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Entrepreneurship Education in the Philippines

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This study presents the current state of entrepreneurship education in the Philippines. The status of entrepreneurship education is evaluated through the analysis of entrepreneurship education curricula and practices in the Philippines and to suggest policy measures in the promotion, development and creation, growth, and sustainability of more entrepreneurial undertaking. Entrepreneurship education in the Philippines is heavily focused on the development of entrepreneurs in terms of encouraging start-ups. However, there is lack of focus in developing creativity and innovation as a mindset of the student in the formal education system. There is also minimal support from the academe and industry to aid nascent entrepreneurial undertaking to grow and sustain the business.

Keywords: education, entrepreneurship, Filipinnovation

INTRODUCTION

Entrepreneurship has always been considered as a driver of economic growth of nations. Entrepreneurship is founded on innovation and change that leads to productivity and economic competitiveness (United Nations Conference on Trade and Development [UNCTAD], 2004). Developed countries like the United States, England, Germany, Japan, and France have been often cited as examples of economies that grew due to the entrepreneurial spirit and undertaking of its people. The phenomenal growth of the USA as an economic power over the last century is traced to the exponential growth of businesses founded by entrepreneurs. The last century has seen the development, growth, and sustainability or demise of enterprises brought about by new technological innovations, expanding market, and globalization of economies. Changes in the form of government created more freedom to express one's ideas and enjoy the rewards of one's undertaking, which helped to usher the creation of enterprises.

Focus on the importance of entrepreneurship manifests in the number of universities that include entrepreneurship courses in their program, as seen in the offerings of formal degrees or a course in undergraduate and graduate business programs. Although the question "Can entrepreneurs be

made, or are they born?" has not been given a definitive answer in the literature, government, educational institutions, and businesses hope that entrepreneurs can indeed be developed. The prospect of making and training entrepreneurs can be seen in the numerous programs, academic training curricula, and support given to developing entrepreneurs espoused by these organizations. Entrepreneurship education becomes an important aspect in the bid for economic growth and development of nations.

For the past 30 years, entrepreneurship education has been incorporated in formal programs in major countries in the world like the USA, Great Britain, Japan, and Singapore. Business schools like Harvard University, Stanford University, University of Sussex, Waseda University, and National University of Singapore have formal and informal training programs to develop and hone the entrepreneurial skills of students in starting and managing a business. In the Philippines, entrepreneurship education was pioneered by De La Salle University when it offered a bachelor's degree in entrepreneurship in 1983 and the Master of Science in Entrepreneurship in 2003. In 1999, Asian Institute of Management (AIM) offered the master's degree program in entrepreneurship (Master in Entrepreneurship) which ran for nine years (1999-2008). The program was eventually spun–off from AIM in 2007 and is now under ACE Center for Entrepreneurship and Management Education, Inc. in partnership with the Ateneo Graduate School of Business. In 2005, the Commission on Higher Education (CHED) issued CHED Memorandum Order(CMO) No. 17 Series of 2005, formally creating the Bachelor of Science in Entrepreneurship. This memorandum from CHED mandated all undergraduate programs offering entrepreneurship training and/or specialization to be called Bachelor of Science in Entrepreneurship.

The initiatives to formalize entrepreneurship education from academic institutions and government agencies have shown the importance and need for the development of entrepreneurial skills. However, little research on entrepreneurship education has been conducted to describe or evaluate entrepreneurship education. This paper aims to contribute to the limited literature on entrepreneurship education, focusing on the Philippine experience. The research will present the development and process of entrepreneurship education in the Philippines in the undergraduate and graduate levels, evaluate the needs and resources for entrepreneurship education to meet objectives of stakeholders, and suggest policies and recommendations to further improve entrepreneurship education in the country.

