School 1, School 4, School 5
Predictive and creative	GT11	School 3
Simulation	GT12	School 2
Multiple mentors	GT13	School 3
World Class Instructions	GT14	School 2
Interdisciplinary Value of Entrepreneurship	GT15	School 3
Leadership and Teamwork *	GT16	School 4
Building Self (Self Improvement) *	GT17	School 4
Strategic Analysis Consulting Project *	GT18	School 4
Skills*	GT19	School 6
Mindset *	GT20	School 6

Legend: GT – Global Trends Theme

In entrepreneurial education found in Literature 1, *innovation infrastructure* was utilised by different universities as the focus of their innovation process (Pittaway et al., 2017). Innovation is the successful exploitation of ideas into new products, processes, services, or business practices. It is a critical process for achieving the two complementary business goals of



performance and growth, which in turn will help close the productivity gap (DTI's Innovation Report, 2003). Innovation infrastructure refers to the facilities, both tangible (building, rooms, equipment, among others) and intangible (ideas, networks among businesses, and academe) that give way to these new innovative ideas.

In contrast to a *business incubator*, is a workspace specially created to offer start-ups and new ventures access to the resources they need, all under one roof. A business incubator is a simulator of the actual business set up (with desk or actual office) that often provides advisors, mentors, administrative support, office equipment, training, and/or potential investors (Business Encyclopedia, 2020).

In other words, innovation infrastructures support the creation of new ideas that go beyond the business incubation process. Recent trends have shown the expansion of entrepreneurship education across campus, the increase in programs and activities worldwide, and the growth of entrepreneurship education across levels within educational systems. Examples of new learning communities (dorms) that were dedicated to entrepreneurship activity, student incubators and accelerators, rapid prototyping labs, and mixed-use facilities are emphasised.

After the use of dormitories as venues for entrepreneurial activities, came the construction and building of colleges and universities built deluxe structures for the generation of beautiful ideas. They and their partners in industry are pouring millions into new buildings for business, engineering, and applied learning that closely resembles the high-tech workplace, inspired by the minimally partitioned spaces of the garage and the factory (New York Times, 2016).

In entrepreneurial education found in Literature 2, the researchers analysed the focus of different countries in entrepreneurial education. At the onset, all countries have recognised that entrepreneurial education will help in the upliftment of poverty in their country. Countries have recognised the role of *formal education* in the implementation of entrepreneurial education,

For instance, in China, initially, most of the programs for entrepreneurship education are short-term training programs and tailor-made vocational education and training. But after 1990, entrepreneurship programs at the undergraduate and post-graduate levels began to emerge. During this period, there was a launching of the student business plan competition, which was considered a big event at the time, and the setting up of the National Entrepreneurship Center in November 2000. The latter was a graduate venture park and four venture capital funds from Tsinghua University and was soon emulated by other universities. To further aid this idea, there was an introduction of new regulations allowing university students to suspend their degree of study for up to three years for the pursuit of business venturing activities.

Literature 3 discussed how the United States has achieved its highest economic performance during the last ten years by fostering and promoting entrepreneurial activity. According to



Kuratko and Hodgetts (2004), U.S. success has at least three entrepreneurial components. First, large firms that existed in mature industries have adapted, downsized, restructured, and reinvented themselves during the 1990s and are now thriving. Large businesses have adopted and learned and become more entrepreneurial. As large firms have become learners, their sales and profits have increased sharply.

To show the US as an example of entrepreneurial education, most of the university centres for entrepreneurship have focused on three major areas: (1) entrepreneurial education, (2) outreach activities with entrepreneurs, and (3) entrepreneurial research.

Mitchelmore (2013) contended that education in entrepreneurship covered the entire scope of business administration, and as such, was the closest approach to the original concept of management education available in universities at that time. With the continued increasing fragmentation of business education into narrow specialisations, they believed that the field of study that takes a broad, integrative, pragmatic, rational approach to business would find itself increasingly popular with those who aspire to be entrepreneurs, managers, and top executives.

