



Creativity and innovation in education: The Tasmanian experince

*A paper for the Small Enterprise Association of Australia and New Zealand 16th Annual
Conference, Ballarat, 28 Sept-1 Oct, 2003.*

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INTRODUCTION

Entrepreneurial education is the process of providing individuals with the ability to recognise commercial opportunities and the insight, self-esteem, knowledge and skills to act on them. It includes instruction in opportunity recognition, commercialising a concept, marshalling resources in the face of risk, and initiating a business venture. It also includes instruction in traditional business disciplines such as management, marketing, information systems and finance. The purpose of this paper is to describe the process of creativity and innovation in the design and introduction of a new program in Entrepreneurship at the University of Tasmania.

WHY ENTREPRENEURIAL EDUCATION IS IMPORTANT

On 29th January 2001, the Federal Government released its long-awaited Innovations Statement – *Backing Australia's Ability*. The program provides \$2.9 billion over 5 years to promote innovation in Australia. It consists of three key elements: strengthening our ability to generate ideas and undertake research, accelerating the commercial application of these ideas, and developing and retaining skills. One of the initiatives includes 2000 additional university places to 'foster a culture of enterprise and innovation.'

New entrepreneurship programs have been emerging at business schools in Australia and overseas. In the United States, they have been launched at such prestigious institutions as Harvard, Stanford, Northwestern, and the University of Chicago. In 1999, there were 170 American universities offering courses in entrepreneurship. Less than half of them existed three years earlier (Lord, 1999). Similarly, a growing number of Australian universities are offering entrepreneurship programs in response to developments in overseas universities and accelerated by the Federal Government's Innovations Statement.

The rise of these programs has been also been fuelled by unprecedented student demand as students look for a style of business education that will provide them with the skills to succeed in an increasingly divergent business environment. In the not too distant past, business schools might nod in the direction of entrepreneurship by offering an elective. Students today are demanding integrated programs that teach practical skills for starting and expanding business enterprises (Farrell, 1994). Traditional business education programs, though well attended, have come under criticism for failing to be relevant to the needs of the changing business environment. For example:

- Entrepreneurial education emphasises imagination, creativity, and risk-taking in business whereas traditional business schools tend to over-emphasise quantitative and corporate techniques at the expense of more creative skills (Porter, 1994).



- Traditional business school programs emphasise the large established corporation over the small or start-up venture and nurture the follower and steward over the leader, creator and risk taker (Chia, 1996).

Entrepreneurial education has firmly established a beachhead in academia as a result of a shift in academic thinking about the value of this field including:

- Acceptance that elements of entrepreneurship can be learned and therefore taught.
- Recognition that entrepreneurship is an important educational innovation.
- Interest in entrepreneurship as a field of research and teaching.
- Increasing demand for entrepreneurship courses by business students.
- A growing body of research on entrepreneurial education.

Entrepreneurial educators have been questioned for attempting to teach what, until recently, has been considered unteachable. It has long been the conventional wisdom that some people are born entrepreneurs and will succeed with or without education, while no amount of education can provide business success for those who lack the 'entrepreneurial spirit'. Experience overseas demonstrates that people are entering business schools to learn about entrepreneurship, and there is a growing acceptance that elements of entrepreneurship can be taught and learned (Gottlieb and Ross, 1997).

Entrepreneurial education is a demand driven innovation in overseas business schools, and it is showing signs of becoming similarly driven in Australian universities. Over 250 research articles on entrepreneurial education have been published in the last few years. A plethora of successful start-up companies, technology that provides for new and different ways to do business, and the expanding globalisation of goods and services are changing the way business is done. Entrepreneurial education is an opportunity to address some of the contemporary needs of business education in ways that the traditional system does not.

CHOOSING A CURRICULUM

While a concise, universally accepted definition of entrepreneur or entrepreneurship does not exist, there is general agreement that entrepreneurship needs to be defined more broadly than business management because it includes creativity, risk taking, and innovation. These traits are not normally nurtured in a traditional business school environment (Noll, 1993).

- Kourilsky (1995) defines entrepreneurial education as opportunity recognition, marshalling of resources in the presence of risk, and building a business venture.
- Bechard and Toulouse (1998) define entrepreneurial education as a collection of formalised teachings that informs, trains, and educates anyone interested in... business creation, or small business development. They point out that entrepreneurial education focuses on combining and carrying out a new



combination of business elements while education for small business ownership focuses on the skills needed to reproduce or acquire an existing business.