ENTREPRENEURSHIP EDUCATION CONCEPTS AND PRACTICE

A. What is entrepreneurship?

To better understand entrepreneurship education, it is important to first define entrepreneurship. What is entrepreneurship? Who is an entrepreneur? Is entrepreneurship a career path? These questions have been answered in different literature with varying definitions. Hisrich, Peters, and Shepherd (2009) defined an entrepreneur as a risk taker who converts innovative ideas into a business process for profit through opportunity maximization and organization of social and economic mechanisms. Hisrich et al. (2009), quoting Pinchot (1978), considered innovators in corporate environment (called intrapreneurs) as entrepreneurs. This type of entrepreneurship in the corporate setting is called intrapreneurship. Entrepreneurship is also defined as the process individuals go through to become entrepreneurs. Defining an entrepreneurship focused on the individual traits limits the meaning of entrepreneurship (Shane & Venkataraman, 2000). The European Commission (2008, as cited from World Economic Forum, 2009) has defined entrepreneurship in a broader context. It states:

> Entrepreneurship refers to an individual's ability to turn ideas into action. It includes creativity, innovation,

> and taking calculated risks, as well as the ability to plan and manage projects in order to achieve objectives. This supports everyone in day-to-day life at home and in society; makes employees more aware of their work and better able to seize opportunities and provide a foundation for entrepreneurs establishing a social or commercial activity. (p. 18)

The above definition covers a wider range of focus, individual involvement, and forms of entrepreneurial organizations. Entrepreneurship in this context does not only refer to profit making institutions but also includes institutions of a social nature that support people's lives and that of the society as a whole. Thus, entrepreneurship does not only cover an individual who aims to start a business but also employees who have the ability to seek and exploit opportunities to improve their work and their working conditions. The role of society and the different entities is an important driver in entrepreneurship.

Entrepreneurship is a combination of two important factors: the opportunities present in the environment and the individual who has the innovative spirit to make good use of these opportunities (Shane & Ventakaraman, 2000). Focus on the individuals creates a scenario that gives too much importance on the traits and values required to be an entrepreneur. It precludes the fact that opportunities and situations for successful entrepreneurial undertaking can be created not by just the individual himself, but by different entities in the environment. If entrepreneurship hinges on the intersection of individual entrepreneurial traits and opportunities, can entrepreneurship be taught? If it can be taught, what is entrepreneurship education?

B. Defining entrepreneurship education

Entrepreneurship education can be defined as an organized process of developing entrepreneurial traits and values in an individual; enhancing a culture of creativity and innovativeness in seeking, developing, exploring, and making use of opportunities; imbibing managerial skills; inculcating a systematic management to address the needs to effectively and efficiently run the business, and achieve profitability, growth, and sustainability (Shailendra Vyakarnan in World Economic Forum ,2009). The process can be a formal course offered by colleges and universities, or informal training programs offered by other agencies, whose aim is to promote entrepreneurship education. The formal process, through the granting of degrees, was brought about by the need of the market to understand entrepreneurship, and hopefully become an entrepreneur after the formal training program. Entrepreneurial intention, which is not supported by the traditional business degree programs that aims to make graduates employed, is the major driver in offering entrepreneurship education. Entrepreneurship education aims to develop in an individual the innovative spirit of an entrepreneur; namely, a creative attitude that calculates risk, is adept with their environment, sees values of business propositions for themselves and the society at large, while seeking and making good use of opportunities. To define entrepreneurship education, four questions have to be answered: who to teach and who will teach; what to teach; where to teach; and how will it be taught. The 2009 World Economic Forum report entitled "Educating the next Wave of Entrepreneurs" answered these four questions, as summarized in Table 1.

From the above table, entrepreneurship education should co-evolve with formal and informal settings, taking into consideration the needs and capabilities of the target participants. Entrepreneurship education, if it is to enhance the ability of the nation's human capital, should start from primary education up to the growth and development stage of an undertaking, making it a life-long process.