Faculty

In Literature 3, the researchers cited two problems: First is the shortage of entrepreneurship faculties at every academic rank, and second, the lack of PhD programs to provide pure entrepreneurship faculties. Faculty-mentors in entrepreneurship at the graduate level, as qualified by the University of San Francisco, should have the following qualifications: are expected to hold (1) a PhD or equivalent terminal degree from an accredited institution in entrepreneurship or a related field; (2) a PhD or equivalent in an unrelated field supplemented by additional academic preparation; or (3) a PhD or equivalent in an unrelated field with a record of publication in peer-reviewed journals and other intellectual contributions or significant experience in entrepreneurship or the related field taught. We indeed need more business schools to develop sound PhD programs in entrepreneurship. Taking the lead from Colorado, Indiana, Georgia, and Case-Western Reserve, more of our leading business schools need to establish programs.

Brush (2003) discussed that one alternative for meeting the demand for practice-oriented faculties to deliver pedagogical and outreach offerings would be to ensure that the PhD programs in entrepreneurship emphasise the applied and practical pedagogies, content, skills, and competencies needed for those outreach and teaching activities. This approach might provide benefits and value by increasing the supply of entrepreneurship-trained PhD faculty.



Learning Facilities

In literature 1, it has been shown that it was becoming common place for universities to develop these facilities, and many universities have multiple spaces for different forms of student entrepreneurial activity. For infrastructure *innovation*, it was concluded that key principles are recommended in the design and architectural literature. When new buildings are considered, it is evident that many of these follow these principles and seek to open space, expand collaboration opportunities, and make space attractive to innovative and entrepreneurial endeavours (Pittaway et al., 2017).

In literature 2, the role of *technology* has been discussed. The focus was given to utilising various technologies as enablers for entrepreneurship. In line with this, there is the need to incorporate the application of technologies in the curriculum.

Learners

In literature 1, the research highlights that students, alumni and employers are demanding that universities upgrade their facilities to be more aligned with 21st-century workplaces, and educational trends require new forms of teaching and learning spaces. A review of existing buildings highlights four such forms, or types, and the dominance of attributes. This shows that student accelerators, pre-incubators, and incubators are becoming common, as are innovation labs with strong materialisation components. It also identified a recent trend towards building mixed-use facilities that host university-wide entrepreneurship programs, dorms that provide living spaces, and recreation designed to develop student entrepreneurial communities. The research shows why spaces are being developed, for whom, what is being developed, and how (Pittaway et al., 2017).

Literature 3 shows that the students learn by practice, that an effective program must show students how to behave entrepreneurially and should also introduce them to people who might be able to facilitate their success.



Table 4. Global Trends in Entrepreneurship Education

	Literature 1			Literature 2			Literature 3			School 4			School 5			School 6		
	I	R	C	I	R	C	I	R	C	I	R	C	I	R	C	I	R	C
Curriculum	GT1	GT1	GT1	GT5	GT5	GT5	GT6	GT6	GT6	GT16	GT16	GT16	GT10	GT10	GT10	GT19	GT10	GT20
Faculty	GT0	GT0	GT0	GT0	GT0	GT0	GT7	GT7	GT7	GT0	GT0	GT0	GT10	GT10	GT10	GT10	GT10	GT10
Administrative	GT0	GT0	GT0	GT0	GT0	GT0	GT0	GT0	GT0	GT0	GT0	GT0	GT0	GT0	GT0	GT0	GT0	GT0
Personnel / HR																		
Learning Facilities	GT1	GT1	GT1	GT4	GT4	GT4	GT4	GT4	GT4	GT0	GT0	GT0	GT0	GT0	GT0	GT0	GT0	GT0
Learners	GT3	GT3	GT3	GT3	GT3	GT3	GT8	GT8	GT8	GT17	GT3	GT3	GT10	GT10	GT10	GT19	GT20	GT19

Legend 1: I-Instruction R- Research C- Community

Legend 2: GT – Global Trends

Curriculum, Faculty, Learning Facilities, and Learners

The Babson College (School 4), which offers a Master of Science in Management in Entrepreneurial leadership, was designed for two semesters of a 14-week program. The students must study full-time and can finish the course within nine (9) months. The students will take the following subjects:

- Data Exploration (Quantitative Methods)
- Entrepreneurial Economics
- Finance for Entrepreneurs
- Information Technology
- Law
- Marketing Management
- Operations Management
- Resource Planning and Control (Managerial Accounting)
- Strategy and Consulting

Babson College, as the number one leader in providing advanced graduate entrepreneurial programs, provides experiential training that aims for students to build their professional life with the leadership program through *Leading Entrepreneurial Action Project (LEAP)*, *global experience*, and *strategic analysis consulting project*:



A sample faculty member teaches courses on strategy, global business institutions and policies. He has *lived abroad and travelled extensively*, and often brings examples from his travels into his classroom.

