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UNIVERSITY TEACHING OF ENTREPRENEURSHIP: A PRACTITIONER'S ANALYSIS

by

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A Portfolio of Explorations submitted in fulfilment of the requirements of the examination for the:

DBA (Business Economics) Degree of the National University of Ireland - University College Cork

School of Economics

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Abstract

This is a practitioner doctorate aimed at both Universities about to introduce Entrepreneurship as a subject and practitioners who may be turning to teaching what they know building on their business experience.

In this Portfolio the transition from Entrepreneur to Lecturer in Entrepreneurship is explored and several approaches were used to support the transition.

A Professional Development Memoir offers a review of the life of an entrepreneur through the lens of *Meaning Making Systems* in order to bring clarity to the theories used by the Entrepreneur implicitly in his practice. Reflecting on these theories offers insight as to how the entrepreneur perceived and acted on market opportunities. Imparting some of the knowledge accumulated from practice is one goal in teaching.

Economics and pedagogical theories were identified, researched and applied to inform the structure, design and delivery of a module in Entrepreneurship within a post-graduate programme that focussed on business practice.

Theories of Entrepreneurship grounded in Economics indicate the importance of this business function within the broad Economic System for economic development. The role of theory is to offer students ways of organising how they think about entrepreneurship.

Gardner's *Teaching for Understanding* framework is used to bring structure to the development of the module. Several leading exemplars on the teaching of Entrepreneurship are attended to offer a context both for the content of the Module and its subsequent implementation within a framework of best practice in the teaching of Entrepreneurship.

The practical running of a business by the students as a central element of the Module provided a deep and valuable learning experience allowing them to experience Entrepreneurship in a real way for themselves.

INTRODUCTION: THE PORTFOLIO OF EXPLORATIONS

1. Overview – Readers Guide

This DBA Portfolio of Explorations is practitioner based. As research conducted at doctoral level that seeks to advance knowledge, the results must be of general interest, while drawing heavily on individual experience. Therefore, there must be an aspect, which advances general knowledge and/or identifies a problem for some particular community of scholars/practitioners or, given the increasing body of graduates from practitioner oriented doctorates, practitioner-scholars. The community for which I have selected to write in this Portfolio is teachers of entrepreneurship at university level, universities seeking to introduce entrepreneurship programmes and education authorities creating entrepreneurship policy. I am doing this by drawing on my own experience of twenty five years as an entrepreneur, and researching as I develop and teach a module, which is informed by theories of entrepreneurship in economics.

This Portfolio involves personal, professional, and organisational development**.** The designated academic standard to be demonstrated is the effective use of theory as an apparatus of thought and, as relevant, theories sourced in Economics appropriate to entrepreneurship. The rationale for this is that across DBA Portfolios of Research the experiential, i.e. individual, data will, of course, be varied. A common or generic element across the Portfolios is the effective use of theory contributing to an increasing order of mental complexity through subject/object separation arising from Kegan's (1994) Theory of Adult Mental Development (this is explained in Essay One, section 3). The crucial focus is the way one thinks about the world.

As the teaching of entrepreneurship proliferates in universities throughout the world, this Portfolio of Explorations asks an important question: How can

a practitioner, such as this researcher, become an effective teacher of entrepreneurship?

The research in this Portfolio is based on two beliefs. The first is that entrepreneurship can be learned and that this learning can be facilitated and perhaps accelerated. By attending entrepreneurship courses at leading universities and also from examining critically the results of my own teaching I suggest, following Drucker, that entrepreneurship is actually a discipline and not a personality trait, as considered by De Vries (1997; cited in Henry et al, 2003) outlined in Essay Three of this Portfolio, and that it can be learned.

This requires clarifying what is meant by entrepreneurship. For the moment we will just say that entrepreneurship is an economic function, which translates into a core element of practice in the form of business leadership and/or management. Many of the entrepreneurial skills such as communication and management skills, are taught in business schools, but the "art" of entrepreneurship must be experienced to be understood.

The second belief is based on the idea, as expressed for example by Peter Drucker (1985: 26) that "every practice rests on theory even if the practitioners themselves are unaware of it". This suggests that we must pursue our work in two theoretical directions. One has to do with the theoretical foundations for the practice of entrepreneurship itself. The other has to do with the theoretical foundations of becoming a facilitator in the learning of entrepreneurship. The experience of this practitioner showed that theories of economics are extremely relevant in the classroom alongside practice and that theories such as those of Schumpeter and Shackle and others help to get students to understand business in the economic world.

The issues being explored in this Portfolio of Explorations is that the most effective way of developing an understanding of the nature of entrepreneurship and its practice is through experiential learning, and that an experienced practitioner can make the transition from entrepreneur to

teacher through the application of the Teaching for Understanding Framework (Blythe 1998). The above directs attention to three orienting essays for a Portfolio of Explorations required to explore these two issues.

The first essay is the Professional Development Memoir. This is the story of this writer's experience as an entrepreneur, interrogated through the lens of Kegan's (1994) Theory of Adult Mental Development and, specifically, his Fourth Order Consciousness and the subject/object relationship. Following Frankyl (1963), the personal-professional development dimension is presented in a reflective, autobiographical element in the Portfolio of Explorations. This provides on the one hand, the personal experiential basis for selecting the theories on which a pilot programme, designed, developed and delivered by the author, is grounded, and on the other hand, the experiential validation of the chosen theories as a result of the experience of the writer as entrepreneur.

The way the Professional Development Memoir is developed is, on the one hand as a piece of literary writing, and approached in a certain way (see Appendix A on techniques of writing), but given the role of the Memoir for the Portfolio of Explorations, it is also guided by a Theory of Adult Mental Development, (following Kegan, 1994, 2001) i.e. meaning making systems, which is relevant to professional development. Throughout, the development of this writer brought about changes in his Meaning Making Systems, which ultimately led to becoming an educator of students in Entrepreneurship. Tacit understandings gained through the practice of being an entrepreneur were subsequently made explicit through business education and research, unearthing this knowledge and changing the Meaning Making System for subsequent use in the classroom.

The second essay is concerned with facilitating learning, or 'Teaching for Understanding', which also has to be placed in the wider context, as we will see, of Adult Mental Development. This element of the Portfolio consists of researching 'the market' in the sense of, first, examining the content, structure, approach and delivery of programmes by market leaders designed

to teach entrepreneurship and, second, experiencing the learning process in programmes of this type. The impact of these exemplars on the Meaning Making Systems of this practitioner was powerful in that it laid out the format and methods available for teaching entrepreneurship over many years of trial and error in the United States and the UK. Both are conducted by the author attending a representative sample of leading edge programmes in the teaching of entrepreneurial practice and examining these using the Teaching for Understanding Framework. The changes in the Meaning Making Systems of this practitioner through these experiences are outlined in the second essay.

The third essay addresses the need, as suggested by Drucker, to examine the theoretical foundations of entrepreneurship practice and, in the case of this study, the theory as found within the field of Business Economics so as to connect the theories with the practice as experienced by the author. The impact of this research on the Meaning Making Systems of this writer was profound in that it influenced the view of the environment that was being assumed from the narrow world of one small business to a global view of the business world. This final element of the Portfolio of Explorations is the design, delivery and evaluation of an actual module to facilitate the learning of entrepreneurship as an aspect of the author's personal and professional development, and Meaning Making Systems, and to contribute to departmental (that is, organisational) development in a university.

Why Entrepreneurship?

The practice of teaching entrepreneurship has been growing internationally over the past decade. This reflects the view that entrepreneurship represents an essential component for a competitive economy to generate and sustain prosperity, high employment and human and organisational development. It is well recognised that European economies must become more

entrepreneurial.[1] Furthermore, with the demise of the 'Celtic Tiger' phase of development in Ireland, Forfas (2007:5) recognises there is a need to foster what Drucker (1985) called "the entrepreneurial society" through encouraging and developing entrepreneurship to help Ireland in meeting the challenges of:

- Sustaining growth;
- Deepening competitive advantage in a knowledge economy;
- Strengthening the enterprise base;
- Creating vibrant regions, and,
- Achieving social inclusion.

Connolly (2006) notes that entrepreneurship is recognised as more than a business or economic activity but has become a social ethos, forming what is known as the 'entrepreneurial society'. There is a need to develop effective entrepreneurial programmes that provide entrepreneurs with a supportive environment through the educational system, which may, for example, facilitate a Recent Graduate Entrepreneur (RGE) in starting a business soon after graduation.

Kuratko (2005) says that the entrepreneurial revolution has taken hold across the globe, has changed the world of business and supported this view with a range of evidence. New business incorporations in the U.S averaged 600,000 per year in the ten years up to 2005. He explains that since 1980, Fortune 500 companies have lost more than 5 million jobs, but more than 34 million new jobs were created. Fifteen percent of the fastest-growing new firms (i.e., gazelles) accounted for 94% of the net job creation, and less than one third of these gazelles were involved in high technology. Small businesses (i.e., those with fewer than 500 employees) employ 53% of the private work force and account for 47% of sales and 51% of private sector gross domestic product (GDP). Sixty-seven percent of all new inventions are

[1]Speech by Minister Žiga Turk (2008) at the European Parliament Plenary Sessionhttp://www.eu2008.si/en/News_and_Documents/Speeches_Interviews/February/0219SVR_Turk_EP_govor.html.

created by smaller firms (Reynolds, Hay, & Camp, 1999, cited in Kuratko 2005).

Today, entrepreneurship education in the U.S. has exploded to more than 2,200 courses at over 1,600 schools with 277 endowed positions, 44 referred academic journals, and over 100 established and funded centers (Kuratko 2005).

In Ireland, the GEM Reports (2005, 2007, 2008) and The Small Business Forum Report (Forfas, 2006) each suggested the need for a more focused and strategic approach to encouraging and promoting entrepreneurship in Ireland. Entrepreneurship is viewed as a major driver of innovation, competitiveness and growth. National governments and international organizations such as the OECD (2008), the European Commission and others have increased focus on entrepreneurship education.

Cooney and Murray (2008) noted that the education system in Ireland was not conducive to engendering an entrepreneurial spirit within students because the school system does not support the idea of working for oneself and entrepreneurs believed it to have played a limited role in supporting entrepreneurship. The report of the Small Business Forum (2006) recommended that the Irish government should formally adopt a *National Entrepreneurship Policy* focused on optimising the number of start-up businesses and, in particular, on maximizing the number of start-ups aspiring to and achieving high growth. It is recommended that this policy should build upon three specific platforms:

1. Stimulating latent entrepreneurial potential, particularly among women And the immigrant community;
2. Reinforcing entrepreneurship in the education system; and,
3. Enhancing the culture for entrepreneurship.

Cooney and Murray (2008) argue that while entrepreneurship education is

still very much in its infancy in Ireland, the provision is increasingly available in all third-level institutions in the form of business modules and structured academic programmes. Programmes are offered to aspiring entrepreneurs, and typically include structured training or workshops to help participants develop a business plan, mentoring, networking opportunities, financial assistance, and shared incubation space. Some such programmes offer links to venture capital companies for the more developed business projects, while others provide a prize fund as seed capital.

In their examination of entrepreneurship education in Ireland, Hamouda et al. (2009) argue for the inherent logic in educating students for entrepreneurship through a multi-disciplinary approach, especially in technical disciplines where self-employment is a often the outcome. Cooney and Murray (2008) suggest that, internationally, entrepreneurship or enterprise-based modules are increasingly being incorporated into non-business courses. More significantly, demand for these modules is growing among science, engineering, and arts faculties (Cooney and Murray 2008: 28).

Hamouda et al. (2009) notes that thirteen Heads of (non-business) Departments and twelve business school academics participated in their research, outlining current entrepreneurship education delivery and the level of integration across curricula. For the most part, entrepreneurship modules are taught as specialized courses, and are not integrated across curriculum in non-business disciplines. Within business schools, whilst many have modules and programmes available to students, only two Institutions report integrating entrepreneurship across the entire business school.

Despite the apparent demand for entrepreneurship education and training amongst science and technology students in Ireland (Cooney and Murray 2008), the number of student start-ups is low. This is despite the government's large financial investment in campus incubation facilities, via the 'Third Level Business Incubator Initiative', which commenced in 1971.

The aim was to support balanced regional development through incubating High Potential Start-Up enterprises, which are often high-technology enterprises with significant growth and export potential. There is some evidence (Hamouda et al. 2009) from practitioners that the lack of entrepreneurial graduates might result from the interplay of several factors including:

- A lack of entrepreneurial training on most undergraduate and postgraduate programmes and, in particular, non-business based disciplines;
- The absence of tangible links between campus incubators/technology transfer offices and academic programmes; and,
- The lack of evidence of collaborations between schools within institutions and a lack of focus on graduates as potential employers.

In research by Hamouda et al (2009) respondents were asked to outline the main methods and approaches employed in delivering entrepreneurship education and the results show that lecturing is still the dominant method.

If Ireland needs to reach the global standard achieved elsewhere, then the teaching of entrepreneurship needs to be brought to world standards. What "world standards" means for entrepreneurship teaching is examined from attendance at top exemplars in the United States and the UK in order to set the standard for this teaching module. However, the GEM Report (2005) identified the following initiatives relating to entrepreneurship education in Ireland as necessary for a positive entrepreneurial environment:

- More education required at all levels on the benefits of entrepreneurship including for teachers and trainers to enable them to effectively teach enterprise skills;
- Development of an entrepreneurship agenda in the education system with a stronger focus on the importance of entrepreneurship as a career option;

- Identification of entrepreneurship as a career option through all levels of education – primary, secondary and tertiary;
- The overhauling of the education system: enterprise, entrepreneurship, risk taking and innovation are absent; and,
- The encouragement of creativity and innovation at all levels of the education system to help develop the entrepreneurial characteristics and traits in young people.

There is a requirement for developing effective education and training programmes in this field to meet the particular Irish circumstances of low levels of undergraduate school education in entrepreneurship, investment in Science and Technology (*Powering the Smart Economy,* Science Foundation Ireland Strategy 2009-2013) by the government, which will need entrepreneurship education to commercialise the research and the tendency of graduates to get employment in large multinationals operating in Ireland.

2. Professional Development and Research

The purpose of this Research Portfolio is to explore, on the basis of my personal experience as a start-up entrepreneur, how to teach entrepreneurship to recent graduates. There are three aspects, which should be noted at the outset in the context of a practitioner oriented doctoral programme directed towards the integration of personal, professional and organisational development.