- Gottleib and Ross (1997) define entrepreneurial education in terms of creativity and innovation applied to social, governmental, and business arenas.

Entrepreneurial education can be viewed broadly in terms of the skills that can be taught and the characteristics that can be engendered in individuals that will enable them to develop new and innovative plans. It focuses on the expertise that is used to conceive of and commercialise a business opportunity. The skills taught in traditional business education programs are needed by entrepreneurs as well, but that curriculum generally addresses important functions of running a business rather than the elements of creating one.

Kourilsky (1995) places curriculum components into three groups: opportunity recognition, the marshalling and commitment of resources, and the creation of an operating business organisation. Opportunity recognition involves the identification of unfulfilled needs in the marketplace and the creation of ideas for services or products that meet them. Opportunity recognition requires observation of the market, insight into customer needs, and invention and innovation. Marshalling resources involves a willingness to take risks as well as skills in securing outside investment. The creation of an operating business organisation to deliver the product or service includes financing, marketing, and management skills.

Bhide and Hart at the Harvard Business School focus on three main concepts in their entrepreneurial courses: evaluating opportunities, securing resources, and growing and sustaining the enterprise (Gottleib and Ross, 1997).

Roach (1999) lists the following objectives for her entrepreneurial course at North Georgia Technical Institute.

- Knowledge of the characteristics of an entrepreneur.
- Ability to recognise business opportunities.
- Basic skills and knowledge to create an effective feasibility plan for a business venture.
- Ability to identify the various business entry strategies available to entrepreneurs.
- Understanding of the skills needed and means available to collect the market information needed to evaluate the feasibility of a new business concept.

The three categories suggested by Kourilsky and Bhide and Hart are similar in their intention to teach the skills that are necessary to create a new business enterprise. Noll (1993), however, includes a focus on the behavioural characteristics of entrepreneurs – characteristics that can be applied to entrepreneurial enterprises whether they operate in business, government or non-profit sectors. Noll suggests defining an entrepreneur and entrepreneurship as the starting point with the following curriculum goals.

Learn to develop ideas by

- Recognising business opportunities.
- Researching customer insights.
- Conducting a self-assessment of personal creativity.
- Conducting a feasibility study.



- Identifying various business entry strategies.

Prepare to start a business by

- Assessing personal resources and financial status.
- Researching and evaluating the risks necessary to get started.
- Writing a working business plan.
- Approaching others for money and other resources.

Build a viable business by

- Learning to allocate resources.
- Using various marketing strategies.
- Managing money and personnel.

Drawing from the literature and a survey of 128 university entrepreneurship programs world-wide by Vesper and Gartner (2001), the following objectives were adopted as the basis for building a curriculum structure at the University of Tasmania. They consist of two sets of objectives operating in parallel. The first set of objectives focuses on students' personal development. It puts entrepreneurship into perspective and asks them to consider the role of an entrepreneur compared with their own skills and behaviours. The second set of objectives focuses on the knowledge and skills that are used to develop an enterprise from initial opportunity recognition to final harvesting.

Personal development

- Concept of entrepreneurship
- Characteristics of an entrepreneur
- Value of entrepreneurship
- Creativity and innovation skills
- Entrepreneurial and ethical self-assessment
- Networking, negotiating and deal-making

Enterprise development

- Identifying and evaluating opportunities
- Commercialising a concept
- Developing entry strategies
- Constructing a business plan
- Finding capital
- Initiating the business
- Growing the business
- Harvesting strategies

The next step was to determine the best way in which to package a curriculum structure program to achieve maximum penetration at minimum cost. The alternatives included a stand-alone degree, a major within the existing Bachelor of Commerce degree, or a cluster of free-standing electives. Another issue was that commerce students generally want a qualification that leads to recognition for employment in fields such as accounting, information systems or marketing. Entrepreneurship does not offer any form of professional recognition and, therefore, might struggle to achieve significant enrolments. After a great deal of debate, an Entrepreneurship major within the Bachelor of Commerce degree was chosen because it offered:

- A familiar curriculum structure. A major in the BCom represented a curriculum structure that was familiar to everyone. It already had established articulation



arrangements with other degrees and a variety of other institutions, including TAFE programs, that were clearly understood.