The University of Chicago Booth School of Business (School 5) offers a Master in Business Administration concentrating on Entrepreneurship and provides tools and experience for students to lead in confidence. Its curriculum combines the fundamentals of finance, economics, and strategy with innovative hands-on learning. Students will consult with real-world companies or students may develop their *business ideas in experiential* laboratory courses. Practitioners share their actual breakthrough experiences with the students.

Rice University (school 6) offers a Master in Business Administration concentrating on Entrepreneurship and is an internationally recognised leader for cultivating successful entrepreneurs. Complementing lessons learned in the classroom, Rice Business offers a variety of *hands-on and experiential opportunities*. Its Liu Idea Lab provides an avenue to help students build the *skills and mindset* needed to be a successful innovator in the workplace or a rock star entrepreneur.

The required courses include 1. New Enterprise, and 2. Financing the start-up venture. Students may choose from a long list of electives that will enhance their knowledge and skills.

3.The required competencies in entrepreneurship as known to the academic, business, and government sectors

Mitchelmore and Rowley (2013) considered entrepreneurial competencies as important to business growth and success. The concept of entrepreneurial competencies is widely used by government agencies and others in their drive for economic development and business success. In this paper, the research proponent has summarised the different entrepreneurial competencies that need to be successful in business development, based on the answers of the three sectors, namely, the academic sectors, business sectors, and government sector shown in Table 5.

Table 5. Required Competencies Themes for Entrepreneurial Graduates

Academic, Business, and Government Sectors

Academic Sector	Business Sector		Government Sector
	Local	Global	
RCT1 (a,b,c,d,e,f,g,h,I,k)	RCT5, RCT13	RCT1k, RCT21,	RCT31, RCT1e
RCT4, RCT5, RCT6	RCT14, RCT15	RCT23,RCT24	RCT13
RCT7, RCT8, RCT9	RCT16, RCT17	RCT25,RCT26	
RCT10, RCT11, RCT12	RCT18, RCT19	RCT27, RCT28	
RCT2, RCT3	RCT20	RCT22, RCT1f	
		RCT29, RCT30	
		RCT8, RCT14	
Total = 21 competencies	Total = 9 competencies	Total = 14 competencies	Total = 3 competencies

Legend: RCT – Required Competencies Theme

Table 5 shows the distribution of competencies per sector’s analysis. The academic sector has enumerated twenty-one (21) competencies, the business sector has come up with twenty-three (23) competencies, nine (9) competencies for local, fourteen (14) for global, while the government sector has come up with three (3) competencies.

Table 6. Required Competencies for Entrepreneurial Graduates

Academic, Business and Government Sectors

Academic Sector	Business Sector		Government Sector
	Local	Global	
Personal Entrepreneurial Competencies (Discipline, confidence, open-minded, self-starter, competitive, creativity, determination strong-people skills, strong work ethic, passion) Visionary Risk Taker Positive Thinker Financial Literacy Goal-driven Persistent	Risk Taker Customer Driven Focus Ability to work with others Kind-hearted Self-awareness Delegation Patience Just and Fair	Passion Builders Creativity Opportunists Innovators Collaborator Change agent Integrity Compassion Risk Mitigator Foresight Focus Goal-driven Persistent	Competitive Skilled Entrepreneurial Mindset



Opportunity Seeker			
Committed			
Quality and Efficiency Seeker			
Customer-driven			
Total = 21 competencies	Total = 9 competencies	Total = 14 competencies	Total = 3 competencies

This table shows the list in the codes enumerated in Table 5. Upon careful analysis, the main competencies to be considered are the competencies given by the global business sector, since these entrepreneurs have proven these as part of their successful entrepreneurial endeavours. For the global business sector, there is what they call an entrepreneurial DNA where successful entrepreneurs are classified into four: builders, opportunists, specialists, and innovators. By the term DNA, it refers to the innate qualities of each entrepreneur that he needs to act on if he wants to be successful. It also means that an entrepreneur cannot force himself in a business endeavour wherein he has no innate talent. Other competencies presented by the global business sector present pro-active characteristics, which shows how entrepreneurs must think ahead of his game to be successful.

