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Incorporating Learning through Doing in Entrepreneurship Education: The Case of an University-Industry Alliance in Asia

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Abstract: With the developments in Asia, there is little doubt that entrepreneurship education would make it way across from the West to Asia. However, the form and manner it takes may differ because of the context and the definition of entrepreneurship adopted. With the differences in Asia and development of entrepreneurship policies adopted by the Asian policymakers, entrepreneurship education has variations across Asia. This paper outlines one such development in a new university in Singapore, involving the university with an industry alliance.

The SMU Mission: To create and disseminate knowledge. SMU aspires to generate leading edge research with global impact as well as to produce broad-based, creative and entrepreneurial leaders for the knowledge-based economy. SMU is committed to an interactive, participative and technologically-enabled learning experience. Towards this end, it will provide a rewarding and challenging environment for faculty, staff and students to kindle and sustain a passion for excellence.

Introduction

Entrepreneurship education has spread around the world at an ever increasing pace since the late 1960s. By 1985, there were 253 schools with entrepreneurship courses, and this number further increased to 369 in 1991 (Vesper, 1992). In recent years, the US and Europe are not the only places where entrepreneurship is recognized as playing a major role in economic development. Former communist countries and others are also focusing a great amount of effort on fostering entrepreneurship education (Brockhaus, 1991). Many universities in the Asia-Pacific have turned their attention to entrepreneurship introducing courses in the field. Singapore is one such country to join these ranks with its newest offering, a private university, taking as its theme management education with the mission to produce entrepreneurial leaders: Singapore Management University (McGrath & McMillan, 2000; Tan 2002).

The objective behind most of the entrepreneurship courses is the inculcation of entrepreneurial skills. Whyte (1966), Cunningham (1966) and Hood and Young (1993) identified decision-making, leadership, communication, management, technical, interpersonal and conceptual skills as key skills for successful entrepreneurship. McMullan and Long (1987) also examined methodologies for the purpose of improving student's abilities to deal with ambiguity and complexity. It is generally accepted that entrepreneurial skills

can be taught and learned through practice and repetition although the development of these skills is a function of a time, but is faster in certain environments (Wong, 1993). Others identify the entrepreneurial mindset as a key component of entrepreneurship education (Tan, 2002; McGrath & McMillan, 2000). They point to the inculcation of the mindset (attitudes and mental modes) as an integral element of entrepreneurship education. This objective of entrepreneurship education would thus change in different environments or if the definition of entrepreneurship changes. In this paper, we explore a recent development in entrepreneurship education in Asia where these two reasons play a part. First, the environment for entrepreneurship education in Asia differs from that where most entrepreneurship programs have taken place – in the West. Second, entrepreneurship is applied in a wider context than merely starting a business or opportunity recognition. There was a time when entrepreneurship education was focused on entrepreneurial startups. Of late however, there has been a realization that what enterprises, large and small, require were individuals with an entrepreneurial mindset. Innovations in products, services or processes call on the initiative of the incumbents in corporations. Whether front line or middle managers. They require the impetus of entrepreneurial leadership from top management (Schulz & Hofer, 1999). Further, the scope of entrepreneurship has been extended to other contexts apart from startups. Entrepreneurship has been applied to corporate contexts with the development of the concepts of corporate entrepreneurship also called “Intrapreneurship” (Pinchot & Pinchot, 1993) and corporate venturing, and in social contexts through social entrepreneurship and social innovations. In the light of these extensions, entrepreneurship educations should not be confined to equipping students or participants with entrepreneurship skills. There is a need to incorporate the other contexts within which entrepreneurship is called for – the managerial and corporate context. Second, there are different policy considerations in each country that impinge on university education and, hence, entrepreneurship education. Much of university education in Asia is publicly funded by the governments. Hence, there is influence from the governments. With entrepreneurship being lauded as a means for economic development, the form of entrepreneurship education could be constrained by the policy makers’ desired view of entrepreneurship and the form it takes in the economies.

This paper outlines efforts at the Singapore Management University to accomplish this through the training and involvement of its students in projects involving entrepreneurial firms as part of its overall entrepreneurship development agenda. It has created a unique alliance involving a bank and some 208 local enterprises to create action learning opportunities for university undergraduates to work with entrepreneurial firms in projects. This alliance is the first of its kind in Asia that we are aware of. It is not the simple funding of a centre by a rich philanthropist or bank. It is an alliance that involves 208 local enterprises who responded to a call to make a difference by pooling resources to launch university-based initiatives that assist local businesses. It is different in that the alliance partners are taking an active role in the governance of the alliance. They are on the board of governors and also in the executive committee. They are actively seeking to ensure the initiative makes a distinct difference and contributes. This paper proceeds to review some of the developments in entrepreneurship education that have a bearing on explaining the context of this alliance. It then provides the context of entrepreneurship education at the universities in Singapore before discussing the entrepreneurship alliance between the university and industry that opens new vistas for entrepreneurship education in Singapore and from which some lessons may be drawn even though this alliance is still at its inception.