The first is the **personal development** aspect that involves reflection on experience gained as a practising entrepreneur, as one of the conditions for further mental development in terms of Robert Kegan's theory of adult mental development. Related to this is the second aspect, **professional development**. This arises from the change in professional direction by the author, the change in Meaning Making Systems and the knowledge and understanding required to facilitate the change from being a practising entrepreneur to becoming a teacher or facilitator of entrepreneurship. The

link to **organisational development,** the third element, i.e. the institutional context for which this project is being undertaken, is:

- A university Department of Economics undergoing significant programme innovation and development;
- A postgraduate programme in Business Economics targeted at recent graduates (Business Practice Economics, Postgraduate Diploma);

And,

- A re-focussing of this programme to provide participants with a meaningful theoretical and practical understanding of business from an entrepreneurial perspective.

It is at the intersection of these three domains of development - personal, professional and organisational - that this Portfolio is located.

3. Structure of Portfolio

In this Research Portfolio the case study approach to research is the most suitable because the question is essentially how a practitioner can effectively teach entrepreneurship. The students learn by doing which of course is a contemporary event (Yin 2009). They later learn by reflecting on these experiences, both during and after the module, while the author develops his skills as an effective teacher of entrepreneurship.

Yin (2009: 26) suggests that a research design is "a logical plan for getting from here to there" where *here* is the initial question of the Research Portfolio and *there* is the set of conclusions. In between 'here' and 'there' are some major steps involving the collection, analysing and interpreting of data and observations.

According to Yin (2009) five components of research design are important. They are a study's:

1. Questions

2. Propositions
3. Units of analysis
4. Logic linking the data to the propositions
5. Criteria for interpreting the findings.

Taking each component in turn:

1. Question: How can a practitioner, such as this researcher, become an effective teacher of entrepreneurship? This central question generates sub-questions such as:

- What benefits does a successful practitioner bring to bear in teaching?
- What challenges are there for the teacher?
- What experiences from one's professional background are most relevant to the teaching?
- How to balance the practical experience of the students with academic requirements?
- How should the module be delivered?
- Should the effectiveness of the module be considered and what criteria should be used in assessing its effectiveness?

2. Propositions:

The propositions are that: (1) every practice is based on theory (Drucker 1985: 23); and (2) entrepreneurship can be taught, while appreciating that not every student may become an entrepreneur as a result. However, the benefits of learning the principles of entrepreneurship will help students who take up other careers, including those in large companies operating in Ireland today. The third proposition is that a practitioner, having examined his professional life using Kegan's Theory of Adult Development, becomes a more effective teacher by utilizing theories relevant to entrepreneurship as an apparatus of thought, attending courses in the leading universities around

the world, and subsequently creating and running a module at a university over three years.

3. Units of Analysis:

The units of analysis of this Portfolio of Explorations are:

- The entrepreneur and his experience reflected upon;
- Exemplars of Entrepreneurship Teaching; and,
- Theories of entrepreneurship

These in turn are linked to the central questions in 1 above in the context of the experience of course design, delivery and on-going development.

I am a practitioner and I reflect on my life experiences as a practitioner. This is in order to clarify the elements of that experience, which are relevant to the learning of my students. As a practitioner I reflect on myself through storytelling. This is in order to expose and reflect on my life lived as an entrepreneur following the view of Arendt (1968) that thought itself arises out of incidents of living experience and must remain bound to them as the only guideposts by which to take its bearings in reference to what to teach subsequently.

Following Arendt, my research and module development build on my personal experience as a practicing entrepreneur and the experience of the students on the course in order for them to understand entrepreneurship. Through the application of the Teaching for Understanding Framework the nature of this understanding is explored. Kegan's theory of adult development will be used to assess the personal and professional development of this practitioner, focussing on the subject/object relationship and the development of meaning making systems throughout the professional life lived.

The main challenge facing this practitioner is achieving the conversion from entrepreneur to teacher by reflecting on and surfacing the tacit understandings of entrepreneurship and communicating them to students. The parts of these experiences that are most relevant to students will become apparent during the writing of and reflecting on of the Personal Development Memoir, outlining the changes in Meaning Making that took place.

The balance between the practical experiences of the students while running a business and academic requirements will be achieved by examining economic and pedagogic theorists in the field of entrepreneurship and to introduce those theories in the design and implementation of the module to be taught.

The design and delivery of the module will be done after this author attends and examines exemplars in the field of entrepreneurship education. The assessment of the effectiveness of the module will be through student feedback and surveys, as well as evidence from outside business advisors as observers.

4. Logic linking the data to the propositions:

Information and evidence is required to answer the questions posed in 1 above. The telling of my story as a practitioner reveals the important real life experiences I had as an entrepreneur. These will be examined through the lens of Kegan's (1994, 2008) adult mental development framework, which demonstrates the role of theory providing the logic linking the data to the desired outcomes.

This is followed by the presentation of economic theories relevant to a practitioner of entrepreneurship and would also be important to students of the subject. These theories are chosen to ground the life lived in economic theories as written by leading writers on both entrepreneurship as a discipline and how entrepreneurship influences the economic system. Some

of those theories, in turn, are then used in the teaching of entrepreneurship to university students.

Attending leading exemplars around the world provides an external view of current teaching practice and elements of these are subsequently introduced into my module where appropriate. My knowledge gained through being a practitioner is combined with the theories and the exemplars and used in the teaching of a university course in order to bridge the teaching gap between being a practitioner and actually becoming an effective teacher. The design and implementation of the course is done through the Teaching for Understanding Framework.

5. Criteria for interpreting the study's findings:

Feedback from students, both in class and through surveys, analysis of their work, feedback from outside business advisors and staff are all used to interpret the impact of the module. The Teaching for Understanding Framework provides the criteria to analyse the effectiveness of the module and examples from students submissions are used to provide evidence of the success or otherwise of the teaching. Kegan's Framework will be used to interpret and analyse the Personal Development Memoir.

Broadly the study comprises three main distinct but interconnected essays. The first essay is The Professional Development Memoir (PDM) with an introduction to Kegan's Theory of Adult Mental Development, the lens through which the PPM will be interrogated. **Essay One** is a professional reflective essay of "an entrepreneurial life", that is of a life- my own - lived entrepreneurially. I believe I have been reasonably successful as an entrepreneur. This autobiographical essay contains the relevant events that made up the business life being examined. The particular contribution of this part of the study is to detail one experience of the practice of entrepreneurship so as to ground the reading of economic theory and course design and delivery in experiential practice. This approach provides the

orientation for the study, and in particular also provides the lens for the second essay.

Essay Two is the study of leading exemplars of teaching entrepreneurship around the world through the lens of Gardner's[2] Teaching For Understanding Framework. This writer attended four exemplars in the teaching of entrepreneurship for research purposes. These exemplars in entrepreneurship education guide the course design and implementation because they are from the leading universities in the world in the teaching of entrepreneurship.

Essay 3 of this Portfolio reviews a representative sample of economic writers on the theory and practice of entrepreneurship. This facilitates making judgements about the theoretical literature in economics on entrepreneurship to inform the course design and content which I then go on to design and deliver. This essay is focussed on the course 'experiment'- the design of content, delivery and evaluation of my own course *Innovation in the Market Economy*. This 'experiment' is conducted over three academic years in which the first year (2007/8) was approached as a pilot year for familiarisation with the organisational and educational context, including the students, operational issues and academic matters. On completion of the first cycle of the new course in the context of the programme, a facilitated 'de-briefing' was carried out with the assistance of experienced academics and business practitioners in addition to conducting a self-reflection exercise. A detailed student feedback survey was a further element in this process while a survey of the Programme Teaching Team was also conducted. On this basis the course was redesigned for a second round of implementation for 2008/9, and again in 2009/10. On completion of the third cycle, the main assessment of the course experiment was conducted, similarly to the above, as reported in the final chapter on reflections and conclusions.

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[2]Howard Gardner led Project Zero at Harvard where the Teaching for Understanding Framework was developed. See: pzweb.**harvard**.edu/research/TfU.htm accessed 5/8/2011.

Table 1 below sets out the structure of the Portfolio that follows.

Table 1: Research Portfolio

Structure of Research Portfolio		
Essay One	**Essay Two**	**Essay Three**
Theoretical Apparatus: Kegan	**Teaching for Understanding Framework**	**Theoretical Foundation**
Professional Development Memoir	**Case Studies**	**Designing and Implementing a Module**
Research Direction	**Findings and Direction**	**Assessments and Findings**

Source: Kegan (1994) and Blythe et al. (1998).

Following the completion of the essays in Table 1 a review of the research and personal professional development is carried out and presented in the conclusion of this Portfolio.

Kegan's Theory of Adult Mental Development is used to assess the personal and professional development of this practitioner, as well as the changes in Meaning Making throughout a life lived as an entrepreneur and subsequently as a teacher of entrepreneurship at a university. The Teaching for Understanding Framework is used to both design a course on the teaching of entrepreneurship and as a framework through which analysis can be carried out of exemplars in the field and subsequently of the course itself.

ESSAY ONE: PROFESSIONAL DEVELOPMENT MEMOIR

1. Towards a Research Agenda

In practising my craft this writer has implicitly used theory. As a businessperson entrepreneurship was practised while unaware at the time, following Drucker (1985), that every practice is based on theory.

For this Portfolio this practitioner practised in two distinct areas of life:

1. The life lived as an entrepreneur; and,
2. The subsequent life as a teacher of entrepreneurship.

For this section what is referred to as the Professional Development Memoir concentrates on the life lived as an entrepreneur. The life lived as a teacher of entrepreneurship is evaluated later in the Portfolio.

The purpose of the memoir is to identify the theories developed by this practitioner as meaning making systems in the business life lived and what needs to be identified as essential understanding for communication to students

Kegan (1994) is the lens through which this practitioner became increasingly aware of the development that took place during this particular life lived and the theories that were developed during this personal and professional journey. Particular experiences allowed this practitioner to separate the subjective from the objective view of the professional life lived and the changes that took place during this development. By using Kegan's Theory of Adult Mental Development as a framework through which to analyse the life lived, the change in meaning making systems (MMS) and the theories developed can then be used to design and implement a teaching course for students at a university.

The purpose of writing this memoir was to follow Frankyl (1963) where he first describes his life's experience as it happened, followed by an examination of the theory relevant to that experience. This format suits the writer as the theory was learned in my life having run a business or businesses for 25 years, after which I did an MBA in University College Cork, which had a substantial influence on subsequent decisions and events. The pursuit of knowledge about business theory then leads to doing this DBA.

This Memoir provides data in the form of my personal experience in business to examine economic theories relevant to that experience, and also to provide data for the subsequent teaching of entrepreneurship in a university, both through Kegan's adult mental development programme and the Teaching for Understanding Framework.

2. Theoretical Apparatus: Kegan's Theory of Mental Development

Kegan describes the stages of mental development as "orders" that people pass through in life, and says thatepistemology is the study of the nature and boundaries of knowledge. Accepting the limits of human development, Kegan (1994) has detailed the evolving movement of consciousness throughout life, showing how the self changes through the subject-object relationship.

Kegan argues that the first three "orders" of human consciousness lead up to early adulthood. He describes the differences between the third and fourth orders within adulthood. It is not that the third order is a lesser form of maturity than the fourth order. It is simply inadequate in meeting the complex social demands of middle class adulthood in the twenty-first century.

Kegan (1994: 134) says:
"The mental burden of modern life may be nothing less than the extraordinary cultural demand that each person, in adulthood, creates internally an order of consciousness comparable to that which ordinarily would only be found at the level of a community's collective intelligence".

Kegan says there's a dramatic transformation from birth to about twenty-one months. In less than two years, a huge transformation takes place from having almost no distinction between subject and object to the beginning of a distinction between what is the self and what is not the self. The child becomes a part of a social world - an enormous transformation. But the next transformation takes maybe twice as long, and then the following one takes twice as long as that one.

Kegan (cited in Demetrion, 1997) suggests there are changes between self-assertiveness and the position of self within long-term social relationships, institutions, and normative ideologies. The second order sense of absolute self-possessiveness (usually achieved by adolescence) gives way to social binding in commitment and relationship, which he defines as “cross-categorical”. This is the capacity to think beyond oneself, to be self-reflective and have a loyalty to the greater community. This is the third order of consciousness, which is normally achieved by adulthood.

The fourth order, in turn, is a move back toward self ownership in the sense of identifying a different self, but only within the various roles and social commitments that emerge through the work of third order consciousness. The challenge of the fourth order is to create a distinctive self by which to navigate through the pressures of social conformity without sacrificing an extensive commitment to a broad range of role, ideological, and institutional responsibilities.

Kegan suggests that the subject-object relationship is the key to the transformation of consciousness. So what is the "subject-object relationship"? Kegan says that there is a fundamental distinction in the way that we make sense of our experience – a distinction that shapes our thinking, our feeling, our social relating, and our ways of relating to internal aspects of ourselves. The subject-object relationship is not just an abstraction but very real, it is experienced. What Kegan (cited in Debold, 2002) means by ‘object’ are those aspects of our experience that are apparent to us and can be looked at,

related to, reflected upon, engaged, controlled, and connected to something else. We can be objective about these things, in that we don't see them as 'me'. But other aspects of our experience we are so identified with, embedded in, fused with, that we just experience them as ourselves. This is what we experience *subjectively* – the 'subject' half of the subject-object relationship.

For a certain period of time, a particular distinction between what is object and what is subject is maintained. One knows the world through that lens, and while the knowing expands, it all goes on within the terms of that system. So, when a person gets to be what we call a "concrete thinker," (usually between the ages of six and ten), he or she is able to learn more and more facts, but that's all one learns. Children at this age collect baseball cards, insects, leaves from trees – they come to understand the world around them by labelling the objects in it.

But one has to make a qualitative move to transform the subject-object relationship before one is able to *organise* these facts into bigger abstract ideas, themes, and values. This, then, becomes the next epistemology. Each qualitative move takes a whole mental structure that had been experienced as subject and shifts it so that it becomes seen as object.

Lahey et al (1988) ask a fundamental question relating to the subject-object relationship: from where in the evolution of subject-object relations does the person seem to be conducting his or her reality? Another question asked is: from where in the evolution of subject-object relations are the person's meanings generated? This practitioner viewed the world as almost entirely subject in the early part of the professional life lived, only becoming object, that is separating the self from the business, in later life, effectively moving to fourth order consciousness primarily through educational understandings being applied to practice. Lahey et al., (1988: 14) go on to say that people can take a perspective on that which is "object" to them by definition. We know what is object: "by seeing what the interviewee is able to reflect on, control, take responsibility for, be in charge of, manipulate or regulate".

In writing the Professional Development Memoir, this researcher attempts to reflect on the life lived as an object to deliver data for the design and implementation of a teaching course at a later stage. One purpose of this memoir is to identify or surface to what this writer was subject in his meaning making systems that subsequently became object in the current meaning making system.

Lahey et al. (1988) describe a person's abilities as what she knows, which includes what she knows she doesn't know, and limitations such as what she doesn't know she doesn't know. Naturally, in the writing of this memoir there will be many incidents of tacit knowledge and instinct occurring which I was not aware of, or cannot even express. However the focus is on data collection, which will be relevant in relation to the teaching of a course on entrepreneurship.