The need to develop human resources of a nation to become entrepreneurs has been recognized by governments and non-government institutions. The World Economic Forum, the

Table 1

Key Areas in Entrepreneurship Education

Key Areas	Elements
WHAT Program Content	* Entrepreneurial behaviour and mindset * Self confidence, self efficacy, and leadership * "Out of the box" thinking through creativity and innovation * Managing complexity and unpredictability * Business skills and literacy * Opportunity identification * Negotiation skills * Building relationship, network, and social capital
WHO The Stakeholders	* Students * Teachers and school administrators * Professors, trainers * Business people and leaders in other sectors * Entrepreneurs * Mentors, coaches, and advisors
WHERE Organization	* *Formal School System (Primary, Secondary, and Tertiary)* – At all levels – Across disciplines – Compulsory and elective courses * *Informal system* – Local schools , training institutions – Community centers and NGOs – Government agencies and banks – Workplace-based training programs Life-long learning
HOW Methods of Delivery	* Interactive learning pedagogies * Multi-disciplinary programs and projects * Case studies, games, simulations, business plan competition * Extensive use of visuals, digital tools, and multi-media * Projects, internships and start-ups * Mentoring and coaching * Interaction with entrepreneurs

World Bank, and Association of South East Asian Nations (ASEAN) have sponsored studies on how to engage nations in the promotion of entrepreneurship education. Entrepreneurship education is also a driving factor in the enhancement of innovation systems of different countries.

Although most literature (Clarke & Clegg, 1998; Lee, Miller, Hancock, & Rowen,2000; Kirby, 2006) point to the replication of entrepreneurship education in the west (North America and Europe), countries in South East Asia have realized the need to enhance entrepreneurship education through a collaborative and common entrepreneurship education program designed according to the local needs of each country. The ASEAN Common Curriculum for Entrepreneurship in ASEAN was commenced in 2010 by Asia Science and Education for Economic Development Institute (AsiaSEED) under the budget of Japan-ASEAN Integration Fund (JAIF), in collaboration with universities in ASEAN countries. The common curriculum aims to adapt Consultancy Based Learning for ASEAN SMEs (COBLAS). This program aims to teach skills and tools in the local university setting by using local procedures and context in the conduct of entrepreneurship education, in order to enhance local business development, promotion, and sustainability. The program does not only involve start-up activities for business, but also focuses on consultancy training with SMEs so that they may understand the rigor and intricacies of running a business in the local setting. Developed by Prof. Takeru Ohe of Waseda University, COBLAS is now being disseminated in the different ASEAN countries in partnership with local universities. Currently, COBLAS is being run in Thailand, Cambodia, Malaysia, Indonesia, the Philippines, and Vietnam.

Entrepreneurship education also covers the development of the student's ability to start up a business and the pursuit of opportunities within larger organizations (public or private) or social ventures (World Economic Forum, 2009). Thus, entrepreneurial training does not only include those who want to be entrepreneurs or owners of entrepreneurial undertaking but also employees of larger organizations who seek opportunities beyond the resources available to them. Management of small businesses has been a common part of MBA curriculum.

The concept of an entrepreneurial university (Kirby, 2006) is one of the outcomes of entrepreneurship education. Universities that teach entrepreneurship open opportunities for faculty, students, and staff to create products/ services from their research that will have commercial value. Commercialization of high technology research outputs (also known as technopreneurship) is being used now as one of the factors in rating universities worldwide. The role of the university in the success of Silicon Valley supports the need for entrepreneurship education for universities to be able to adapt to the changing needs of its environment (Gibbons, 2000). Entrepreneurship education is now given not only within the business and management curriculum but with science and technology courses. Universities are also expected to generate their own funds for activities like research, and do this through the commercialization of technologies they have developed. Entrepreneurship education should support entrepreneurship development in high growth and high opportunity undertakings. Entrepreneurship education in universities brings the academe and business together.

Professionals interested in starting an entrepreneurial undertaking have also expressed their need for entrepreneurship education. Diploma programs and executive training programs on entrepreneurship are being offered by most universities with graduate programs.

On the other hand, entrepreneurship education is not limited to the formal sector. It has found its way to include other sectors that are not socially capable of tapping formal entrepreneurship education. Government, non-government agencies, universities, and business organizations have seen the need to enhance the entrepreneurial abilities of the marginalized sector (usually women, youth, and the poor) in order to address the poverty problem. Coupled with lending

facilities and entrepreneurship training programs, the marginalized sector is being led to economic activities that generate jobs for them, with the aim of alleviating poverty. Entrepreneurship education for the marginalized sector is also looked at as a corporate social responsibility undertaking of schools and large corporations.