Other competencies recommended by the academe and local business sector also need to be considered; they represent the character or attitude required by entrepreneurs to be successful. With the right mindset, it can be used for the initial take-off the business. On the side of the government sector, skills, competencies and mindset are deemed to be important.

Table 7 explains a total of thirty-one (31) themes of these required competencies of a graduate of entrepreneurship programs.

Table 7. Required Competencies Themes for Entrepreneurial Graduate

Themes	Code	References
Personal Entrepreneurial Competencies	RCT1	Academic Sector
(Discipline,	RCT1a	Academic Sector
confidence,	RCT1b	Academic Sector
open-minded,	RCT1c	Academic Sector
self-starter,	RCT1d	Academic Sector
competitive,	RCT1e	Government Sector
creativity,	RCT1f	Global Business Sector
determination,	RCT1g	Academic Sector
strong-people skills,	RCT1h	Academic Sector
strong work ethic,	RCT1j	Academic Sector
passion)	RCT1k	Global Business Sector
Leadership	RCT2	Academic Sector Global Business Sector
Technological Savvy	RCT3	Academic Sector
Visionary	RCT4	Academic Sector
Risk Taker	RCT5	Academic Sector Business Sector
Positive Thinker	RCT6	Academic Sector
Financial Literacy, good financial management	RCT7	Academic Sector



Goal-driven (with purpose)	RCT8	Academic Sector Global business sector
Persistent	RCT9	Academic Sector Global business sector
Opportunity Seeker	RCT 10	Academic Sector
Committed	RCT11	Academic Sector
Quality and Efficiency Seeker	RCT12	Academic Sector
Customer-driven	RCT13	Local Business Sector
Focus	RCT14	Local Business Sector Global Business Sector
Ability to work with others	RCT15	Local Business Sector
Kind-hearted	RCT16	Local Business Sector
Self-awareness	RCT17	Local Business Sector
Delegation	RCT18	Local Business Sector
Patience	RCT19	Local Business Sector
Just and Fair	RCT20	Local Business Sector
Entrepreneurial DNA (Builders,	RCT21	Global Business Sector
Opportunists,	RCT22	Global Business Sector
Specialists,	RCT23	Global Business Sector
Innovators)	RCT24	Global Business Sector
Collaborator	RCT25	Global Business Sector
Change agent	RCT26	Global Business Sector
Integrity	RCT27	Global Business Sector
Compassion	RCT28	Global Business Sector
Risk Mitigator	RCT29	Global Business Sector
Foresight	RCT30	Global Business Sector
Skilled	RCT31	Government Sector
Entrepreneurial Mindset	RCT32	Government Sector

Legend: RCT – Required Competencies Theme

3.1 Academic Sector

The academic sector is an important driver for the students to be equipped with knowledge and skills to become successful entrepreneurs in the future. Jintalan (2020) stressed that the graduates should continue to pursue advanced studies for professional development.

The researcher set up interviews and focus group discussions of five higher educational institutions in the Bicol region. Interviews with the school administrators were conducted, followed by focus group discussions with the faculty of entrepreneurship to validate the answers of the former. The HEIs chosen are those offering BS Entrepreneurship as part of their roster of courses at the College of Business Administration.

3.2 Local Business Sector

According to the World Bank, the business sector, or the private sector already provides ninety (90%) percent of jobs in developing nations, so the health of the private sector will be crucial to maintaining growth and development in the years ahead.