Kegan says that the demand of this construction of the self - as author, maker, reviewer, and re-maker of its experience, the self as a complex regulator of its parts-is again a demand for fourth order consciousness. The demand that we be in control of our issues (within the context of powerfully normative social settings) rather than having our issues be in control of us is a demand for fourth order consciousness. In terms of this Portfolio, then, this practitioner is the author and reviewer of the life lived, in order to reach the subject object view of my meaning making system, to separate out the relevant experiences for inclusion in the creation of a teaching module.

Lahey et al (1998) describe the evolution between stage 3 and stage 4 as the story of gradually separating internalised points of view from their original sources in others and making the self itself a coherent system for their generation and correlation.

In relation to work, and of particular interest to the work of this writer as entrepreneur and teacher Kegan lists his claims for Fourth Order

Consciousness as they apply in work and school environments. These are listed in Table 2 below:

Table 2: Fourth Order Consciousness

Work	Invent Work	Self Evaluate	Own Vision	Respons-ibility	Master Role	"Out-side in"	Eval-uate Beliefs
School	Critical Thinking	Own Values	Set Goals	Co-Creator of Culture	Read Actively	Self Reflect	Own Con-cepts

Source: Kegan (1994:302).

In more detail (Kegan 1994: 302):

- To invent our own work (rather than see it as owned and created by the employer);
- To be self-initiating, self-correcting, self-evaluating (rather than dependent on others to frame the problems, initiate adjustments, or determine whether things are going reasonably well);
- To be guided by our own vision at work (rather than be without a vision or be captive of the authority's agenda);
- To take responsibility for what happens to us at work externally and internally (rather than see our present internal circumstances and future external responsibilities as caused by someone else);
- To be accomplished masters of our particular work roles, jobs, or careers (rather than have an apprenticing or imitating relationship to what we do);
- To conceive of the organisation from the "outside-in," as a whole; to see our relation to the whole; to see the relation of the parts to the whole (rather than see the rest of the organisation and its parts only from the perspective of our own part, from the "inside-out");
- As citizens of a diverse society:
  Resist tendencies to see "right" or "true" that which is merely familiar, and "wrong" or "false" that which is only strange (contravene our tendencies towards ethnocentrism, gender-centrism);

- Be able to look at and evaluate the values and beliefs of our psychological and cultural inheritance rather than be captive of those values and beliefs; and,
- Be able to recognise our styles (how we prefer to receive stimulation and energy, prefer to gather data, prefer to make decisions, or how spontaneously or structured we prefer to orient our lives; our orientation to separateness or connection) as preferences (rather than as superior apprehensions).

In School:

Kegan says one should:

- Exercise critical thinking. The students will need to look at their work and businesses in a critical way, as an object of their thinking and experiences on the course;
- Examine ourselves, our culture, and our milieu in order to understand how to separate what we feel from what we should feel, what we value from what we should value, and what we want from what we should want;
- Be a self-directed learner (take initiative; set our own goals; take responsibility for our direction and productivity in learning)
- See ourselves as the co-creators of the culture (rather than only shaped by culture);
- Read actively (rather than only receptively) with our own purpose in mind;
- Write to ourselves and bring our teachers into our self-reflection (rather than write mainly to our teachers and for our teachers); and,
- Take charge of the concepts and theories of a course or discipline, marshalling on behalf of our independently chosen topic its internal procedures for formulating and validating knowledge.

Kegan describes meaning making as not merely cognition or knowing something divorced from feeling or social relating. He says it is about the

organising principle we bring to our thinking and feelings, and how we relate to others and to ourselves.

In the Professional Development Memoir, I reflect on my professional life and examine my meaning making to identify the evolution of my meaning making system over my business life. I then examine that life lived through the lens of Kegan's framework for Adult Mental Development and the subject-object relationship. The memoir provides selective episodes and experiences during the business life to be used as data to identify the theories of entrepreneurship developed by this practitioner and the changes in meaning making systems during that period of development.

3. Professional Experiences and Development of Meaning Making System

There are thousands of books and papers on business and business lives. Students and professors alike have studied and taught theory after theory on how businesses start and how strategy works. All I can say is that my particular business life was inextricably linked with my personal life, and in that sense was, by definition, entirely unique. My early experiences and background were to influence my thinking to a great degree and give me the self-belief and determination to follow a course that would lead to business success.

Techniques of Writing

Because I feel I have something to say which is interesting to both academics and other readers, I intend using some guidelines to make the prose in the Professional Development Memoir flow and be accessible to readers (see Appendix A). The Memoir should also include humour and engage the reader. The literature encouraged me to write the memoir as a story and to introduce some style to the telling of it rather than writing it in an academic style. Maguire (1998) was the most useful in that he gave the clearest guide to a novice on how to write a memoir. However his suggested "restoryation" is

not applicable to a Research Portfolio as the story must be told with as much accuracy as possible and not retold in a "creative" way.

The Story of an Entrepreneur

My father is bottling oil from a barrel, opening the tap and letting the gooey liquid pour in. The shed stinks of oil, and it is freezing. He forces the silver cap onto the bottle with a special machine, sealing it. I am five years old, watching his every move. He wholesales the bottled oil to petrol stations in Ireland. It is 1958.

Unfortunately, this little business of his is doomed to failure, mainly because of his poor health – from cigarettes - and a third world Irish economy that would make any kind of business difficult, if not impossible. He died a year later and left my mother and the four of us, aged twelve down to five, impoverished. There was no insurance, no money, just a house and a mortgage to pay. I was his favourite, and missed him, big time.

It is 1984. I have just walked out of the offices of my accountant in Dublin, deflated and shocked. He has advised me that my one-year-old business is not working and that I should consider another way of earning a living. I have to face home to a wife and children with no future, no hope.

Twenty-one years later, it is 2005 and a contract on a building I have sold has been signed. "It's a very high price," said the auctioneer, "€6.7 million". I could not believe it. The building had been bought ten years earlier for €400,000. The struggle was over. In those twenty years I had developed an import and distribution company and a property business that prospered, and despite my accountant's advice, I "made it".

The Travelling Salesman

My first serious job was in 1975 as a sales representative with a boiler distribution company. I was working in a pub in Dublin and a customer said: "Do ya want a job youngfella?" The free company car was enough to sway me.

I would be selling central heating boilers, the workings of which were a mystery to me. After a day's training I went out and sold the boilers and was soon being described as a brilliant salesman. I was very surprised at this, as I was just "doing the rounds". I really didn't know what I was doing. The sales manager had to call me aside one day and tell me that sandals on bare feet did not work with a pin-striped suit! However sales went well.

Another day the sales manager came to visit my customers in Cork. I was using an old borrowed VW Beetle, as the company car was in for service. While travelling down the South Mall in Cork with the boss in the passenger seat, one of the Beetle's wheels passed us out. The tyres (remoulds) had been changed the day before and hadn't been tightened properly. I was able to pull over and put it back on.

An important lesson was learned from the first job experience: selling is about the product, not contacts or who you know. This practitioner had no contacts at the beginning. Somehow it seemed possible to be able to get the orders where many before me had failed. There was always the belief that business was about the product, quality, delivery and looking after the customer. Communicating this to the customer is so important, as is following it through so that one becomes trusted. Dealing with customer complaints to a satisfactory conclusion is crucial. Once you solve the problem, you have a customer for life. Repeat orders then flow in.

I moved on from one company to the next, three in all over four years, getting experience and contacts in the trade. I also ran a stall at an open air market in Cork on Saturdays for one winter. I would buy arts and crafts on my way around the country and then sell them at a profit at the weekends. This didn't make much money, but a lot was learned about business and profit. I used to be surrounded by other dealers who were rough and ready but knew how to make a living at the lowest level of the retail chain. I quickly realised that in order to survive you needed to have something different. I sold my stand after a year of cold wet Saturdays.

Own Vision

In 1982 I went to an international trade fair of heating and plumbing materials and sought out my own agencies. This was while working for someone else and my ruse was spotted. I was fired. This forced the issue, and I started a business, despite the negative experience of my own father's failure. Somehow my Meaning Making System had managed to shut that reality out for me. My experience of being so good at selling convinced me I could do this successfully. I simply approached several existing suppliers (including one Irish manufacturer) of heating and plumbing materials, leased a van, and went around the country selling to all and sundry, from plumbers to hardware merchants. Crucially, the suppliers gave me credit, so that I could get paid early (cash or 30 days credit) and pay these suppliers in 60 days. I had raised a couple of thousand pounds from relatives.

While local suppliers would give you supplies on credit, the international companies were strictly cash. Without finance, I would find it hard to develop an agency with exclusive distribution rights, essential if I was to develop a viable business. A good relationship with your bank manager is so important at this point, and mine was excellent. They need to trust you. I knew how important it was to tell the bank what was going on, warn them well in advance of my financial needs and honour my commitments. In time, the same was true of the relationship with suppliers.

Understanding the importance of this learning process or Meaning Making in creating a sustainable business, I will want to have the students learn this process by actually sourcing products from suppliers for their campus businesses and set up a bank account with their own money. The bank manager from the campus bank will attend their presentations and comment on their businesses.

Selling "Boxes"

I always felt my role started after the product was made. The before process was boring and for the "anoraks". There is a fundamental difference between the people who make the products and those who sell them. The ones who make products are a particular mindset. They are the engineers, researchers, inventors. The ones who sell the product liaise with the market, communicate, do the deals and give feedback to the designers and production team. I drew a big thick line between the ones who made things and those who sold them. All I wanted was the box! I discovered this with my first business.

Moloneys of Cappagh made wood burning stoves. While they were good at making them, they couldn't sell them. They were barely surviving. I asked them for three stoves which I put into a leased Toyota van and I started driving around to the buyers in Munster inviting them to view the product in the van and taking orders. I would ring the orders into Moloneys, get the boxes collected and keep the factory going. The business survived, and lots of stoves were sold. This business lasted about a year.

I decided to open a retail outlet. I teamed up with a busy plumber and opened a 50/50 operationin Cork called O.B. I had the idea, he had the money. This was a difficult and challenging business, supplying plumbers and builders with materials, as well as having a bathroom showroom. Turnover was high and margins were low. Credit had to be extended at a time when the economy was weak (1983) and cash flow was a major problem. I learned some valuable lessons: sales are of no value if the profit margin isn't high enough, and you must get paid! Students will need to learn the importance of this while running their businesses.

What About Profit?

My experience of opening a retail outlet taught me a huge lesson about profit: you must make enough and don't be afraid to! Early in the business life of an

entrepreneur you can often be afraid to charge enough. It is as though you feel you are not entitled to make money. I am not sure where I learned about the mathematics, but here it is:25% on to cost is 20% off the selling price. When you add €25 to €100, it is **€125**, 25% *on*. This €25 is only 20% of the total €125. Why is this so important? Because when you buy and sell goods, it is vital to know how much of the **sale** price is profit! Ultimately, if you don't know this, you go bust.

Hector Grey, a street toy dealer, who learnt his trade on the streets of Dublin in the 1940's and 50's and went on to be a millionaire, famously said that his business theory was 1%. "I buy for one penny and sell for two pennies - one per cent". Of course he was wrong, not about the amount he put on, but about one per cent – of course it was 100 per cent *on*, 50 per cent *off*. The other important numbers are 33 on is 25 off, 50 on is 33 off, 200 on is 100 off (and if you are getting that much you will be rich!). If you don't understand this, don't open a business.And of course this is the *gross* profit. After you have paid rent, rates, salaries, light and heat and transport, to name a few, you are left with the *net* profit, which in many cases is anything from -10 to +30%, but is often in the 4 to 5% range of sales, particularly in mature industries. So, what you add on at the beginning is absolutely crucial, as it could make the difference between 3% or 10% of your total sales, which can be in millions, or hopefully 100s of millions.

With all the sophistication of MBA degrees and risk analysis, I feel that the basics are often lost. The technology bubble in 1999/2000 demonstrated this. I like to quote my good friend Johnny Murphy who runs a small successful engineering workshop in Cork with his cousin, Barry Quinlan. Drucker(1985) says that there is always a theory of business and Johnny's is:"There must be more money coming in than is going out". Simple isn't it? Not so simple, in reality. The tech boom of the late 90's allowed companies who had little or no money coming in to get valuations in 100's of millions.

Move On

I sold out my shares in the retail outlet in 1982 because our profit formula was wrong – 25 on being 20 off and it simply wasn't enough to keep the business afloat. I got the princely sum of £10,000 (they say the first 10 thousand is the hardest) and moved on. The business subsequently prospered and is trading successfully today at much higher profit margins. I was learning that you must move on to the next business idea if this one isn't working. Instead of the advanced strategy employed by big corporations, the life of an emerging entrepreneur was about trying something, and if that didn't work, trying something else. What you learn during this process is invaluable. I remember looking at the cheque and realising that £10,000 is a lot of money, especially when you started with nothing.

I had some ideas, particularly a revolutionary push-fit plumbing product called Acorn, which I had seen at an international exhibition in Birmingham in 1983 while still running the retail outlet. Acorn was a push-fit flexible plumbing system which saved the plumber a lot of time and difficulty with installation. Up to then plumbers had been using copper pipe and brass fittings, so this was quite a breakthrough. Instead of having to make difficult pipe bends and complicated connections with compression fittings, Acorn came in coils and simply snapped together. It was also unique and patented, so if succssfully soldit would be an exclusive market for a while at least.

How did I get the agency? I just asked for it, that's all. Most of the trade believed that it could not be sold; one or two had tried and failed. I simply believed the opposite, and having been in the market for sometime felt that I was on to something.I put together a portfolio of products which included Acorn, sanitary ware from France and various brass fittings for plumbing. I made the decision to wholesale to the shops rather than sell to the plumbers direct, as the shops seemed to stay in business and I had learned something about their operations and psychology from running one myself. Also, the potential market was larger, selling nationally rather than locally. Distribution could be started from home. There was no need for expensive

corporate premises or even a showroom. You go to the customer, not they to you.

Again, cash flow was a problem. The international suppliers took time to trust a distributor, so credit took a while to establish, while the shops required 60 to 90 days credit. Add the requirement for maintaining a stock of products and soon £10,000 seemed very meagre indeed, as did the £5,000 overdraft facility squeezed from the bank. Monthly visits to the bank were common, begging for time and more facilities. The ability to convince the bank that the business could survive became crucial, as did the contact with Hepworth, the main supplier of Acorn. I quickly learnt that the bank weren't really that interested in the figures or sales, they just want security for their loans. A cottage my wife and I had bought as our first home in Cork was put up as collateral, which resulted in a tearful phone call from her mother warning her about the danger of our actions. I had to personally guarantee the overdraft and whatever loans were issued. It was very scary but I just took whatever they would give me and carried on.Hepworth, my supplier, continued to extend credit, right up to 120 days in order to grow the market. Eventually, invoice discounting became necessary, where the bank paid the issued invoices up front, and owned the debt. This was expensive, as overdraft rates at the time were 15%. Every month was "a sweat" as you never knew whether you could afford to pay the bills or not. Terrifying.