Developments in Entrepreneurship Education

Consistent with all educational offerings, entrepreneurship education design would be influenced by its disciplinary leanings and the objectives behind the designers. In order for a field to develop and offer content, skills or attitudes as knowledge, what it offers has to come within its defined confines or stream. Without going into the elements of requisite research, body of knowledge or transferable content/skills/attitudes, for there to be entrepreneurship education, there must be a clear idea of what entrepreneurship is. In short its definition determines its educational content.

Entrepreneurship as a new discipline carving its niche has encountered considerable obstacles, chief of which has been defining its space. Suffice to say without re-visiting the debate in detail, there has been prior to the recent gravitation towards opportunity recognition as the domain of interest following the Shane and Venkatraman piece in the Academy of Management Review in 2000, a parade of definitions documented by Kao (1995) to which Kao added his own (See Table 1 below). Since then, entrepreneurship programmes either continue their previous sway to include the examination of entrepreneurial character traits, theory, skills and business planning, or paid some modicum of attention to the element of opportunity recognition. Opportunity recognition as the domain of entrepreneurship as a field was defined as the source of opportunities, the processes of discovery, and exploitation of opportunities (Shane & Venkatarama, 2003). Unfortunately, much of this definition in itself draws and legitimizes what has gone on before. The element that is new is the emphasis placed on the recognition of opportunity, what has previously been dealt with as business startup processes and skills is now subsumed under the how and what. What the entrepreneurship programmes covered under motivation and character traits would be subsumed under the rubric of “why.”

Summary definitions of an entrepreneur (Kao, 1993, 1995)

Contributors	Period	Definition
Richard Cantillon	1730	A self-employed person with uncertain returns.
Abbe Nicollas	1767	A leader of men, a manager of resources, an innovator of ideas including new scientific ideas, and a risk-taker.
Jean-Baptiste Say	1803, 1810	A coordinator of production with managerial talent.
Joseph Schumpeter	1910	A creative innovator.
Frank Knight	1921	A manager responsible for direction and control, who bears uncertainty.
Edith Penrose	1959	A person with managerial capabilities separate from entrepreneurial capabilities, and able to identify opportunities and develop small enterprises.
J.E. Stepanek	1960	A moderate risk-taker.
D.C. McClelland	1961	A person with a high need for achievement.
Robert L. Budner	1962	A person with a high tolerance for ambiguity.
Orvis F. Collins	1964	A person with a high need for autonomy.
W. D. Litzinger	1965	Low need for support and conformity, leadership, decisiveness, determination, perseverance and integrity.
J. B. Rotter	1976	Internal locus of control.
Israel Kirzner	1979	An arbitrageur.
J. A. Timmons	1985	“A” type behaviour pattern.
Raymond W. Y. Kao	1993	Entrepreneurship is the process of doing something new (creation), and/or something different (innovation) for the purpose of creating wealth for the individual and adding value to society.

It is therefore not surprising in the light of these definitional issues that policy makers define entrepreneurship education in the manner that suits their policy demands. As such, entrepreneurship in Asia would, from the policy makers' perspectives, range from self-employment to high-technology entrepreneurship. The first would be a definition adopted in countries with high unemployment and the latter scope for entrepreneurship education would apply in more advanced countries where the key to competitiveness is higher order innovation and invention.

Over and above the definitions issues poses by the academics and policy makers which would impinge on entrepreneurship education other definitions of entrepreneurship have come to the fore – extending the context within which entrepreneurship has application. New definitions are the realities of a new field. In the public sector in entrepreneurial public administration (See for example Osborne and Gaebler, 1992), in the non-profit sector as “social entrepreneurship” (see for example, Tan, Tan and Williams, 2005; Brinckerhoff, 2000), within corporations under the banner of “corporate entrepreneurship” (Schollhammer, 1981; Morris, 2003) and in political leadership and economic development, Asian statesman Lee Kuan Yew referred to “political entrepreneurship” stating that good government required political entrepreneurs like some of his lieutenants who had vision and ideas (Straits Times, 1994).

In the light of these developments, which could be considered product extensions drawing upon marketing parlance, it is no surprise that entrepreneurship education has expanded in the curriculum offerings. There are courses reflecting either creativity or innovations. Business schools have introduced courses that apply the principles in different industrial/service sectors such as artistic industry, creative industry, hospitality industry, and even medical and legal practices.