ENTREPRENEURSHIP IN THE PHILIPPINES

The Philippines, like other ASEAN countries, is dominated by micro small and medium enterprises (MSMEs). MSMEs comprise 99.6% of total firms in the Philippines as of 2009 (Department of Trade and Industry [DTI], 2012. They provide 61% of the country's employment, 35.7% of value-added, and 60% of all exporters. MSMEs play a major role in the economic development of the Philippines, particularly in the rural development and decentralization of industries, creation of employment opportunities, equitable income distribution, use of indigenous resources, creation of backward and forward linkages with existing industries, and development of entrepreneurship in the country. Philippine MSMEs are mostly engaged in wholesale and retail trade (49.6%). Only 14.4% are engaged in manufacturing, 12.5% in hotels and restaurants, 6.1% in real estate activities, 5.7% in community, social, and personal activities, with other sectors accounting for 11.6%. Table 2 summarizes the overview of Philippine firms. Over the last 10 years, total Philippine firms have decreased by 5%, as shown in Table 3.

Table 2

Philippine Firms Composition as of 2009

Enterprise Category	Total Asset Value(Pmillion)	No. Of Employees	No. of Firms	% of Total
Micro	3 or less	1-9	710,822	91.1
Small	3-15	10-99	63,529	8.1
Medium	15-100	100-199	3,006	0.4
Large	100 or more	200 or more	2908	0.4

Source: DTI, 2012

Table 3

Comparative Number of Philippines Establishments Between 2000 and 2009

Year/ Category	2009		2000		Change (%)
	No. of Firms	%	No. of Firms	%	
Micro	710,822	91.1	747,740	91.09	-4.94
Small	63,529	8.14	67,166	8.18	-5.42
Medium	3,006	0.39	3,037	0.37	-1.02
Large	2,908	0.37	2,984	0.36	-2.54
Total	780265	100	820,927		-4.95

Source: National Statistics Office, 2012

The Philippine Global Entrepreneurship Monitor Report for 2006-2007 has documented the profile of Filipino entrepreneurs (Madarang & Habito, 2007). According to the report, 39.4% of Filipinos are engaged in entrepreneurial activities. Fifty-two percent of these entrepreneurs are engaged in early stage activity or in business between 3 months to 3.5 years. Forty-eight percent are established businesses existing for more than 3.5 years. Businesses have an average capital of P10,000.

A typical Filipino entrepreneur is male, married, 25-44 years old, high school graduate, and comes from the low income group. They are driven by necessity and more than half are engaged in retail trade. There is very little application of technology and minimal use of innovation. Seventy percent are engaged in businesses that do not generate employment since the entrepreneur assumes all the functions of the business. Most of the businesses employ less than four employees and very few have 20 employees or more.

Filipino entrepreneurship has very poor employment generation activity. Business engagement is only done on a local basis and very few are engaged in exportation. There is very little growth and long-term view of the business. However, Filipino entrepreneurs see business opportunities and are highly confident that they have the knowledge and skills needed to do business. Yet in what seems to be a contradictory attitude, they fear failure and have a very low tendency to take risks.

The present pool of Filipino entrepreneurs is driven by previous work experience (37%), exposure to family business (29%), and education and formal training (17%). Filipinos entering entrepreneurial activity as a means to support the financial needs of the family accounts for 54% of entrepreneurial motivation. Only 37% take advantage of a business opportunity. This is compounded by the problems in doing business in the Philippines, as shown in Table 4. Corruption, inefficient government bureaucracy, and inadequate infrastructure have discouraged people to enter into business, making them consider employment more as a better source of livelihood. However, the good work ethics, low crime and theft, more stable currency regulations and inflation, and health of the labor work force can be seen as good resources that can counterbalance the difficulty of doing business in the country.