Eventually, after 3 years of hard work, in 1986 the Acorn push-fit plastic pipe and fitting system took off. I would convince a local hardware store to stock the product. I then would contact their customers, usually local builders and plumbers and convince them to switch from copper pipe to Acorn. About 1 in 6 did, so there was a lot of work involved. I stood at their counters at 8 in the morning to meet the plumbers as they came in. I would turn up at every home exhibition and trade show and argue the product's advantages endlessly. It's called "working the agency". Lots of people take on agencies but few actually work them the way I did. I knew that once they started using the product, they would continue using it for years, which is what happened.

Back at home, Irene, my wife, handled customer queries and orders. She remembers having a babysitter look after the children while she packed boxes in the garage outside. “I remember having the two kids in the car outside our first rented warehouse while I helped a truck unload a consignment of pipe” she told me. It was truly a family business at that stage and it would not have worked without her. She also remembers our postponement of our Christmas holidays for another day to look after a customer’s late order. Nothing was too much and the customer had to be taken care of.

Because a proper shelving system was regarded as too much of a luxury, I got a consignment of tea chests from Lyons Tea in Dublin for nothing. These proved to be a brilliant shelving system as they stacked five high in the garage and were open in front for stock picking. Whenever stock needed to be moved to a new location the tea chest could be easily moved. The only drawback was the tealeaves which kept turning up in customers orders and were a regular part of our daily lives, the wonderful smell of tea always there!When we moved our distribution centre to Cork the tea chests were picked up by a haulier chosen from the local paper. I worried all the way to Cork in case he simply disappeared with all our stock. Luckily he arrived and another risk paid off.

There were moments when it all seemed impossible, and I survived one crisis after another. In the first year of this new business a consignment of sanitary ware from France arrived (all pre-ordered by merchants) only to be broken inside the boxes. I nearly went broke because of this. I eventually convinced the manufacturer to take a hit and replace the broken items. This made me decide never to sell fragile products again. Acorn plumbing was a durable product. Every mistake in business costs money and this was no exception. At another stage there were leaks on site for which the Acorn product was inevitably blamed. On one occasion water poured from an apartment into a bank’s computers below and I was certain I was finished! For local political

reasons, the matter was not pursued by the bank, and O'Brien Marketing (OBM) lived to fight another day!

When it was clear that I was doing well, others in the business would say: "but you worked very hard at it", as if to say it was too much work. I always answered: "If I told you that you could earn 10 times as much as you do, wouldn't you work hard?" I don't think anyone quite believed me, but eventually I was earning more than a million a year.

Marketing Innovation

On an early visit to Hepworth, our suppliers in England I found a case with a heater inside it, showing the piping working while hot. I asked for it and headed off around Ireland showing the case to everyone. It gave credibility to the doubts about plastic piping working with hot water and was a great boost to sales.

One of the earliest product exhibitions took place in a small town near Letterkenny, Co Donegal, up on the northwest corner of Ireland. Jim Johnston, a local plumbing merchant, had arranged for us to do the demonstration in a falling down corrugated iron shed with a single light bulb out in the middle of nowhere. It was astonishing. There must have been thirty plumbers and builders there and we were given the best of attention and respect. Tea and sandwiches were served afterwards. I sold the advantages of Acorn hard, something I would do over and over again throughout the country in pubs, hotels, shopping centres, agricultural shows. The argument got better and better as you went along, because you had to overcome the objections as they came up. Sometimes the presentations would attract six or seven people, and sometimes upwards of one hundred. Often entire communities would turn out and it would turn into a bit of a night out for all the family. Inevitably, you would meet plumbers at the shop counter the following day actually purchasing the pipe and fittings. If they were buying copper, I would do my utmost to convince them to switch over to Acorn.

When the business got bigger, it became impossible to meet plumbers individually, so I developed a marketing system where each plumber and builder in Ireland heard from us every six weeks, either by telephone, post or through exhibitions. An intensive contact programme, which included giving out samples of product to new users and following up with phone calls, was very successful.

We simply approached our stockists through our sales people and told them that we were going to develop business for them through direct contact with their customers. They would then part with their customer lists which we added to our database and contacted them directly with various direct sales methods: phone calls, breakfast mornings in shops, samples by post, newsletters. We recorded tapes, videos and DVD's and used whatever mass media we could imagine to continue a regular contact system with the customer, who in my eyes, was always king. The films were recorded cheaply with a video camera and one of the sales people talking into it and giving demonstrations. The promotion was relentless.

We made sure never to supply the plumbers directly but to send them along to the merchant to buy the product. This was to prove invaluable in the long term, as our distribution network was extensive. We even published our own paper, for two years in 1994/5, called "The Irish Plumber" and circulated it nationwide. We made sure to have articles of interest to plumbers and put our promotions of Acorn inside the magazine. We were also the first to advertise a trade product on national radio, booking a six week blitz, after which sales grew rapidly. We booked the front space in the bi-annual Building Exhibition and put on a great show!

I had a number of lucky breaks, what economists call "unintended consequences" or "systemic effects". The product was manufactured in Britain, and in 1985 the value of sterling dropped 25%, increasing my profit margins and making the product much more competitive in price. Ireland's economy was developing. Interest rates dropped.Turnover increased and I

took on more employees. Eventually this became 10 people and turnover reached £4 million. Profits allowed a substantial income for me and the balance sheet became strong. Crucially, the numbers were 50% on, 33% off.

One of the great advantages of building up a company through individual small merchants is that once you have the network established, it is very difficult for competitors to break it down.

Government Interference in the Market

I encountered the activities of the Industrial Development Authority (IDA), a government run industrial developmentbody. Their policy, besides attracting Foreign Direct Investment, was to encourage and grant aid local industry in "import substitution". This was seen as legitimate development of local enterprise and I ran straight into them. Because my product was an import, they grant aided a local company to develop "Qualpex" a competing pipe system. They also ran trade fairs throughout the country promoting these products. I was incensed. Here were my government using my taxes to compete with me! I got my solicitors to write to them demanding to be included in their promotions, and it soon stopped, although the grant-aiding of local enterprise continued and does to this day. This permits the competing company to enter the market against you at a cheaper price, because they do not have the same costs of production as their plant and machinery, as well as buildings, are often paid for by the government, an advantage my suppliers in the UK did not have.

More seriously, it also gives Irish companies a comfortable advantage which is very akin to protectionism. This form of interference in the market is hugely questionable, not only because of the problems it creates in the market place, but protectionism has been proved to lower the competitiveness of companies when they attempt to compete on the world stage.

Dublin Corporation refused to approve the use of Acorn in the Dublin market for years. This made accessing Dublin virtually impossible: often I was called to sites where a plumber was being told by the inspector to "take the whole lot out", costing him a fortune. One plumber told me that he had given the local plumbing inspector "a brown paper bag", which was gratefully accepted and he still had to pull the lot out!

The reason given was that the internal bore of the pipe was smaller in diameter than copper and that this would affect the flow of water to the taps in Dublin. However, the locally manufactured Qualpex, which had the same internal bore, was no sooner on the market than it was approved. I couldn't believe it. After 10 years of trying, we had failed and they got approval in months. A threat to sue got the approval immediately. I could only assume that other influences were brought to bear which my honest dealings had failed to implement, although I have little evidence of this. I also may have been kept out of the market by the copper lobby, which was strong in Dublin. To this day, it is the weakest part of the market for the product. Efforts were simply concentrated outside of Dublin.

Warning: Look out for the "The Upgrade"

In 1999 Hepworth, the manufacturer of the product, decided, in their wisdom, to launch the upgraded version of Acorn and to change the name to Hep 2 O. I had been warned by Thos Cournane, a friend, mentor and customer of mine from Tralee about this very problem. "When they tell you that they are launching the new version- that's when the problems begin" he said. He was so right. The new fitting started to fail, three or four months into its launch. The leaks took place under concrete floors where the fitting connected to Irish size copper. Disaster! We were getting phone calls from all over the country from irate plumbers and merchants who had to start digging up floors in peoples' front rooms and all these cases had to be dealt with one by one and compensated. Hepworth had not done their homework and a lot of credibility was lost in the market place. I went out around the country myself and dealt with one case after another. Insurance companies

had to be informed and for six months the business felt like it was just dealing with claims. Valuable market share was lost and it opened the door for other companies to get into our territories where before they had been shut out. Everything eventually settled down but not before nearly £300,000 was paid out. For the first time, market penetration stalled.

Employing Consultants

Throughout the time of running the business a number of consultants were employed, accountants, lawyers, marketing people and most importantly, in 1995 a psychologist who was an expert on Human Resources. He interviewed the staff, and finally me. People should be trusted to do their jobs and not interfered with and that it was not necessary to control all activities in the business. Market rates should bepaid to staff for their jobs success rewarded. The bank manager had advised that it was time to become a manager of the business and not be on the road selling all the time. The slow process of withdrawing from the business began and The staff were allowed to run the business.

Discovering Property

Early in the life of the business I went out to my garage at home one Monday morning. On opening the door to examine the stock, the boxes fell down on top of me. I realised I needed to rent a warehouse! In those early days, you only spent money when absolutely necessary.This was a gradual process of moving from one premises to another, renting from various landlords. What I didn't realise at the time was that I was also learning about the property business. All I needed in order to become a landlord myself was a building. I understood the needs of small business people like myself, and the merchants I was supplying (I had opened a shop - OB). If the opportunity arose, I would buy a building and attempt to rent out a portion of it.

In 1992 that opportunity arose. A large 200 year old building in Cork city was up for sale. It totalled 30,000 sq ft and cost £320,000. Somehow I had to acquire it. It was next to the bus station and yards from the newest shopping

centre in Cork. Location was excellent. I borrowed 75% from the bank and took the leap. I put my business in the back portion of the building and rented out as much of it as I could. This would prove to be the most important move of all. I would sell the building 12 years later for EU 6.7 million.

I would describe my approach to business as learning by doing, building on experience which leads to knowledge and insight. What I do seems very obvious, and like other entrepreneurs, I cannot understand why everyone else isn't doing it. When I am asked how things are, I often say "Great – they haven't copped on to me yet!" There is always the feeling that you are just one step ahead of the posse. I believe that creators of businesses are unaware of the value in depth they create by their actions, both for themselves and their families and the economy as a whole.

Exporting the Service

In England, Hepworth was having difficulties with the market in London. It was a fragmented and competitive market and they were losing market share rapidly. In 1999 they asked me to take over distribution within their organisation on a service basis, which I did. I set up a company marketing and distributing their products operating within their premises on the Southeast of London. This also became quite lucrative and lasted for seven years. After growing the business substantially between 1999 and 2006 I handed this back to them.

Shopkeeper

During lunch hour one day I noticed an empty shop in a busy street in Cork. I decided to open a newsagents/delicatessen there, which I did in partnership with a friend. This also took off and I sold my shares after 18 months. What I saw of the retail business disappointed me, particularly in the food/newsagents business, as margins were very low and shops opened and closed with great regularity. The food business was becoming dominated by big players, as happens in mature industries.My own distribution business was itself becoming dominated by big players and a takeover was inevitable.

Business Education

Well into my business life, in 2004 I decided to do an MBA in University College Cork. I did this because I felt that unless I got the level of information that the big companies enjoy, I would always remain the small businessman I was. How true this turned out to be. Here was a high level intellectual look at business which I relished. Business was a science. Risk could be analysed. Markets could be understood. The broader economic view was analysed.

"See that fella there?" Dr Martin O'Fathaigh, head of Adult Education at UCC once said about me while I crossed the campus, "he made it in the business world and came in here to find out how he did it!"It transformed me as a businessman. It allowed me to separate the business from my person, as in Kegans' subject object relationship. Gradually I began to understand the analytic way of looking at business and implemented a number of changes to my own businesses, such as using the Balanced Scorecard by Kaplan and Norton (1996). I sold the property the business was in and bought a modern warehouse which I fitted with the best of equipment (operations). I began to see business as strategy and investment over a longer term, and not just one month after another. The new approach worked wonderfully. Some staff left because the changes overwhelmed them and the serious ones got down to making the business great. This was done by implementing the recommendations of the Balanced Scorecard based on my analysis and with the assistance of an MBA lecturer, Mr Jim Walshe and relentlessly improving the quality of every part of the business. Profits took off once again.

I learnt an expensive lesson about technology during this process. I decided to upgrade the computer system in the company and went for the latest online management system from Netsuite, an offshoot of Oracle. It was a disaster. The idea was that it could be accessed from anywhere and therefore would be a wonderful way to run a business from any location. The system simply didn't work and we were the guinea pigs. Tens of thousands were spent and countless hours of staff time and commitment ended in failure and we had to abandon the system altogether and start again.

Mistakes

There are some things I would not do again. Employing friends and family is almost always a mistake. This is done because the experience of recruitment is not usually a skill an entrepreneur has. Instead of learning the skill, the temptation is to employ someone you know, because you feel you can trust them, and you have the social reward of giving employment to someone within your circle.

The problem arises, of course when they don't work out, or you clash with them personally. I made that mistake several times, and have paid the price over the years in broken relationships. I employed, and had to fire, my sister, brother in law, and a couple of friends. I now look back on these events with regret and blame myself for being so naïve as to employ them in the first place. I also discourage people from going into business with their partners, wives or husbands as the boundary between family and business becomes blurred and the pillow talk becomes business. I believe that family and business lives are incompatible and the twain should not meet. My own marriage did not survive the business. I have actively discouraged my children from entering the business for these reasons.

Having money to spend is also a strange experience. Suddenly, there are hundreds of thousands in the bank, and you can buy whatever you want. For many years I did just that, and ended up with a lot of rubbish. The feeling of being different is uncomfortable and it really can be "lonely at the top", particularly in a small community. The funny thing about money is that you very quickly have your car, house, plasma screen TV and holiday home, and money becomes meaningless. This is truly a subject/object experience in Kegan's terms. In my case, I really never expected to make more than a good living and the quantities of cash that have become available are something of a burden. I know there are many who would find that hard to believe, but for me, it brought confusion and uncertainty. Becoming rich was quite a crisis for me, as I had reached my goal, and now what?

Exit

Wavin, a major multinational, have bought Hepworth and have purchased OBM. This has been a timely exit from that particular business.

In2006 I began a new distribution business with a Latvian entrepreneur who approached me through a business contact I made during a course in UCC. The business was distribution of fixings (nails and screws) for the building industry. This was unsuccessful due to the inexperience of the entrepreneur which led to poor product choice and low customer knowledge.I am now being drawn into the world of investment and equity markets, because of the funds earned from the buildings sold, and am on a new learning experience.