Entrepreneurship Education in Asia

Tina Seelig, the Executive Director of the Stanford Technology Ventures Program at the NCIIA Annual Meeting in San Diego, California on March 18, 2005 noted that in the quickly changing economic environment across Asia, some governments encourage entrepreneurship education as in Singapore; in others (e.g. China and Korea) it is limited. Where there has been significant growth in entrepreneurship education over past few years has occurred in the area of teaching venture management to MBA students.

In Singapore, the earliest efforts at entrepreneurship development were at the Nanyang Technological University (NTU) where in 1987, an entrepreneurship development centre, ENDEC, was opened. Prior to this, there was an elective at the National University of Singapore (NUS) dealing not with entrepreneurship but small business management. This establishment of this centre led to the development of an entrepreneurship elective for the undergraduates and the MBA programs by 1991. Its early days were spent assisting local enterprises. In 1990, it launched the ENDEC World Entrepreneurship Research Conference it held in the years 1990 to 1997, and 1999. Seeking to foster research that is needed for the education, it launched together, with World Scientific Publishing, the Journal of Enterprising Culture. The Journal is now independent published by World Scientific but hosted at Singapore Management University by editorship.

NTU went as far as to launch an entrepreneurship minor (a concentration) for its Bachelor of Business Program in 1996 comprising three electives: Entrepreneurship, New Business Creation and The Entrepreneurial Approach in Corporate Management. In 2000, ENDEC was dissolved and NTU focused on technology-based entrepreneurship under its new Technopreneurship Centre. The entrepreneurship minor was also discontinued. NTU also has a venture seed capital fund.

At the same time in NUS, entrepreneurship courses have been started at NUS since the formation of the NUS Entrepreneurship Centre in 1999 with student enrolment rising from less than 200 in 1999 to over 1100 in 2004. These courses have also been complemented with a number of new initiatives like StartUp@Singapore (a national business plan competition), business incubators for professors and students embarking on start-ups, regular forums that bring entrepreneurs onto campus, and a venture support fund to seed university spin-offs.

The Singapore Management University is a newcomer to the university scene as it is the youngest university in Singapore established in 2000 compared to NUS which celebrated its centenary in 2005 and NTU is fiftieth anniversary in 2005. It is Singapore's first private university built around management education.

Entrepreneurship education is at the core of SMU's curriculum as it states as its mission. SMU seeks to provide the relevant environment for entrepreneurship to flourish.

SMU seeks to promote and provide an entrepreneurship infrastructure on campus through the Business Incubation and Development Programme, student clubs such as SMU Ventures and SMU Students in Free Enterprise (SIFE) and faculty advisors (members of the SMU Enterprise Development Growth and Expansion Programme). Students may avail themselves of the opportunities, support systems and initiatives that exist should they wish to engage in entrepreneurial activities.

Opportunities are also created for knowledge acquisition on the part of the students through the courses, seminars and workshops being offered. To this end, SMU promotes entrepreneurship research, curricula (e.g. the new Management (Entrepreneurship) concentration) and entrepreneurship-related activities. There are also opportunities for students to experiment with new ventures and ideas. Students are provided with opportunities to apply for incubator space under the SMU Incubation and Business Development Programme. They are also encouraged to participate in projects with entrepreneurs and organizations in SMU courses. Students can also form teams to participate in competitions in Singapore and abroad. Some details of SMU Entrepreneurship Development Agenda are provided in Appendix 1 to this paper.

The UOB-SMU Entrepreneurship Alliance

The value of collaborations between industry-university depends on the nature of the collaboration. There are skeptics who fear that collaborating with the intimate employees of one's graduates and/or relying on their funding leads the university to depart from its calling to be true to academic pursuits. Be that as it may, we are fortunate in that the SMU collaboration that we describe draws upon the positive aspects of university industry collaborations.

The collaboration was a result of discussion that SMU had with a leading local bank, the United Overseas Bank on its involvement as a stakeholder in university education in Singapore. The discussion led to the exploration of a way to involve a greater number of local enterprises in an entrepreneurial venture that will see returns to the local business community. The felt need at that point in time was assistance to be rendered to local small and medium-sized enterprises (SMEs). The dream was to craft a collaboration that allowed for funds to provide assistance to SMEs through the university – involving students and faculty. The bank's leadership was visionary and launched a fund wherein it committed to give a S\$1 for every S\$2 contributed by local enterprises to the alliance up to a maximum of S\$3million which would provide funds for the creation of a centre for an initial five year term.

The thrust of the Alliance is to put student and faculty teams to work on consulting projects mandated by local enterprises especially SMEs. The projects will be relevant to the enterprises, and provide them with research on the markets they operate in, as well as ideas and proposals on competitive strategies. The result of the collaboration is the establishment of the centre that was officially opened on 20 September 2005.