The research proponent interviewed three small and medium-sized enterprises (SMEs) to discuss their experiences in their entrepreneurial journey. Small and medium-sized enterprises (SMEs) drive global economic growth and employment, accounting for an average of thirty three (33%) percent of GDP, forty five (45%) percent of the workforce in high-income countries, over sixty (60%) percent of GDP and seventy (70%) percent of employment in developing economies. The rise of SMEs has been crucial to economic diversification and resilience, particularly in countries vulnerable to commodity price fluctuations. SMEs have also been at the crest of innovation, taking advantage of their smaller size and greater agility to respond to more technological and commercial opportunities.

The researcher interviewed two owners and one manager of a small, medium-sized enterprise in the Bicol region. They were interviewed, where they shared how they begin their businesses, their ups and downs, and the traits they developed to stay afloat in their chosen businesses.

3.3.1 Joe Abraham of TEDx Bend (May 20, 2013)

According to his YouTube video in May 2013, not all entrepreneurs are the same. We were taught in business schools, given that one-size-fits-all strategies, which usually does not lead to success. According to Joe Abraham, even though more information is available recently, the failure rate for entrepreneurship is the same from way back. This is because, as earlier said, we were taught the same strategy that we thought would fit all would-be entrepreneurs. According to him, there is no guarantee on whether the business will take off or not based on the practices taught, but each is unique. The deal is each business is on a trial-and-error basis.

He discussed differences in each entrepreneur through the concept he called “Entrepreneurial DNA.” He considered the discovery of this concept since by identifying the “DNA” of the entrepreneur, the entrepreneur himself would be able to determine his strengths and weaknesses.

3.3.2 Prasad Kaipa – TEDxBay Area

Prasad Kaipa is a Silicon Valley-based CEO advisor and coach. He was the founding executive director of the Center for Leadership, Innovation, and Change at the Indian School of Business and Smith Richardson Fellow at the Center for Creative Leadership (2010-11).

These findings are congruent to the study of Man et al. (2002) that defined entrepreneurial competencies as higher-level characteristics encompassing personality traits, skills, and knowledge, which is the total ability of the entrepreneur to perform a job successfully. Six major competency areas are identified in their work: (1) opportunity, (2) organising, (3) strategic, (4) relationship, (5) commitment, and (6) conceptual competencies. Likewise, Inyang & Enuoh (2009) stated that entrepreneurial competencies as clusters of associated knowledge,



attitudes, and skills that an entrepreneur must obtain through managerial training and development will enable him to produce outstanding performance and maximize profit while managing a business venture or an enterprise. They pointed out that entrepreneurial competencies consist of time management, marketing management, business ethics, leadership, decision-making, and financial management.

Bagheri & Pihie (2011) emphasised the two specific types of competencies that the leaders of entrepreneurial endeavours must-have; these are personal competencies and functional competencies. In functional competencies, it permits leaders to mobilise a group of people, share the entrepreneurial vision with their people, and they are committed to improving their self-efficacy and achieving their entrepreneurial vision. On the other hand, proactiveness, innovativeness, and risk-taking are among the personal competencies. Likewise, Mitchelmore and Rowley (2013) classify four clusters of entrepreneurial competencies that include personal relationships, business management, and entrepreneurial and human resources competencies. Dixon et al. (2005) categorise entrepreneurial competencies into eight clusters, which are team leadership, communication, trustworthiness, organisational skills, basic business skills, problem-solving skills, personal traits, and creativity.

3.3 Government Sector

The government is the number one driver of the economic growth of a country. On the part of the Philippine Government, it has the Department of Trade and Industry to guide businesses, especially SMEs, to become successful in their endeavours.

The DTI is responsible for realising the country's goal of the globally competitive and innovative industry and services sector that contributes to inclusive growth and employment generation. Under the Philippine Development Plan (PDP) 2017-2022, we shall endeavour to reduce inequality and poverty by expanding economic opportunities in industry and services, and by increasing the access, particularly of micro, small, and medium enterprises (MSMEs), cooperatives, and overseas Filipinos (OFs) to these opportunities.

Interview with DTI Official

According to the official of the DTI, there is a need to improve the skills and entrepreneurial mindsets of Filipino entrepreneurs. The DTI provides training to SMEs in topics like business entrepreneurship, bookkeeping, labour, branding, presentation, and production. They get expert speakers who are knowledgeable in business as well.