Living in Terror

The story as I tell it seems simple and smooth, and it was far from that. I lived most of my business life in terror of failure and was often on the edge of panic. I simply could not consider failure, so was prepared to do anything to survive and prosper. It was only in the final 5 years of the business that I started to relax and believe that everything would be ok no matter what.

4. Research Direction - Programme for Continuing Professional Development

In Table 3 below the events that led to changes in my meaning making system through my professional career as an entrepreneur and subsequently as a teacher are shown. From the beginning when I started the business, the important events included the selling of my shares in the first venture, the development of a "national" rather than "local" mentality, delegating, employing consultants, the venture into and exit from property, the vital business education and the subsequent DBA and teaching at a university. Many of these experiences can be considered through the "subject/object" lens in Kegan's terms. Employing the consultant allowed me to take an objective view of my employees rather than having an emotional or subjective attitude. Taking an object view of properties purchased encouraged me to view them as assets rather than personal possessions with emotional connections and led to their disposal. The meaning making (see Table 3) that occurs throughout the memoir and during the design and implementation of a teaching module and the concurrent completing of a DBA contained subject object experiences in that through taking an object view of my professional life I become more able to teach entrepreneurship.

In Table 3 the development of this practitioner's meaning making system is seen in the professional life lived and the impact of those understandings or meanings. For example, the setting up of the first business in 1983 was because of the success as a salesperson while working for an employer, my thinking changed from seeing the world as an employee to seeing the world as a source of opportunity to be exploited independently, a major subject/object shift in meaning making. In 2001 the employment of a Human Resources consultant allowed a shift in meaning making about my relationship with employees and changed that relationship from subject to object. As a practicing entrepreneur much of my thinking was subjective: I was the property, I was the business. This changed over time as the emotional attachment to these items was abandoned in favour of an object view of assets (see 2006 and 2007 below).

Table 3: Author's Meaning-Making System (MMS)

Year	Experience	MMS Before	Effect	MMS After
1983	First business	Job with employer	Confidence to be entrepreneur	Independence possible
1984	Sold shares	Turnover key	Seek unique product	Profit margins key
1984	Start distribution business	Retail locally	Thinking bigger	Larger national market
1985	Cash-flow problems	Sales are what matter	Invoice discounting/ credit	Cash is king
1986	Rent warehouse	Work from home	Understand logistics	Professional business
1988	Employ sales staff	I could do everything	Became a manager	Tasks can be delegated
2001	Employed HR Consultant	I controlled the Business	Delegated management role And left day to day running of business	People should be trusted to do their own work
2002	Studied Managem-ent book	Business was intuitive	Sought further information	Business benefits from scientific analysis
2003/4	Did MBA in UCC	Academic study irrelevant	Professionalised business using tools learned in MBA	How little I understood about business theory
2006	Sold property assets	Emotional connection to property	Sold most property assets	Properties are assets that can change in value
2006	Started DBA	Entrepreneurship is individual	Taught entrepreneur-ship to postgraduates	Entrepreneur-ship is a discipline
2007	Sold business	Emotional connection to business	Wealth creation and realisation. Business object	Businesses are assets

Source: based on application of Kegan's (1994) Theory of Adult Mental Development.

While the experience of "real " business is the foundation of this practitioner's knowledge, doing an MBA (see 2003/4 in table 3) late in the business life introduced management and economic theories and in some ways instructed what had been done in theory at both environmental and business levels. The MBA was an important element in pushing this writer

towards Fourth Order Consciousness and the linking of theory to business through doing that degree greatly influenced the subsequent decision to become a teacher, as the tacit and instinctive understandings of this entrepreneur's theory of practice had been surfaced as a result, demonstrating the changes in Meaning Making that occurred and enabling these understandings to be used in the subsequent teaching.

In order to interrogate this memoir I use the framework of Kegan's guidelines for reaching the fourth order of consciousness.

In relation to work, Kegan lists his claims for Fourth Order Consciousness:

(a) To invent our own work (rather than see it as owned and created by the employer).

Having had the early experience of running a market stall, and two experiences of starting businesses that didn't quite succeed before the third finally did, shows the extent to which my meaning making system developed. Deep lessons were learnt about what businesses need to become in order to be successful. I had no business training prior to starting in business and literally learned by doing it. Each failed or abandoned business created a new conviction about the requirements for success, such as the margin lesson in OB and the need for differentiation in OB. The meaning of what work meant changed substantially during these experiences from just working for an employer to creating and inventing a business and career, an entirely deeper and broader experience.

A business and entrepreneurial career was, literally, invented by this practitioner through twenty years of reacting creatively to experiences of the commercial world. The meaning making was by its nature instinctive and reactive, rather than reflective and there was little awareness of frameworks or theories until an MBA was undertaken. It then became evident that this writer had been, in effect, using theories such as marketing, methods (direct marketing, talk to the customer, theories on how to sell) customer service (after sales) and cash flow, indeed there

were a myriad of theories on all aspects of the business. One could only describe the meaning making as, as Kegan puts it, embedded in the subject. However, there was much learning and development of meaning, albeit tacit, or subconscious.

(b) To be self-initiating, self-correcting, self-evaluating (rather than dependent on others to frame the problems, initiate adjustments, or determine whether things are going reasonably well).

Once the business person has developed the awareness to identify the benefit of reflection, they appreciate that the process of conceptualising, creating and running a business demands continuous examination of the self and questioning of one's judgement and role in a business. The introduction of a consultant in order to solve difficulties with staff motivation during my time as a business owner accelerated this process and the psychology of being a business owner and an employer was well understood. Getting a formal business education also played a major part in this process. Through doing the MBA I became much more aware of the changes that were needed not just to the business, but to *my attitude to myself* and reflection on this as owner of the business. This awareness arose through the realisation that there were business theories and frameworks through which the enterprise could be examined and that the operations of the business needed to be professionalised. This was actually carried out while the MBA was being done and was a major change in Meaning Making especially around the need to become far more professional in the way the business was run, particularly in the area of operations.

(c) To be guided by our own vision at work (rather than be without a vision or be captive of the authority's agenda).

The memoir shows that throughout the entrepreneurial career of the author the business was sustained by the vision of the practitioner. The vision was that I could successfully become an entrepreneur and this was originated and carried out by myself. Marketing campaigns and methods

were created by me and not by the company who made the products I sold. In fact the company who made the products not only copied the methods used by us, but eventually offered me a part of their own territory to manage. The main changes in Meaning Making that took place occurred during the partaking in the MBA degree when subject/ object separation took place.

(d) To take responsibility for what happens to us at work externally and internally (rather than see our present internal circumstances and future external responsibilities as caused by someone else).

I understood well that the responsibility for what happened in the business was ultimately my responsibility and not that of my employees. Part of the development of this practitioner's meaning making system was the deep understanding of the urgency of problem solving, of taking responsibility for any problem that occurred with customers or products, operations, cash flow or staff. Later, when teaching began at a university, a lot of these Meaning Making experiences would be very useful for teaching at undergraduate, postgraduate and executive levels in the sense of bringing such experience into the teaching practice in the class room and to inform the requirement of the students to run their own campus businesses.

(e) To be accomplished masters of our particular work roles, jobs, or careers (rather than have an apprenticing or imitating relationship to what we do).

While selling and marketing were my strengths, people management and logistics were certainly weaknesses of mine. These improved over the years, but eventually people had to be hired with particular skills in these areas. There are challenges in being an owner/manager of a young growing business and my lack of business education at the beginning lead to mistakes being made in people management, such as over-delegating responsibility to staff who turned out to be incompetent and by employing friends and family. However, over time, expertise built and

confidence built up with experience creating the “master role”. This deep Meaning Making through sometimes bitter experience created a knowledge of entrepreneurship, which provided a powerful base for teaching later on when these experiences were explained to students in class.

This Portfolio addresses the next phase as a teacher and how this practitioner wants to master that new role.

(f) To conceive of the organisation from the “outside-in,” as a whole; to see our relation to the whole; to see the relation of the parts to the whole (rather than see the rest of the organisation and its parts only from the perspective of our own part, from the "inside-out").

Completing an MBA in UCC was crucial in this respect and certainly gave me the opportunity to see the organisation of the business through various lenses of theories and from a more “object” perspective. This allowed me to professionalise the business, which inevitably led to its sale. The MBA also provided insights into the experiences of being an entrepreneur and provided a strong theoretical basis for teaching which would be very valuable for communicating the principles of entrepreneurship to postgraduates and the means for complementing my knowledge from the experience and practice of entrepreneurship over several decades

Principles of Entrepreneurship

The principles that I developed over my entrepreneurial life that I believe made me a successful are listed next. These are lessons learned that need to be brought forward into Essay Three for the design and implementation of the module to be taught specifically in terms of the understanding goals I choose for students.

These meaning-making discoveries were all made as a result of experiences during the professional life lived. These attitudes and beliefs were learned the hard way, over many years of trial and error. This section is useful for

determining the kind of thinking I want my students to achieve. The benefits to them of understanding these principles will enable them to become entrepreneurial in their lives and careers. They are:

(a) Be determined: Unswerving determination to succeed no matter what. This is more important than the product or idea. My memoir displays my persistence, which was necessary to survive and the various businesses that were tried prior to the final successful ones.

(b) Trial and error: suck it and see, while minimising the downside. There is much more to learn by doing the strategy than by talking about it. There is a cheap way of finding out if the idea works, which means the risk, is low. If it doesn't work, you have learned something that could easily lead to something else. Persistence is vital. The early businesses I tried were bootstrapped and were relatively easy to exit, as very few commitments were entered into that were catastrophic. This must be emphasised to my students for their own meaning making.

(c) Problem solver: Any problem can be sorted out. Don't delay. Be creative. Stay with the problem. With the "upgrade" of the Acorn product as explained in the memoir I learned the importance of remaining with and solving a problem, which succeeded at the time and became an important meaning-making lesson, which will be emphasised to the students on the course.

(d) Quick. Do things in the shortest possible time. Do everything better and quicker than the competition. Get control of events. Be ahead of 'the posse'. The importance of this knowledge or meaning is discovered when starting and running a business. If you don't do things quickly, the competition will. A sense of urgency as meaning making will need to be emphasised in the teaching style of the course.

(e) Do it! Doing something is more important than what it is you do, e.g. advertising, marketing. Cheap marketing is still marketing. Keep telling

the customers your story. Get the stuff out! Deliver. Tell the customer if you cannot. Too often people think they can't afford marketing. I discovered cheap ways of marketing, as explained in the memoir when the display box was borrowed from Hepworth and displayed around the country in shops.

(f) Sell! Win the argument. Overcome the negative. The years of talking with plumbers during my business life added to my meaning making system. I learned that to win a customer you must win the argument. Students will need to learn how to sell during the module to be taught.

(g) Get people doing it. Key people take over what it is you were doing. You move on. Learning to delegate is a crucial business function.

(h) Repeat. Do simple tasks over and over. It will work eventually. Keep calling on your customers, for instance, as explained in the memoir.

(I) Make profit. Don't be afraid to make a margin. 25 on is 20 off, and 20 probably will not be enough. This was a major meaning-making discovery and is crucial to business success.

(j) Get on with your credit suppliers: banks, suppliers in general. They will give you the chance to expand. These relationships became deeper in time as trust developed. Honesty became a major part of my Meaning Making System. The cash in a business is not yours; it belongs to the company, your suppliers, the banks, and the taxman.

(k) The customer is king. Talk to him. It's amazing how many suppliers don't. When you take the time and look after him, he/she will stay with you forever.

(l) Be straight: Try to be straight, although on a need to know basis. As explained in (j) being straight developed crucial relationships with banks, suppliers and customers.

(m) Everyone loves a trier, people want you to succeed.

(n) Think big and think long-term. Big is the size of the market and time is decades. You will take a short term hit in the interests of the long-term. My meaning making was developed in this area by the realisation through experience that it takes a long time to succeed.

(o) It's easy! This is so easy it's amazing everyone isn't doing it! Throughout the business life lived, I always felt I was doing the right thing. My meaning making developed this further and further as success arrived.

(p) There are opportunities everywhere that simply need to be taken. This is a crucial meaning-making discovery. Students will need to understand this.

The above list was made close to the end of my business career. While some beliefs may not have been held throughout my career, most were. In success, everyone may no longer love a trier (m) and there was some resentment evident of my success. Also, it is convenient to think that it was easy (o), when at times it was very hard indeed. The reference to being straight on a need to know basis (l) means be honest, but your stakeholders may not need to know every detail of your business, for instance your banks need to have confidence in you, so you wouldn't reveal every risk associated with the business. Also, for instance, your customers may not need to know about an isolated product failure. However the list represents a comprehensive account of the meaning making that underscored the life of this entrepreneur and, therefore, would be a powerful list of the understandings I would want my students to achieve in learning to think entrepreneurially and in developing their own meaning making systems.

My Professional Development Memoir reveals that I:

- Sourced products internationally;
- Made decisions on which products were suitable for the market;
- Bootstrapped the finance over many years through banks and suppliers;
- Worked hard selling the products through relationship development;
- Built up loyalty in staff;
- Developed marketing systems that sustained the business;
- Created a quality system for service;
- Identified, bought and rented properties in the commercial world; and,
- Exited the business.

While all of this was experienced and learnt over 20 years, I need to establish a method for communicating these important understandings about these experiences and learnings to students. Each of the points above can be expanded to explain in detail what they mean in the business world and how I experienced these important lessons. For example (j), Get on with creditors and suppliers is not simply about being their friends, it is about the way one communicates and actually trades with the creditors, and honourable dealings with banks, for instance. These topics will need to be linked clearly to understanding goals, which will be introduced to the teaching module later in this Portfolio.

In order to further develop my own Meaning Making System I chose to examine if and how effectively I could support student learning. Because this writer was not a teacher, or had no experience of the teaching and learning methods that exist, an obvious route to go in researching how entrepreneurship is taught is the identification and experiencing of leading exemplars of entrepreneurship education around the world, which is explained next in Essay Two. The purpose of attending these exemplars is to further develop the Meaning Making of this practitioner of how

entrepreneurship is taught in leading universities around the world and to guide the decisions on what needs to be communicated in the module to be taught. The exemplars also guide the further professional development of this practitioner as a teacher of entrepreneurship. Following these case studies of exemplars, decisions are made regarding what parts of these exemplars are relevant for inclusion in the design and implementation of a university module in Essay Three. The design of the module also takes into account economic theories examined and the principles of entrepreneurship from the Professional Development Memoir.

ESSAY TWO: CASE STUDIES OF EXEMPLARS

1: Purpose and Approach

This essay is in the form of case studies in order to identify and investigate best practice methods in the teaching of entrepreneurship in a university context.