Table 4

Most Problematic Factors in Doing Business in the Philippines

FACTORS	%
Corruption	22.7
Inefficient government bureaucracy	18.3
Inadequate supply of infrastructure	15.4
Policy instability	11.8
Tax regulations	9.2
Tax rates	5.1
Restrictive labor regulations	4.0
Inadequately educated workforce	2.3
Government instability/coups	2.3
Access to financing	2.1
Poor work ethic in national labor force	1.7
Crime and theft	1.7
Foreign currency regulations	1.3
Inflation	1.2
Poor public health	1.0

Source: World Economic Forum [WEF], 2011

Although there are difficulties in starting a business in the Philippines, the country offers competitive advantages (Table 5) that can propel the growth of small Filipino entrepreneurs. There is good transportation infrastructure that can move goods and people around.

There is a good pool of managers educated in management schools. Although more than half of Filipinos are considered poor, there is a good market orientation and buyer's sophistication. The country offers a large market base due to its population, 92.34 million as of May 2010 (National Statistics Office, 2012). Large businesses have business sophistication due to the worth of their value chain, marketing, and adaptation of management philosophy based on a willingness to delegate.

ENTREPRENEURSHIP EDUCATION IN THE PHILIPPINES

The Philippine education system is highly patterned after that of the United States of America. English is used as the medium of instruction. There are three government agencies that serve the education requirements of its citizens. These are: Department of Education (DepEd) that caters to the basic education from elementary to secondary level; Commission on

Table 5

Philippine Competitive Advantage

PILLARS	INDICATOR
INSTITUTION	Strength in auditing and reporting standards
INFRASTRUCTURE	Available seat kilometers
MACROECONOMIC STABILITY	Inflation
HEALTH AND PRIMARY EDUCATION	HIV prevalence
HIGHER EDUCATION AND TRAINING	Quality of educational system Quality of management schools Extent of staff training
GOODS MARKET EFFICIENCY	Degree of customer orientation Buyer sophistication
TECHNOLOGICAL READINESS	Firm level technology absorption FDI and technology transfer
MARKET SIZE	Domestic market size Foreign market size
BUSINESS SOPHISTICATION	Nature of competitive advantage Value chain breadth Extent of marketing Willingness to delegate authority
INNOVATION	Company spending on R & D

Source: WEF, 2011

Higher Education (CHED) that is responsible for the development and operation of higher education (baccalaureate to post graduate studies); and Technical Education and Skills Development Authority (TESDA) serving the non-degree training program needs of the population.

The higher education system is composed of public and private institutions. Public schools are state or local university and colleges, CHED Supervised Institutions (CSI), other Government Schools (OGS), and Special Higher Education Institutes (HEI). State colleges and universities (SUCs) are established by law, funded and managed by the board of regents for state universities and board of trustees for state colleges. The boards develop and approve policies. The Chairman of CHED heads the boards of regents/trustees of SUCs.

Private higher education institutions are established under the Corporation Code with its corresponding corporate mandate. There are two types of private schools in the Philippines—the sectarian and non-sectarian schools. Sectarian schools are usually non-stock, non-profit organizations owned and managed by religious orders. Non-sectarian schools are private institutions not affiliated with any religious organizations.

There is a very high degree of regulation being implemented on higher education by CHED. Programs are monitored and regulated through an accreditation process. Support to attain target quality in higher education comes in the form of student scholarship grants, funding for faculty development programs (training and enrollment in graduate programs), and research development programs and funding. Philippine higher education is dominated by private schools as of 2011, which account for 71.38% of total higher education institutions (Commission on Higher Education [CHED], 2012). Fourteen percent of colleges and universities in the country are in Metro Manila and the rest are distributed in the other 16 regions. Private universities focus on the teaching function and very minimal research is done. Research funds are given mostly to state colleges and universities.

Business administration and related fields have the highest student enrollment, which comprised 22% as of 2005. This was followed by science education and teacher training, which accounts for 15% of total enrollment. Sixty percent of faculty members in higher education have baccalaureate degrees, 30% with master's degree, and only 9% with earned doctorate degree. Thirty percent of total faculty in higher education are in the business administration and related fields.

Entrepreneurship education in Philippine higher education is a formal baccalaureate on Entrepreneurship, as mandated by CMO No. 17 Series of 2005 (CHED, 2005). It focuses on training students on how to start up the business and prepare business plans.