- Lower cost and greater expediency than a stand-alone degree. It incorporated a number of existing commerce units so that only four units needed to be developed specifically for the new major.
- Greater accessibility and viability. The major could be introduced wherever the BCom already operated, including the combined degrees with law, arts, information systems and science. This significantly increased accessibility and the viability of enrolments.
- Greater attractiveness. Students were more likely to be attracted to entrepreneurship if they could select it as a *second* major. This was an advantage over free-standing electives because it would appeal to students' sense of credentialism. Moreover, it represented an exciting companion for their first major instead of asking students to make a mutually exclusive choice.

The Bachelor of Commerce is a 24-unit degree over 3 years full-time. The first year consists of 6 compulsory core units plus 2 nominated elective units that lead into the various majors. Students then go on to complete an 8-unit sequence in one of the majors. The remaining 8 units may be taken as electives, but most students use them to complete a second major. The following curriculum structure was adopted for the major in Entrepreneurship incorporating the objectives previously identified.

Year 1 Core Nominated Elective

S2 Principles of Marketing

Year 2

S1 Organisational Behaviour

S1 Foundations of Entrepreneurship*

S2 Financial Management

S2 Entrepreneurship and Creativity*

Year 3

S1 Business Logistics

S1 Entrepreneurship and Innovation*

S2 Strategic Management, or
Electronic Marketing

S2 Project Evaluation and Planning*

*New units

Only four new units were required to mount the Entrepreneurship major. The first two units are offered in Year 2 based on the personal development objectives, and the second two units are offered in Year 3 based the enterprise development objectives.

- *Foundations of Entrepreneurship* is an introduction that focuses upon the nature of entrepreneurship and its role in business. Topics include the entrepreneurial



perspective in individuals, entrepreneurial schools of thought, ethical and social responsibility, sources of information and assistance, assessing and evaluating opportunities, strategic planning for emerging ventures and managing growth.

- *Entrepreneurship and Creativity* covers a range of creative problem solving methods including problem definition techniques, idea generation methods, and the evaluation and implementation of creative ideas. The objective is not to 'teach' creativity but to assist students to develop whatever creative capacity they bring to the unit. Topics include morphological analysis, brainstorming, lateral thinking and synectics.
- *Entrepreneurship and Innovation* concentrates firmly on the process of commercialisation using the resource-based view of entrepreneurship. Topics include intellectual property, identifying key resources and capabilities, feasibility analysis, entry strategies, developing a business plan, securing venture capital, and networking.
- *Project Evaluation and Planning* is a project-based capstone unit for the Entrepreneurship major. Students are expected to make practical use of everything they have learned in a structured opportunity to research, develop and present a business plan that will stand up to the standards expected by a venture capitalist.

The University of Tasmania and the Tasmanian state government entered into a Partnership Agreement in November 2000 that acknowledged 'the important role which higher education plays in the social and economic development of the Tasmanian community.' Tangible evidence of the Partnership occurred with the recommendation by the Tasmanian State Innovations Advisory Board for a grant of \$200,000 to develop and introduce the new Entrepreneurship major. A decision to mount the program was clearly galvanised by the offer of external support and the Entrepreneurship major was approved by the University at the end of 2001 for 2002 enrolments. Despite the limited opportunity to promote the new major, the initial enrolment of 96 students was very respectable for a small university.

We were also fortunate to have Edward de Bono in Tasmania for one week during the launch of the program. His presence and participation in a variety of public forums contributed a great deal of exposure for the establishment of entrepreneurial education at the University of Tasmania.

CHOOSING A TEACHING STRATEGY

Inasmuch as there is no unified theory of entrepreneurship, the first step in developing a teaching strategy was to try to identify a conceptual framework. Essentially, the literature in entrepreneurship consists of a series of schools of thought.

- An **Environmental** school of thought that uses a socio-political framework for explaining entrepreneurial behaviour.
- A **Financial** school of thought that emphasises the capital raising process as a framework for explaining the formation of new enterprises.
- A **Displacement** school of thought that focuses on political, cultural and economic factors that propel individuals towards an entrepreneurial event.



- An **Entrepreneurial Traits** school of thought that concentrates on the personality traits of individuals who have been successful entrepreneurs.
- A **Venture Opportunity** school of thought that focuses on the search for opportunities, analysis of feasibility and pathways to commercialisation.
- A **Strategic Formulation** school of thought that emphasises the strategic planning process in new venture development.