Certain examples of existing entrepreneurship programmes were attended and examined. These were selected on the basis that they were leading edge courses from some of the top-ranked universities in the world and could be used by me as foundations for practice in my own teaching as well as developing this writer's Meaning Making Systems. The four institutions attended were: Harvard Business School, Babson College, Massachusetts Institute of Technology (M.I.T.) and Cranfield University. The M.I.T. course was attended while teaching the module in University College Cork, while the others were attended beforehand. One programme, Cranfield, was short (one day and a half) while the other three were one-week full-time programmes. Some of the programmes were for business executives and some were for teachers of entrepreneurship. Three were in the United States and one was in the United Kingdom.

While the audiences for these programmes were different from the audience for the module being designed, in that they were executives or teachers of entrepreneurship, the content was still very relevant for postgraduate students being prepared to enter the business world as the intention of the overall programme is to have the students "business ready" at the end of the programme.

The framework for interrogating these exemplars is Gardner's Teaching for Understanding Framework outlined below. Having attended each course I summarise their teaching, outlining what I consider most relevant to my teaching module and how my Meaning Making Systems changed as a result.

2. Review Method: Gardner's Teaching for Understanding Framework

In 1988 three faculty members at the Harvard Graduate School of Education began an extensive six-year research programme to develop a classroom-tested approach to teaching for understanding. The questions they asked were:

- What does it mean to understand something? ;
- How do students develop understanding and how well do they understand it? , And,
- How can we consistently support the development of understanding?

In *The Teaching for Understanding Guide* (Blythe et al 1998), the answers to such questions are said to be complex and not at all obvious. This writer will not investigate Gardner's writing on the subject but will use Blythe's framework to guide, investigate and examine the results of this Portfolio. For future research, Gardner's theories on education and the relevance to the teaching of entrepreneurship could be examined.

There is a difference between knowing and understanding. We have a good understanding of what knowing is. When students can feed back the information we have given them they know, but understanding is subtler. How do we define understanding? How does a teacher know if the student understands what it is he or she teaches? On the Harvard Teaching for Understanding website it is explained that "We feel assured a student has knowledge when the student can reproduce it when asked. The student can tell us what Magellan did, where Pakistan lies, what the Magna Carta was for, what Newton's first law of motion is. And if knowledge is information on tap, skills are routine performances on tap. We find out whether the skills are present by turning the tap. To know whether a student writes with good grammar and spelling, sample the student's writing. To check arithmetic skills, give a quiz or assign a problem set."

But understanding is much deeper and more complex. “The student who deftly solves physics problems or writes paragraphs with topic sentences may not understand much about physics, writing, or what's being written about at all. While knowledge and skill can be translated as information and routine performance on tap, understanding slips by these simple standards.” The Teaching for Understanding Project came up with what they call the performance perspective: “That understanding is a matter of being able to do a variety of thought provoking things with a topic, such as explaining, finding evidence and examples, generalising, applying, analogising, and representing the topic in new ways” (Blythe et al. 1998).

Examples of this are:
A mathematics teacher asks his students to design a floor plan for a community centre, including dance areas, and a place for a band. Why? Because such a design will involve several geometric shapes and a defined floor area. The students must use what they have studied about the computation of area to make an effective plan.

Perkins (1993) gives an example. In an elementary school in Arizona, students studying ancient Egypt produce a National Enquirer style, four-page tabloid called King Tut's Chronicle. Headlines tease "Cleo in Trouble Once Again?" Why? The format motivates the students and leads them to synthesize and represent what they are learning (Fiske, 1991, pp. 157-8). Blythe (1998) says that this understanding is a continuous process. Understanding is being able to do a variety of actions or performances that show ones grasp of a topic while at the same time advancing it. It is like learning to skate while at the same time reflecting on what you are doing.

In teaching entrepreneurship an example might be asking the students to create ideas for selling products to Irish Americans in a workshop and to come up with as many proposals as possible in quick time in order to learn how to think without boundaries in opportunity identification. The actual

running of a business is another activity, which gives a deeper understanding than just studying the theory alone.

The Teaching for Understanding Framework (Blythe et al. 1998) has particular features, e.g., teaching for understanding and performances of understanding which are particularly relevant to teaching entrepreneurship which ultimately is about practice. In my journey towards becoming a teacher, this framework guides the design and implementation of the module.

Perkins (1993) suggests that in the long term, education must aim for active use of knowledge and skill as students engage more deeply and thoughtfully in subject-matter learning. Newton (2000:16) talks about unconscious understanding: "At the same time, conscious reflection may not always be essential for an understanding. The understanding that a carpenter could have of wood, a sculptor of clay and a mother of her baby may not have been achieved by conscious reflection. In unconscious or implicit learning, the learner is not usually aware of the detection of contingencies and co-variations and the making of connections. For instance, in what is commonly referred to as intuition, a complex situation may be processed unconsciously but the nature of the processing often remains inaccessible to conscious thought."

Developing understanding means doing things. The framework developed by the Teaching for Understanding Project provides a framework for discussing and creating curricula for better understanding (see Figure 1).

The framework works on four basic concepts: generative topics, understanding goals, performances of understanding and on-going assessment, shown in Figure 1 below, and are outlined in the sections that follow.

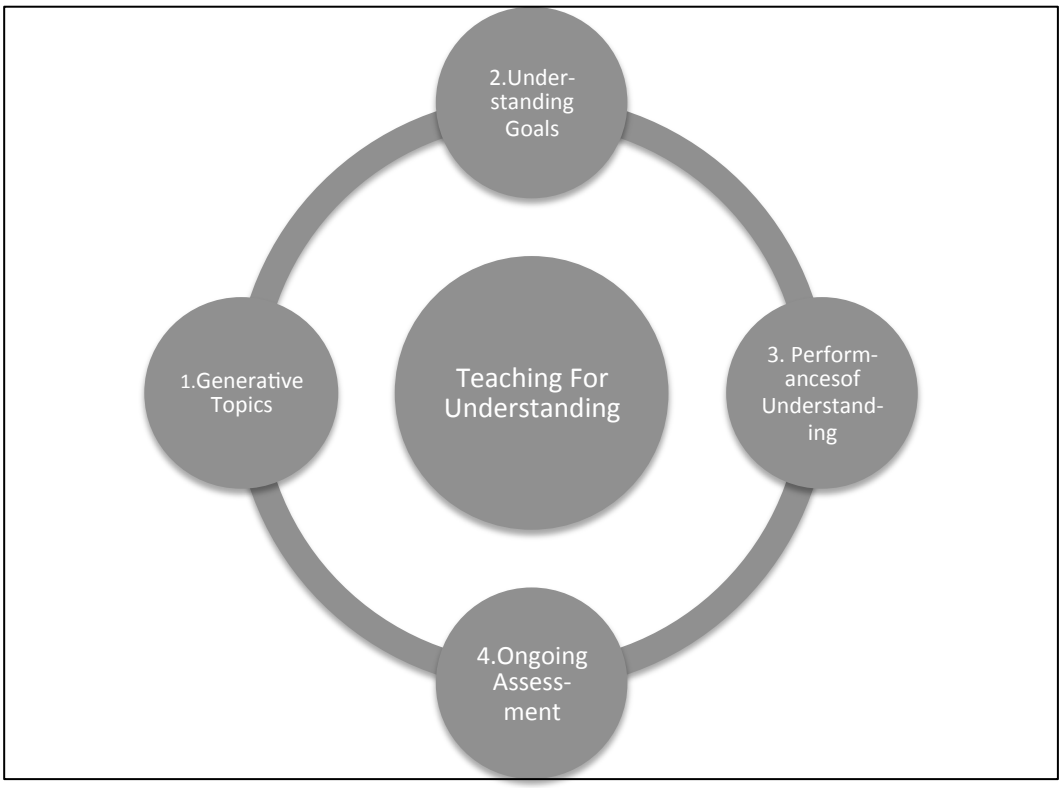
Generative Topics

Generative topics (concepts, ideas, themes) must be central to the discipline, excite and interest both students and teacher and be accessible. They will vary with the age and social contexts of the students as well as their intellectual experience. Examples include:

In Biology: the definition of life, rainforests, dinosaurs, endangered species, global warming.

In History: Maritime disasters, survival, revolution, conflict, power.

Figure 1: The Teaching For Understanding Framework



Source: based on Blythe et al (1998).

The challenge in teaching a course in entrepreneurship is to define and identify the generative topics that will increase the likelihood of understanding.

Understanding Goals

In most cases it is folly to set out on a journey without knowing where you want to go, although the very essence of entrepreneurship is to take a journey without certainty of the end result. Understanding goals are simply the things the teacher wants the students to understand after the journey is completed. It also helps gauge progress along the way. Blythe et al (1998) say that understanding goals identify the concepts, processes and skills that we want our students to understand. They are the "territory" of the generative topics. This then becomes my map, or strategy in designing a teaching course for entrepreneurship.

In order to reach the understanding goals, based on the generative topics developed, a teacher should ask him or herself this question: "What do I want my students to get out of their year's work with me?" The goals are worded in such a way as to say: "Students will understand" or "Students will appreciate".

Performances of Understanding

Perkins (1993) says that if understanding a topic means building up performances of understanding around that topic, the mainstay of learning for understanding must be actual engagement in those performances. In this way the running of a business will be the major performance of understanding.

Perkins goes on to argue that from the standpoint of the teacher, the performances of understanding are less about what the teacher does than about what the teacher gets the students to do. He suggests that the teacher must arrange for the students to think with and about the ideas they are learning for long periods of time, so that they learn their way around a topic. This then makes the linking of theory and practice important in the design and implementation of the teaching course. If students are not thinking with and about the ideas they are learning for a while, they are not likely to build

up a flexible repertoire of performances of understanding. A simple example is actually driving a car rather than simply learning the theory of how a car is driven. While developing performances of understanding of students the teacher should see him or herself as a kind of "floating coach", making connections to the understanding goals that the performances should help them achieve.

On-going Assessment

It is difficult to assess accurately what our students have learnt. With the Teaching for Understanding Framework (Blythe et al 1998) the process is more than just simply assessing, the process of assessing assignments and presentations is a big contribution to learning. It informs what the students currently understand and helps to decide what to proceed with in subsequent teaching and learning. The principal components of on-going assessment are establishing assessment criteria and providing feedback.

In the assessment of performances of understanding the performances need to be:

- Explained clearly at the beginning of the performances of understanding;
- Relevant to the understanding goals; and,
- Known to all involved, both teachers and students.

Feedback needs to:

- Be frequent throughout the unit, both formal and informal;
- Inform students not only about how they have done so far, but how to improve in the future;
- Inform future planning of classes for the teacher; and,
- Come from a variety of perspectives: students, teams, teachers, panels of business people and bankers.

Conclusions

The Teaching for Understanding Framework (Blythe et al 1998) will be used to examine and interrogate the exemplars attended by this writer. Each programme will be looked at through the headings: Generative Topics, Understanding Goals, Performances of Understanding and On-going Assessment in order to extract or bring forward the relevant content into the design and delivery of the module to be taught, which itself will be framed around the Teaching for Understanding Framework. This process deeply influenced the meaning making system of this practitioner, in that it forced me as a teacher to consider not only what to teach the students from my own experience as an entrepreneur but to consider what it is I want them to understand in order to develop their skills as "apprentice" entrepreneurs and to deepen their understanding of what entrepreneurship actually is.

3. Case Studies - Exemplars

Four programmes on teaching entrepreneurship at leading universities were undertaken and examined by this writer as the case study research part of the Portfolio of Explorations. Two programmes were selected because they were targeted at business executives and two were selected because they were targeted at teachers at university level. The changes in Meaning Making as a result of attending these exemplars are outlined in the conclusions.

Criteria for Selection

The criteria for selection were as follows:

1. The programmes should be practical, i.e. should be close and relevant to practice, both in business and the teaching of entrepreneurship;
2. They should deal with large as well as small companies as this is relevant to students who may well end up working in large local multinational companies and the professional experience of this practitioner is mostly limited to small to medium enterprises;
3. They should be immersed in an entrepreneurial society;

4. They will provide possible material and direction for creating a module from experienced educators targeting experienced business people; and,
5. Programmes that have been tested with the most demanding participants in the world.

Three were in the United States, Harvard, Babson and M.I.T. while one was in the UK at Cranfield University. The US programmes were selected not only because of the prestige of the institutions but primarily because of the general recognition that the US is one of the most entrepreneurial societies in the world. The programme in the UK was selected because of the reputation of the institution in this area and because of the similarity between the Irish and UK social context for business and entrepreneurship. These are leading universities in the world and provided the best opportunity to investigate best practice in the way entrepreneurship is taught. The choice of programme types, namely executive type programmes was made partly on practical grounds to do with being able to attend a complete programme in a convenient way but also in order to draw on material and experiences that are grounded in the real business world. The choice was also made so as to orient the post-graduate students to be taught towards becoming entrepreneurial managers. Primary or undergraduate programmes were not looked at, as the participants of these types of programmes are not within range of the business world as the post-graduates are. Materials used were case studies and classes were interactive.

Of its nature, this essay is primarily descriptive of the programmes experienced and reviewed with a view to drawing implications for designing and delivering a bespoke module within an existing university postgraduate degree programme.

Because the Teaching for Understanding Framework is being used to design and implement the course to be taught, this framework is used to examine and interrogate the exemplars attended.

3.1: Harvard Business School: Building New Ventures

This was an intensive programme called "Building New Ventures: Entrepreneurship In Existing Companies" and took place from 22-27 October 2006. It focussed on the current thinking and research on how to build new ventures within large organisations. A full description of the course is attached in appendix B. Fees were $7000 plus accommodation and travel and the writer paid all costs. Senior executives from across the world attended it. While the majority were from large multinationals, such as Boeing Corporation, McDonalds, Sprint Nextel and Nokia about 20% came from smaller businesses.

This was a residential 5-day course, which began with reading at 6.30 each morning, group discussions at 7.45 on the cases read that day and classes from 9am to 5pm. Evening lectures and speeches were often provided at dinner. Figure 2 shows full timetable of the course.

As an entrepreneur from a small company this practitioner was in a minority. Senior executives from large companies knew little about neither where I came from, nor I them. They spoke in billions of revenue and the issues that concerned them were the systems and communication of large organisations.

As many of my students may well end up working for large organisations, this course was an important insight into the thinking in Harvard. I worked in teams with these executives and hoped to get an insight into their attitudes to entrepreneurship.