However, there is lack of focus in managing the enterprise for growth and sustainability. Entrepreneurship is also offered in master's programs and incorporated as field courses in the MBA curriculum. The needs of the other sectors in the non-formal entrepreneurship education are being provided by government agencies like the Department of Trade and Industry, TESDA, and non-government agencies that are mostly involved in lending and financing projects of MSMEs.

The need to develop entrepreneurs through the formal education process has been recognized by the government. Various programs have been initiated by different government agencies to support enterprise development and technology development and commercialization to generate jobs, alleviate poverty, and develop the economy. For the past 30 years, the Philippines has been outperformed by its ASEAN neighbours in terms of economic development and growth. To address this concern, the Department of Science and Technology spearheaded the creation of an innovation system strategy called FILIPINNOVATION to fast track the country's economic growth through enterprise creation focused on innovative and high technology products and services (Steering Committee on National Innovation Summit, 2007). This was

collaborated by the Department of Trade and Industry, Department of Agriculture, Commission on Higher Education, Department of Budget and Management, and Development Academy of the Philippines. This strategy is supported by different universities like De La Salle University, University of the Philippines, and Asian Institute of Management, to name a few, and business establishments like Ayala Corporation and IBM Philippines.

Filipinnovation identifies four strategies, namely: a) strengthening human capital, supporting business incubation and acceleration efforts; b) supporting business incubation and acceleration effort; c) regenerating the innovation environment; and d) upgrading the Filipino mindset. These strategies require the participation of the academe, industry, and government to develop businesses that will spur the growth of the economy.

Traditionally, universities take the role of providing education through formal training through teaching and research. The government makes laws and policies while industries provide the business activities through the production and marketing of value added products and services. However, the action agenda of Filipinnovation encourages the universities and the government to take the role of business entity through patents and licensing agreements with industry and other business partners. The industry, on the other hand, takes the role of the universities in providing training to the employees. Research institutes (government and university based) are also looking at how the technology they have developed can be commercialized. The triple helix model of innovation is now at play in Filipinnovation. There is nothing wrong with this. However, the question on how prepared the Philippine universities and government to create high growth enterprises and high opportunity seeking entrepreneurs has to be answered. Has entrepreneurship education in the Philippines gone to the level of preparing the human capital of the country to explore high growth–high opportunity undertaking?

WHERE DO WE LACK FOCUS?

The strength of entrepreneurship education is to influence people's attitude on looking at entrepreneurial undertaking with the prospect of being a growth enterprise due to the presence of high opportunity undertaking. Important factors for high growth enterprise are: *the entrepreneur*—someone who sees the opportunity present and knows how to operationally exploit it; *the team*—the group of individuals made up of different skills to run the enterprise; and *the growth strategies*—a combination of short-term and long-term action plans to manage the enterprise for growth and profitability (Byers, 2006). Entrepreneurship education should be able to develop these three factors. However, the Philippine educational system is more focused in developing people for employment rather than entrepreneurship.

Entrepreneurship in the Philippines is basically a necessity entrepreneurship. People become entrepreneurs in order to provide for one's family. The profile of the Filipino entrepreneur and the kind of businesses Filipino firms are engaged in can attest to this. The curriculum set by CHED for entrepreneurship education capitalized on necessity entrepreneurship. The aim of the entrepreneurship program is to solve the unemployment problem by creating employment for one's self. Thus, the society see entrepreneurship as the alternative if one cannot find a job. The rationale behind this curriculum is the need to train entrepreneurs to support the high percentage of Filipino MSMEs. The curriculum is focused on the start-up of businesses that are usually based on fads or bubble opportunities and not high growth opportunities. Projects of students for start-ups are the typical food we see on the street, clothes and fashion wear, handicrafts, and household gadgets. This can be traced to the lack of knowledge or skills on products that possess high growth opportunity. Only business skills are taught in the formal entrepreneurship education program. Acquisition of knowledge on high growth opportunity products or services that are usually innovative

and technology-based is not provided for in the curriculum. Technology programs like engineering and sciences are more focused on teaching the students to pass the board exams and not to see the opportunities for a possible career path on entrepreneurship.