The Alliance Centre

The centre shall have three main thrusts to enable it to attain its purpose:-

- Education – to facilitate the development of courses, workshops and seminars that benefit SMU students and local enterprises,
- Consulting & Training – to develop, train and facilitate student consulting teams led by advisors drawn from SMU faculty and volunteer business mentors to address the development and growth needs of SMEs
- Research – to engage in applied research that enables the centre to better carry out its education and consulting activities.

The centre will seek to achieve a symbiotic relationship between the activities under its thrusts. There is scope for the centre to engage in pertinent and relevant research that will have benefit to the local entrepreneurs and enterprises in Singapore. This research will be conducted employing on-line questionnaires on the centre's web-portal. There is also funding for the development of case studies to be developed by the student teams and faculty advisors which provides opportunities for longitudinal studies of the centre's client-enterprises. The centre will engage student teams with faculty-advisors who will be matched with the SMEs who apply for the assistance that the centre will provide.

With the creation of this centre, there will also be the development of dedicated SME executives, individuals who are not academic faculty but with practical experience able to help SMEs directly and manage the operations of the centre. Curriculum-wise, the centre coordinates a specific course that ties in with the university's Entrepreneurship track in the Management concentration offered by the Lee Kong Chian School of Business. Table 1 details the courses in the Management Concentration. The course is designed to equipped students with the key skills needed for their project assignments with the centre and also covers aspects of enterprise management; it is called SME Consulting.

Management Concentration [2 Core course plus 3 electives]

Core courses:

- Entrepreneurship and Business Creation
- Entrepreneurial Management

Entrepreneurship Track

- Entrepreneurial Finance
- Enterprise Development
- International Business
- Social Entrepreneurship
- New Product Development

- SME Consulting
- Family Business
- Seminar in Management Research Methods
- Business Study Mission

Strategy Track

- International Business Strategy (Restrictions apply)
- Leadership and Organizations
- Management of Creative Industries
- Management of Innovation
- Corporate Governance
- Seminar in Management Research Methods
- Business Study Mission

Advantages of this Alliance

The first advantage the alliance furnishes to SMU is the addition of one more element to the microcosm on campus within which the students can evolve. One way to conceive of entrepreneurship education on campus is to look upon the offerings on campus as reproducing societal evolution mechanisms (Laukkanen, 2000). As such the alliance, by bringing the students into contact with local entrepreneurs and their management challenges through the projects, opens the students to opportunities to mingle with the real life business owners, may provide the impetus and catalyst that is needed in the university's ecological milieu for young entrepreneurial talent to bubble up to the surface. No one can tell who the real entrepreneurs will be when they graduate from our tertiary institutions and enter the market place. It will take place in the long run unbeknownst to the university unless there is a effort to track the graduates. The projects will also be an excellent way of providing SMU students with an authentic sense of the real world of business. It will allow them to develop skills that will eventually help them in the workforce or when they start firms of their own.

From the pedagogical perspective, it permits the university to go beyond the traditional classroom to incorporate more experiential learning. In this case, SMU will be able to employ action learning. Elements of action learning (i.e., real problems, fellow leaders in the action learning team, a reflective inquiry process, commitment to action, and focusing on learning) contribute to the building of critical leadership skills (Marquardt, 2000; Smith & O'Neil, 2003). It also enables SMU to overcome a criticism of traditional management education for its "disconnect" between entrepreneurial practice and theory – that business graduates do not have the ability to deal with real life problems when entering the world of business (Gibb, 1996).

The collaboration permits the student participants develop their skills and abilities from their real life experience through trial, error, and reflection, often outside academic institutions (Leitch & Harrison, 1999). It enables the development of many entrepreneurial characteristics, such as self-confidence, persistence and high energy levels, that cannot easily be acquired in the classroom (Miller, 1987). The collaboration attempts to engage students in SMEs and to perform in the real environment. They may need to provide solutions, structure effective programs, measuring their outcome and demonstrating the results to entrepreneurs. The projects with the SMEs are real-life managerial challenges, that these students would be expected to perform once they graduate and when they develop their own enterprises. Conclusion Whichever side of the divide of

the debate to collaborate or not collaborate with industry, it is clear that where entrepreneurship education is concerned, there exists a real need for greater interaction between educational environments and external organizations so that current business thinking and entrepreneurial experience can be introduced into schools (White, 1993). To embrace action learning is in concept easy but in reality a daunting task for academics as there is a need to develop and improve the current curricula and modes of delivery (Salaman & Butler, 1990). The university-industry collaboration in the UOB-SMU Entrepreneurship Alliance Centre augers well for the university provided care is taken to ensure that the potential of the collaboration bears fruit.

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