Figure 2: Harvard Timetable

Sunday, October 22	Monday, October 23	Tuesday, October 24	Wednesday, October 25	Thursday, October 26	Friday, October 27
11:00 - 4:00pm	Breakfast: 7:00 - 7:45am	Breakfast: 7:00 - 7:45am	Breakfast: 7:00 - 7:45am	Breakfast: 7:00 - 7:45am	Breakfast: 7:00 - 7:45am
Registration	Discussion Groups: 7:45 - 8:45am	Discussion Groups: 7:45 - 8:45am	Discussion Groups: 7:45 - 8:45am	Discussion Groups: 7:45 - 8:45am	Discussion Groups: 7:45 - 8:45am
	Session: 9:00 - 10:30am	Session: 9:00 - 10:30am	Session: 9:00 - 10:30am	Session: 9:00 - 10:30am	Session : 9:00 - 10:30am
	Jumpstarting Entrepreneurship in Established Firms Case: Medtronic *Professor Lynda Applegate*	Organizing for Innovation Case: IBM's Transformation *Professor Lynda Applegate*	Dealing with Disruption Case: Hewlett-Packard (A) *Professor Clay Christensen*	The Challenges of Dynamic Capabilities Case: USA TODAY *Professor Mike Tushman*	Building Businesses in a Networked Economy Case: Li & Fung *Professor Lynda Applegate*
	Break: 10:30 - 11:00am	Break: 10:30 - 11:00am	Break: 10:30 - 11:00am	Break: 10:30 - 11:00am	Break: 10:30 - 11:00am
	Session: 11:00 - 12:00pm	Session: 11:00 - 12:00pm	Session : 11:00 - 12:00pm	Session: 11:00 - 12:00pm	Session : 11:00 - 12:00pm
	The Innovation Process Interactive Lecture *Professor Lynda Applegate*	Organizing for Innovation Interactive Lecture *Professor Lynda Applegate*	Dealing with Disruption Interactive Lecture *Professor Clay Christensen*	Innovation Streams and Ambidextrous Designs Case: Compagnie Lyonnaise *Professor Mike Tushman*	Building Businesses in a Networked Economy Interactive Lecture *Professor Lynda Applegate*
	Lunch: 12:00 - 1:30pm	Lunch: 12:00 - 1:30pm	Lunch: 12:00 - 1:30pm	Lunch: 12:00 - 1:00pm	Working Lunch: 12:15 - 1:15pm
	Session: 1:30 - 5:30pm	Session: 1:30 - 3:00pm	Session : 1:30 - 3:00pm	Session: 1:00 - 2:30pm	Closing Comments & Course Wrap-Up
	Putting the Insights to Work *Professor Lynda Applegate*	Technology and Innovation Case: Lexar Media *Professor Mary Tripsas*	Marketing Strategy Case: Corona Beer (A) *Professor Rohit Deshpande*	Building Ambidexterous Organizations Interactive Lecture *Professor Mike Tushman*	
		Break: 3:00 - 3:30pm	Break: 3:00 - 3:30pm	Break: 2:30 - 3:00pm	
		Session: 3:30 - 4:30pm	Session: 3:30 - 4:30pm	3:00 - 5:30pm	
		Technology and Innovation Interactive Lecture *Professor Mary Tripsas*	Marketing Strategy Interactive Lecture *Professor Rohit Deshpande*	Putting the Insights to Work Exercise *Professor Lynda Applegate*	
4:30 - 6:00pm	5:30 - 6:30	4:30 - 5:30pm	4:30 - 5:30pm	5:30 - 6:30	
Wecome & Opening Lecture	Free Time and Individual Study	Work on Projects *Professor Lynda Applegate*	Work on Projects *Professor Lynda Applegate*	Free Time and Individual Study	
6:30 - 8:00pm	6:30 - 7:30pm	6:00 - 7:30pm	6:30 - 7:30pm	6:30 - 8:00pm	
Opening Reception & Dinner	Dinner	Reception & Dinner	Dinner	Closing Reception & Dinner	
8:00 - 10:30pm	7:30 - 10:30pm	7:30 - 10:30pm	7:30 - 10:30pm	8:00 - 10:00pm	
Free Time and Individual Study	Free Time and Individual Study	Free Time and Individual Study	Free Time and Individual Study	Free Time and Individual Study	

Source: Course Catalogue

Application of Teaching for Understanding Framework

As can be seen from Table 4 the Teaching for Understanding framework offers a means of identifying essential aspects of the programme.

Table 4: Building New Ventures Course

TOPICS	Opportunity Analysis	Business ideation	Entrepreneur-ial Platforms	Risk Management
UNDERSTAND-ING GOALS	Understand challenges and risk	Analyse ideas and opportunity size	Make sound decisions	Develop necessary systems
PERFORMANCES OF UNDERSTAND-ING	Create and plan business in teams	Study and interact with case lectures	Elevator Pitch	Idea creation

Source: Adapted from Blythe et al (1998)

Generative Topics

From my analysis of the information and course materials provided (see appendix B), the generative topics were:

- Opportunity Analysis;
- Business Ideation;
- Entrepreneurial Platforms;
- Risk Management; and,
- Value Creation.

The course addressed the problems that large companies have in starting entrepreneurial ventures from within their sometimes, huge organisations. The culture of large organisations often restricts the entrepreneurial spirit, because as Professor Lynda Applegate (2006) said, strict budgeting, traditional strategic planning, and the short-term pressures of the stock market prevent companies from following an entrepreneurial route. They must be risk averse.

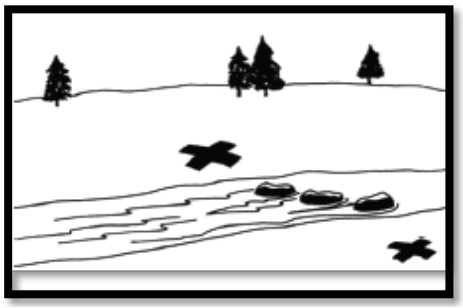
Understanding Goals

The course objectives, or understanding goals (source: course catalogue) were to:

- Understand the challenges and risks associated with building new ventures within an existing business environment;
- Create and analyse ideas to determine the size (turnover) and viability of opportunities in different, political, and geographic contexts;
- Understand how to make solid go/no go investment and management decisions;
- Be able to develop the necessary systems, structures, processes, practices and incentives throughout the organisation; and
- Know how to develop the visionary, yet pragmatic leadership skills required to build a business and to inspire confidence at all stages of a new venture.

Applegate argued that larger firms often ignore the inevitable entry of small low cost competitors into markets at first and there can be serious inertia and denial in the face of competition. Established companies are often glad to be exiting the low profit segment of their markets: the US steel market was given as an example, but this pattern is followed across the motor industry, computers, airlines etc. The denial of the threat allows the competitor gain a foothold at the bottom of the market and gradually they rise up to dominate. Typical examples are Toyota, Dell, and Ryanair. Large companies seem incapable of countering this inevitable process. These are examples of the market economy in action and will be useful in teaching the process to students on the course. Figures 3 and 4 below are important visual examples of how firms approach strategy in different market conditions.

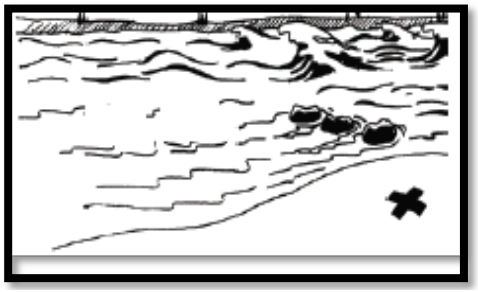
Figure 3: Strategy in Stable Times



Source: Linda Applegate (2006), Module "The Innovation Process".

In Figure 3 we see the strategy process in stable times: Identify the current state; identify where you want to be; identify all of the "stones" (projects) needed to get from current to future; complete the projects and stop.

Figure 4: Strategy in Turbulent Times



Source: Linda Applegate (2006), Module, "The Innovation Process".

In Figure 4 we see the strategy process in turbulent times: Identify the current state; identify the general direction you want to head; identify the first few "stones" (projects); plan for alternative paths before you start. Figure 4 is a good illustration of what this practitioner understands the entrepreneurial process to be. The opportunity is understood to some degree, but may emerge along the journey into something else. So the entrepreneur takes the first steps to discover the nature of the opportunity and is prepared to proceed into an uncertain arena. Often the idea is not workable, but occasionally it becomes a sustainable business. If unworkable the individual entrepreneur can still learn and may benefit from that in the future. If sustainable it is of immediate benefit to the entrepreneur and systems. It is learning by doing. Figure 4 is suggested as an alternative in turbulent times.

However the very systems and processes employed by successful companies to carry out their businesses are the very reason why they do not innovate from within. Six Sigma, Balanced Scorecards and budget forecasts are not routes to entrepreneurial creativity; it is the people who use those tools, the innovative and creative entrepreneurial types within a company. According to Applegate culture is the number one barrier to innovation. Mark Chapman,

an executive with IBM asked: “What is your most daring idea? Is it daring enough?”

Innovate or Die

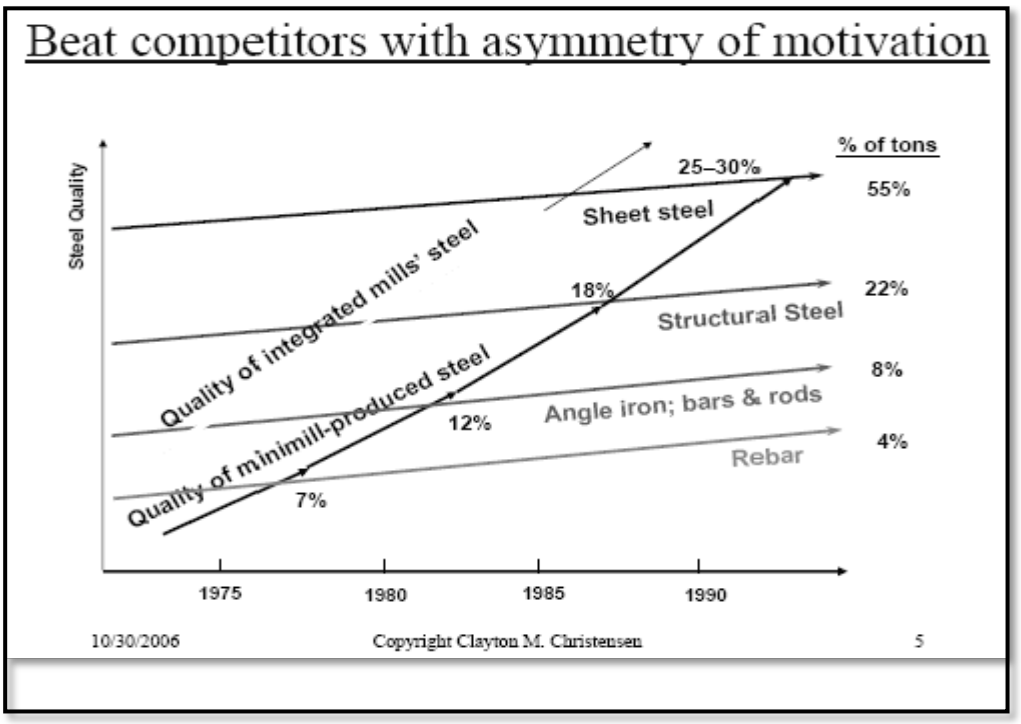
Emphasis was placed on the difficulties faced by existing successful companies in making sure that they remain innovative. The very success of the organisation can prevent them looking for new opportunities. Christensen (1997) suggested that companies must innovate or die. The market is, mostly, taken by new entrants who slowly take the bottom end (Toyota was given as an example) with cheap products. The existing established companies who believe that that part of the market is worthless because it is unprofitable or doesn’t exist allow them into that position. The steel industry was given as an example of this. Christensen (2003) suggests that large companies often ignore the small entrepreneurial ones biting at their heels. The steel mini-mills started small at the bottom of the market in the US in 1975 and gradually took over more than 55% of the market. The bigger companies ignored them to their cost. The following diagram, Figure 4 from Christensen’s slide shows how small seemingly irrelevant companies enter the market at the low cost end, which the larger companies ignore because of poor profitability. This insight will be included in the module being designed as an important lesson for large companies and examples can be taken from Yamaha, Steinway, Honda, and even Ryanair in Ireland.

Christensen argued that, in order to protect its position, a company must occupy and innovate at the low cost end of the market. There may be products and customers that are hitherto unknown. Yamaha, Steel (see Figure 5) and Toyota were given as examples.

The problem with innovating at the bottom or cheaper end of the market is that a company may very well invent or discover products that may compete with and threaten its existing products. The organisation, feeling threatened, will then stifle the innovation. As Applegate argued, disruptive change has two opposite effects: It mobilises entrepreneurial excitement, engagement and action (disruption is an opportunity) or it paralyses established

organisations that are stuck in existing business models (disruption is a threat). Leadership at CEO level in encouraging disruptive change is regarded as essential to the innovative process

Figure 5: How Smaller Steel Companies Took Market Share

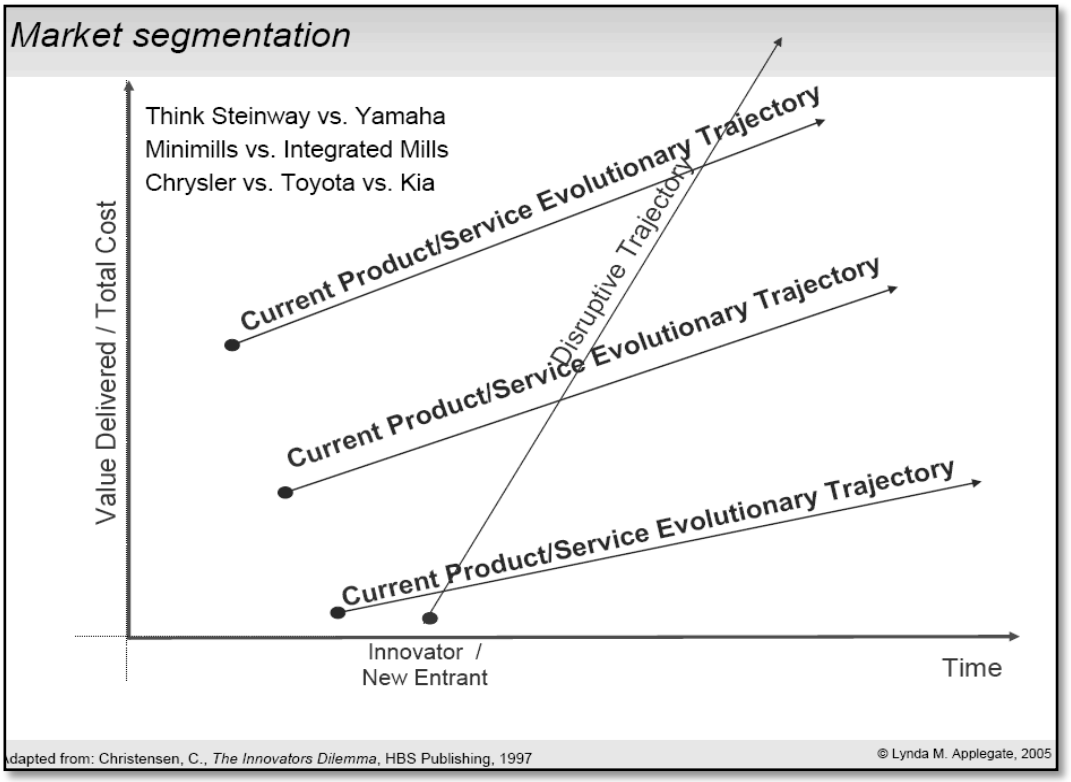


Source: Christensen (2006).