In the DTI, the interviewed official could see that the Filipino entrepreneurial mindset is not that strong. They have a program that will improve their business mindset, that they will feel support with confidence and going in the right direction.

4. Can a Business model framework be proposed to support a PhD in Entrepreneurship for Filipinos?

Figure 1 shows the Business Model Canvas Framework based on the summary of the document analysis, text analysis of video sources, interviews, and focus group discussions of the three sectors interviewed for this paper: the academic sector, business sector local and international entrepreneurs, and the government sector.

Key Partners	Key Activities	Value Propositions	Customer relationships	Customer Segments
PhD in Entrepreneurship	Phase 1 – Produce program administrator	Quality Instructions	Special Pilot Classes	PhD Students:
Professors from				
1. Asian Institute of Management		State of the Art Entrepreneurial Infrastructures	Quality Classes	Filipino Students:
2. Asian Countries (Iran)	Phase 2 – Create an internal (and external) demand			(aspiring administrators)
3. USA				
4. Europe		Branding of PhD in Entrepreneurship		Retirees
CHED, DTI and OP	Phase 3 - Create a demand for the program for retirees	Program (Exclusivity)		Regional Prospective Students (Abroad)
Consortium among Top HEIs in the Philippines	Phase 4 – Create a demand for external market	Promotion of Top Philippine Corporations		Short courses:
Collaboration with Top Philippine Companies	<u>Programs to offer</u> Pioneering program – PhD in Entrepreneurship	and Chambers of Commerce Promotion Activities for the Pioneering Batch		Diploma / Certificate Students

	<p>Short courses – powerful entrepreneurial diploma courses</p> <p>Powerhouse Seminars and Trainings</p>	Marketing Mix		Seminar Attendees
	<p>Key Resources</p> <p>Human Resources (Professors)</p> <p>Entrepreneurial Infrastructures</p> <p>Government Scholarships</p> <p>Private Sector Scholarships</p> <p>HEIs Financial Resources</p>		<p>Channels</p> <p>Online Marketing</p> <p>Online Processes</p> <p>Online Classes</p> <p>Traditional Classrooms</p>	
<p>Cost Structure</p> <p>Fixed Costs</p> <p>Entrepreneurial Infrastructure (Simulation rooms, incubation rooms)</p> <p>Classrooms</p> <p>War rooms (Conference Rooms)</p> <p>Variable Costs</p> <p>Human Resources (Administrators, Faculty and Staff)</p> <p>Other Costs</p> <p>Instructional Materials</p>		<p>Revenue Streams</p> <p>Pioneering batch (50 students – 1 auditorium lecture class, divided into three discussion classes)</p> <p>Bi-annual enrolment, diploma courses</p> <p>Monthly conferences, seminars and trainings in partnership with top HEIs and top companies</p>		

Instructional Equipment	
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Figure 1. Business Model Framework for a PhD in Entrepreneurship for Filipinos

Conclusions

A business model framework to offer a PhD in Entrepreneurship is needed to ensure a successful program offering. The business model framework cited the step-by-step process on how to go about the proposed program. The Commission on Higher Education has a set of policies in the form of CHED Memorandum Orders to support the initial offering of PhD in Entrepreneurship. Global trends in entrepreneurship education are basically focused on the learning and experience part of the education process. Innovative infrastructures are being built on the campuses of universities. Information technology is still the number one driver of growth of the business. The global business sector has come up with a list of needed competencies gearing towards an entrepreneur taking advantage of information technology for a bigger leap from being traditional. The proposed business model framework in this study can guide pioneering universities who shall offer PhDs in Entrepreneurship.

Recommendations

The business model used in this study, the Business Model Canvas, shall be supported by the Higher Educational Institutions (both private and public), the Commission on Higher Education CHED (government sector), and the business sector (big conglomerates) for it to be successful. The Business Model Canvas can be used as a business model framework that can guide pioneering universities who will offer PhDs in Entrepreneurship. This study can be used as a point of reference for future studies on the feasibility of a PhD in Entrepreneurship in the Philippines. A survey among possible program candidates can be done, to determine if there will be takers of the program. The survey must also include the possible program content (curriculum) that will interest future students in this graduate program.



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