Another weakness of Philippine entrepreneurship education is the lack of role models in the form of entrepreneurs espousing high opportunity-high growth undertaking. These are entrepreneurs with formal skills training in engineering, science, and technology that were able to detect opportunities and subsequently make good use of them. Most entrepreneurs who are promoted as models started as necessity entrepreneurs and are lacking in formal management training. Success factors of these entrepreneurs are passion, hard work, and more often luck. These factors do not need formal entrepreneurship education. Studies of successful entrepreneurs in developed countries have shown that entrepreneurs who went to a university have a higher propensity to succeed and expand the enterprise. There are Filipinos who can be role models for future entrepreneurs, like Winston Damarillo (Morphlabs), Diosdado Banatao (Tallwood Venture Capital), and Bonifacio Commandante (Buhi Corporation). However, they are not emphasized in the entrepreneurship education program. The success of entrepreneurship in the Silicon Valley is traced to the presence of many role models like William Redington Hewlett and Dave Packard of HP, Larry Page and Sergey Brin of Google, who were graduates of technology-based education in Stanford and were able to see business opportunities in the skills they have academically acquired.

There is also lack of materials to support entrepreneurial education in terms of cases that focus on local context of business. Although some cases and books were written on Philippine cases (books written by Divina Edralin on Entrepinoy and Family Business written by Elfren Cruz), there is limited access to these materials for most students in the entrepreneurship program. Most cases on Philippine businesses are available at the Asian Institute of Management for the graduate program in management. Likewise, cases on local enterprises are also available at the graduate program at De La Salle University. Most of these cases are focused on the management of large organizations or corporations.

Entrepreneurship education as a formal program is new in the Philippines as the formal degree program was instituted by the CHED in 2005. Research on Philippine entrepreneurship and cases on entrepreneurial organizations are still in its infancy stage. There is low level of research being undertaken by faculty members teaching entrepreneurship. This is brought about by the limited exposure of the faculty in research as attested by the low percentage with master's and doctorate degrees. Aside from these, universities do not encourage the faculty to develop teaching materials with local context for entrepreneurial undertaking. Most universities offering entrepreneurship education program subscribe to the notion of research through publication in ISSI journals. Students and faculty alike do not have tangible material to fully understand the environment the Filipino entrepreneurs will have to face.

Curriculum of most schools offering entrepreneurship education is focused in the preparation of business plan. However, very few schools proceed to the actual implementation of the business plan in the curriculum. The minimum course requirements mandated by CHED CMO No. 7 leave less time for actual marketing, creativity, and innovation undertaking. There is an absence of courses that integrate the arts, literature, engineering, science, and history that can provide the mindset needed to innovate products and services. The absence of an integrating course that blends the different disciplines of social science, humanities, technology, and the natural sciences limits the entrepreneurial environment in the classroom. Business plans are also limited to products that the student sees or experiences and not on the products that requires the innovation process of research and development and commercialization.

Furthermore, there is a lack of financial resources to support the entrepreneurial undertaking students would like to exploit. Funding from venture capital or angel investors is not commonly available to the students. The universities do not have the necessary funds to support start-ups and business incubation. Although business incubation facilities exist, these incubator facilities are more for real estate business development rather than creating high growth-high opportunity business proposition.

Qualification of faculty members is another issue in entrepreneurship education. Most teachers do not have the necessary experience in entrepreneurship. They do not have experience in running a business or having consultancy experience to share with the students. Entrepreneurship is learned better through experience, and what better way to learn it than with testimonies of the teachers?

WHERE DO WE GO FROM HERE?