Each school of thought makes a significant contribution to our understanding of entrepreneurship, but none represents a framework with which to *operationalise* this knowledge. They are largely descriptive in nature and generally take the perspective of the detached academic as opposed to the practising entrepreneur. Why not teach students to think like entrepreneurs by designing a teaching strategy based on the entrepreneurial process itself?

The framework that underpins our teaching strategy is the *Resource-Based View of the Firm* adapted from the strategic management literature (Barney, 1991; Barney, Wright and Ketchen, 2001). It is an intuitively appealing framework because it leads directly into a means for teaching entrepreneurial practice. Dollinger (2003) characterises the resource-based approach to entrepreneurship in the following terms.

- *Acquire* strategically relevant resources and capabilities cheaply.
- *Transform* the resources and skills into a product or service.
- *Deploy* and implement an entrepreneurial strategy.
- *Sell* the product or service to maximise returns.

A sustainable competitive advantage is created when the entrepreneur controls and employs key resources and capabilities that are:

- *Valuable* because they exploit some opportunity.
- *Rare* in the sense that there are not enough for all competitors.
- *Hard to copy* so that competitors cannot duplicate them.
- *Non-substitutable* with other resources.

A taxonomy for identifying and evaluating key strategic resources and capabilities is needed. Dollinger recognises six categories of resources and capabilities that he refers to as the PROFIT factors.

- Physical
- Reputational
- Organisational
- Financial
- Intellectual and human
- Technological

The resource-based view of the firm provides an operational framework for the study of entrepreneurship, particularly when it is combined with the entrepreneur's key intellectual capabilities for creativity, risk-taking and innovation. It is a framework for identifying and evaluating opportunities, commercialising a concept, developing an entry strategy, constructing a business plan, finding capital, launching the business, growing the business and harvesting strategies. It is a teaching strategy modelled on the entrepreneurial process itself.

Having established a conceptual framework for studying entrepreneurship, the next step was to design a matching delivery program. The delivery program is based on a model called *student centred learning* in which students have a great deal of



autonomy over how they learn, when they learn and where they learn. Unlike traditional teaching strategies, it is not a passive experience. It includes collaborative activities, goal-driven tasks, intellectual discovery, activities that heighten thinking and activities that provide practice in learning skills. A combination of new technology and traditional resources is used to provide students with a rich variety of learning experiences. The objective is to create an environment in which students are encouraged to actively engage with the entrepreneurial process rather than simply read about it.

The class meets once each fortnight for three hours supplemented by independent group collaboration outside of class. Conventional lectures and tutorials have been replaced by workshops that are designed to develop entrepreneurial skills and behaviours. WebCT is used as an interactive platform for delivering parts of the program on-line and for discussion boards and chat rooms. The purpose of this mixed-mode learning format is to enable students to exercise a significant degree of flexibility over how they learn and to make the learning process as creative and innovative as the subject matter itself. In the workshops, students operate in small groups presenting, discussing and debating the cases and issues under examination.

Peer evaluation is a key element in the teaching program. It shifts the learning and assessment focus from lecturer-centred to student-centred. A fundamental premise that underpins student involvement in assessment is that taking part in the process is something for which they are uniquely qualified. They already know what assessment is all about, they bring a student's perspective to the assessment process, and they are personally aware of the performance of each of the members of their own group as well as the performance of the other groups in the class. Peer evaluation ratings are used to monitor, evaluate and reward both individual and group performance. *Internal* peer evaluation focuses on the individual's contribution and performance within their group and focuses upon the development of communication, coordination and planning skills that reinforce collaborative behaviour. *External* peer evaluation focuses on group performance during workshop presentations. A student's overall result is a function of their individual internal peer evaluation and external peer evaluation of their group.

CONCLUSION

This paper began by defining entrepreneurial education as the process of providing individuals with the ability to recognise commercial opportunities and the insight, self-esteem, knowledge and skills to act on them. Our overriding reason for teaching entrepreneurship in the way we have chosen is the belief that it is especially suited to the development of entrepreneurial behaviours and skills. The transformation to student-centred, active, group-based learning from traditional, lecturer-centred, passive learning called for a dramatic and sometimes uncomfortable shift in our approach to teaching and learning. Our experience so far reinforces our commitment to this style of teaching, because it positively shapes students' belief in their ability to take control of the future.



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