Entrepreneurship education is a program that any university cannot ignore. It can be called entrepreneurship or management of small business. Whatever name it is called, the fact remains that schools have the responsibility to support entrepreneurship education. If the only objectives of entrepreneurship education are to create any enterprise and develop entrepreneurial traits in an individual, entrepreneurship education can be delegated to any organization that can offer training programs to develop these skills. The university can better develop entrepreneurs that will have more impact to the economic growth of a nation through employment and technological innovation. Philippine universities have the responsibility to contribute to the development of the country through the development of individuals that will contribute to economic growth and development. To be able to do this, following suggestions are given to support entrepreneurship education:

1. ***Review and revision of the entrepreneurship education curriculum***. The entrepreneurship curriculum should include courses on innovation and technology. This will widen the window of opportunity the students will see. Enrollment in technical courses or courses that will give them skills to seek and exploit opportunities is necessary. For business courses offering entrepreneurship, courses in technology, software development, culinary arts, and so forth should be an option for students. This will give the students the necessary knowledge and skills on product development for the opportunity they would want to utilize. For technology and science courses, entrepreneurial courses on opportunity evaluation, business plan development, and enterprise management should also be offered. Students in technology and science fields should be introduced to business development and management through these courses.

2. ***Documentation of role models***. A research on Filipino entrepreneurs that pursue high growth–high opportunity business ventures must be conducted to identify role models for students to emulate. Compilation of the stories of these entrepreneurs should be done to serve as teaching materials for the entrepreneurship program.

3. ***Setting up of business incubation in the university***. Creation of business incubators for high growth-high opportunity products/services in the university is necessary to actually start up, market, and run the business. This should be supported by the government and industry in terms of providing facility for business registration, funding for start-up, and procurement of products to help start-up the venture.
4. ***Pursue research on entrepreneurship***. Promotion of entrepreneurship

research is needed to better understand entrepreneurship. Entrepreneurship cannot be taught only by studying the experience of entrepreneurs. There is a need for entrepreneurship education to develop a strong theoretical framework that can withstand time, culture, and geography. For a country like the Philippines, entrepreneurship education must be supported by local case studies. Materials should not only be about the passion and hard work of successful entrepreneurs, but must also include how they crunch numbers and see their environment in synchrony with the business. The integration of economic and management theories must be developed to prepare an entrepreneurship framework.

5. ***Promotion of on-the-job training with entrepreneurs***. Actual running of the business or consultancy-based entrepreneurship should be mandated in formal entrepreneurship education. This is more appropriate for graduate students. This is to provide a venue for students to go beyond merely formulating a business plan. Universities can also tap their graduates who have succeeded in their entrepreneurial undertaking as mentors to the students. Students can also work as apprentices to these graduates in order to have a hands-on experience in running an enterprise.

CONCLUSION

Entrepreneurship education is a new field that should be formally developed in the Philippines. Universities should focus on entrepreneurship education that will cater to high growth-high opportunity entrepreneurship. This can be done through the collaboration of the academe, industry, and the government. An interdisciplinary approach should be set in place that will enhance the collaboration of business, science, and technology programs. Universities should adapt a new set of policies on faculty remuneration, working conditions (balance between teaching and research hours), entrepreneurship research focus, and entrepreneurial development. The creation of a new entity that will help in the start-up and incubation of the business will help in developing entrepreneurial skills of students, teachers, and staff. The government should encourage the formation of business incubators within the university system supported by legislation. The science parks or entrepreneurship centers should be a collaborative effort of different universities who are considered centers of excellence in business and entrepreneurship. Universities should be grouped together as a consortium to fully utilize resources. In this way, they will not be burdened with high financial costs since expenditures can be shared.

Entrepreneurship education will transform a university into an entrepreneurial university. However, this is not an easy task, especially for universities that are still struggling to build a culture of research among its faculty and students. Collaboration among business, science, and engineering programs should be done to support the start-up and growth of high growth and high opportunity business venture.

The programs and innovations needed to form an entrepreneurial university will create a new breed of faculty called academic entrepreneurs. An academic entrepreneur is a faculty who commercializes products of high growth-high opportunity in collaboration with their students and the industry. Faculty members should be recognized based on the academic entrepreneur's contribution to the growth and development of their academic discipline. New policies and guidelines should be developed through legislation to support the promotion of entrepreneurial universities.

Success of entrepreneurship education takes time. Every stakeholder should be willing to invest time for this undertaking. The zeal and support of the members of the academe,

environmental conditions set by government policy and legislation and the collaboration of the academe, industry, and government will determine the success of entrepreneurship education in the Philippines.

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