For teaching purposes then, students will need to understand disruption as an opportunity and not a threat. The materials covered in Clayton Christensen's lecture will subsequently be adapted for use in the teaching module being designed.

In Figure 6 we see how new entrants disrupt the existing incumbents. This is a new understanding for this author and refers to larger companies of which I had little experience.

Figure 6: New Entrants



Source: Christensen (1997).

In Table 5 below the seven deadly sins point to the reasons why companies don't innovate, and would be essential learning for students of business. A lack of mission clarity leads to confusion and failure. The stock market trap is quarterly reporting that traps a company into short term thinking thereby strangling long-term innovation.

Internally, complacency and over bureaucratic procedures lead to low change for innovation. Failure must be tolerated, as failure teaches strong lessons. Seeing and adapting to change is in itself innovative. Acquiring for size has a very high failure rate, and of course the leader not being an innovator is a serious impediment to innovation in the rest of the company.

The Innovation Challenge

Table 5: Sins and Antidotes for Innovation

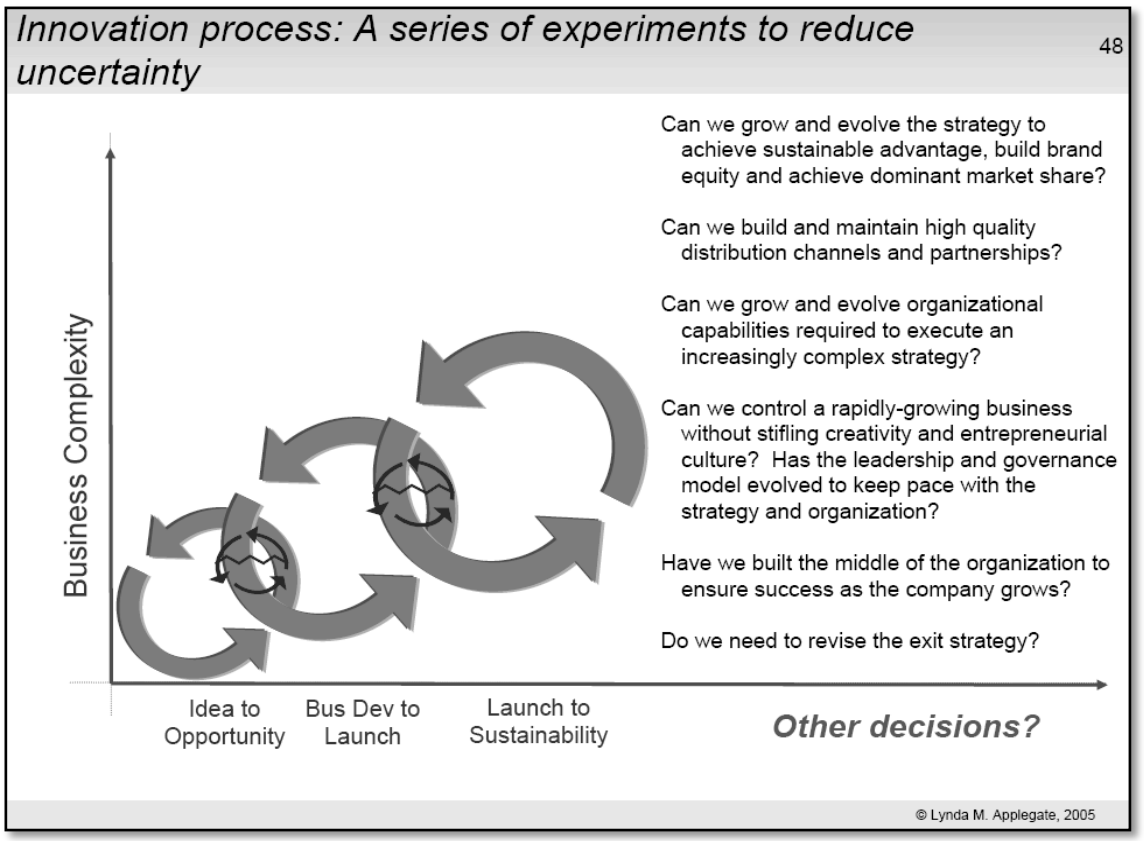
Sins	Antidotes
Lack of mission clarity	New, expanded visions
Stock Market Trap	Develop your own shareholders
Internal complacency and Bureaucracy	Split off innovators and protect them
No tolerance for failure	Reward failure (at least once)
Inability to adapt to technology/market changes	Stay one step ahead of the market
Acquiring for size	Acquire only for innovation
Lack of top innovation leaders	CEO as innovation leader

Source: adapted from Applegate (2005).

The Antidotes to these "sins" were that a company needs to develop new clear visions for the future (see Table 5). The stock market trap can be avoided by developing supportive shareholders by regularly explaining to them the long-term value gains from the innovative process. Splitting off innovators was suggested as types of "entrepreneurial platforms", geographic even. Companies need to encourage and even reward failure. Keeping in touch with and staying ahead of the market is essential for survival. Companies should acquire for innovation instead of size. All of this is new to this writer and has changed my meaning making about how the module should be taught, that it simply isn't just about my experience but also about theory and, for example, as it applies to big business.

Applegate described innovation as a process (see Figure 7).

Figure 7: Innovation Process



Source: Applegate (2005).

In Figure 7 innovation is seen as a series of experiments to reduce uncertainty. The key moments are those in between one stage and the next, between idea and business launch, and then from launch to uncertainty.

Principles of Innovation

Applegate gave recommendations for succeeding in innovation. These will be used in teaching the module to students, as important lessons for large companies where the students here in Ireland are likely to work.

These were to:

- Stay true to your Mission (innovation related)- This can be difficult in the idea to opportunity phase as change may be resisted strongly;

- Talk about it regularly and to everyone -hurry! Ignore Security Analysts (reinvest windfalls and profits);
- Cut the bureaucracy, every day;
- Split the organisation: Operations vs. Development;
- Create entrepreneurial platforms;
- Protect innovators from existing culture;
- Reinvent the company every 5 years with challenging metrics;
- If undertaking strategic acquisitions, acquire for innovation, not for size;
- Stay personally engaged (manage by walking around);
- Tolerate creativity and failure – innovation means failures;
- Cost efficiency has a limit;
- Sustainable growth comes only from innovation; and,
- Real innovation takes a long time…be patient.

As can be seen from this detailed list, innovation needs to be on going and broadly based within an organisation. Deliberate structural systems need to be put in place and the company should continually reinvent itself. Management needs to be intimately involved in innovating and entrepreneurs within the organisation need to be protected from the bureaucracy and existing culture. Patience is required.

Performances of Understanding

The curriculum was built around frameworks that examine the process of exploiting opportunities to launch new successful businesses. The stated aims were:

- Identifying and analysing entrepreneurial opportunities;
- Turning a viable opportunity into a focused strategy;
- Attracting top talent to turn the plan into reality;
- Building the capabilities to nurture early stage ventures;
- Recognising and managing risk;

- Develop the systems structures, processes, practises and incentives throughout the organisation; and,
- Develop visionary, yet pragmatic leadership skills.

Performances of understanding included:

- Creating and planning a new business in teams and producing a business plan;
- Debating business cases in interactive lectures to understand a variety of industries worldwide in the context of creating entrepreneurship in large companies;
- Developing and performing an "elevator pitch"; and,
- Partaking in interactive lectures, ideation, arguing cases.

Analytical tools formulated by the faculty at Harvard were provided to analyse and develop business opportunities. These included an idea generation tool, a business plan assessment tool and a marketing strategy tool (Dolan 2006).

Teams also created a fictional company. Various ideas were presented by each member of a team and discussed. Then one idea was agreed upon, a business plan made, and elevator pitch given to the class and judged by faculty members. The success of the content lay in the raising of awareness of the executives of the urgency of innovation and the methods for implementing it.

While this was effective in getting executives to consider their own companies by comparison, in the case of my module the actual running of a business would be a better option as the students have no prior business experience.

Entrepreneurial Platforms

Applegate suggested that companies must create Emerging Business Opportunities (EBO) by establishing what were termed "entrepreneurial

platforms" within their organisations. These are necessary to prevent the creative types within a large organisation being crushed by the conservatism of the majority who often prevent change from occurring. Entrepreneurial platforms must be created within the business from which entrepreneurial people or teams can operate. These must be protected from destruction by the existing culture and may need to be kept remote from the existing organisation geographically, while having access to the resources of the large company. Rather than adopting the existing strategy of long term planning with metrics, these units operate on a "suck it and see" strategy of learning by doing, a typical entrepreneurial way of doing business. "Mistakes" should be accepted as part of that process of discovery. Christensen (2003) says that these units are also encouraged to compete directly with the existing products or services the company offers. The company attempts to be the disruptor itself and searches for opportunities.

In teaching to students, this will need to be impressed upon them, the need to separate out the entrepreneurial teams. They will also need to understand that many companies will resist this and they may well be working in companies that do not encourage entrepreneurship.

It was suggested that these companies ought to employ entrepreneurial individuals to jumpstart these businesses. They could be "parachuted in" to an existing organisation and encouraged to develop the business, unencumbered by the restrictions of the extant culture. The very nature of the individual entrepreneur could be harnessed to start the process.

Several participants felt that they would find it very hard to convince their colleagues of the value of innovative processes. All agreed that the support of the CEO was essential if the platform was to be created, and their core belief was this support would be hard, if not impossible to get.

Collaboration

Applegate suggested that collaboration with clients and suppliers was seen as extremely important. If a company thinks it has all the answers internally they are wrong. In the session on "Organising for Innovation", Applegate encouraged companies to go and talk to their customers and suppliers. Companies were urged to co-create the product ideas by inviting both customers and suppliers to come up with ideas. Collaboration needs to be looked at as a route to innovation. Collaborate with customers and suppliers. Innovate at the boundaries. Participants were given a word of caution about market research: asking the market what it wants is "market driven". Many new products and services innovations, such as Apple's iPod or iTunes were unknown to the market and succeeded as a result of "market driving". The introduction of the product created the market.

Frameworks

Several frameworks for examining a company and generating ideas were supplied. These would prove very useful as a method of beginning the process of innovation in an existing organisation. These included an "Analyse your Current Business Model Tool" (Applegate and Byers 2006) and a "Business Plan Assessment Tool" (Applegate and Henry 2006). These were not worked on the programme itself but were provided for participants to use afterwards when they got back to their desks. The cases were those of growing businesses and included Corona Beer, IBM, Lexar, Li & Fung, all of whom manage to create entrepreneurial business opportunities within their organisations.

Summary

This course was clearly motivating for the participants, although some voiced doubts about whether they could convince their CEOs of the need for innovative change. It showed the urgency of innovation and the need to foster entrepreneurship in large companies. There is a palpable commitment and belief in Harvard in entrepreneurship and the same motivation must be

present in the module to be taught. The teaching needs to motivate the students so, therefore, needs to be entrepreneurial in itself. Students must be allowed to see that entrepreneurship can exist in both large and small companies and that it is a way of thinking and perceiving the world.

As far as the effect on this practitioner's meaning making system is concerned the principle change in my thinking was that entrepreneurship is of great importance to existing large companies and they find it very difficult to be entrepreneurial, indeed they need to protect and encourage entrepreneurial behaviour, and even encourage failure. Entrepreneurial platforms and the sins and antidotes of innovation are all new understandings for this writer. Through attending this exemplar this practitioner got a global view of entrepreneurship, which has added greatly to the knowledge that will be imparted to the students, as this experience complements my own direct experience as outlined in the memoir.

Looking at this course through the Teaching for Understanding Framework, the principal understanding goal was that innovation is essential to the survival of any company or organisation and that it must be made central to the activities of that organisation.

Seen through the Teaching for Understanding framework in Table 6, several potential elements for inclusion in my module were identified from this exemplar.

Table 6:Insights From Harvard Exemplar

GENERATIVE TOPICS	Opport-unity Analysis	Strategic Plan develop-ment	Working in teams	How to manage risk	How to create value
UNDER-STANDING GOALS	Recog-nise and analyse opportun-ities	Analyse ideas and opportune-ity size	How to make decisions in practice	Develop necessary systems	Visionary, pragmatic leadership
PERFORMAN-CES OF UNDER-STANDING	Find and create product opportun-ities	Do Business plan	Develop business in teams	Invest own money and manage cash-flow	Envision and run a business

Source: Blythe et al. (1998) based on author's analysis of course materials and attendance.

Much of the materials presented in this exemplar are useful tools for teaching, such as the Marketing Note or the Seven Deadly Sins. Much of Christensen's work around innovation could be introduced to encourage students to understand innovation in large companies, where many will work. Students will need to learn how to identify opportunities, develop businesses in teams, create and run businesses with business plans and innovate throughout the module, both in the products they choose and in the way they operate their businesses.

3.2: Babson College: Symposium for Entrepreneurship Educators

This four-day course was held in May/June 2007. This is an annual course aimed specifically at entrepreneurship educators and was in its 23rd year. Babson claims to be the leading University in the United States in entrepreneurship education[3] and aspires to be the globally recognized leader in entrepreneurial management education.Their stated vision is to be known for thought leadership that advances management practice and theory. They want to be respected as an academic community of committed, diverse and highly qualified students, faculty, and staff. As this author had little experience of teaching entrepreneurship, this programme would be the biggest influence on my Meaning Making System with regard to teaching.

Cross-disciplinary educators from around the world are invited to attend Price-Babson Symposium for Entrepreneurship Educators (SEE). The program is designed to build an international cadre of educators who understand the importance of combining entrepreneurship theory and practice in teaching. This is vital to the program and why they require teams – one academic, one entrepreneur – to attend the symposium. I attended with Professor Fanning of UCC, he being the academic, and myself the entrepreneur.

In Table 7 the Babson course is shown using the Teaching for Understanding Framework. These are broken down into Generative Topics, Understanding Goals and Performances of Understanding.

[3]Entrepreneur magazine and The Princeton Review announced the results of their seventh annual survey ranking the top graduate and undergraduate entrepreneurship programs in the US. From the more than 2,300 programs surveyed by The Princeton Review, 25 under-graduates and 25 graduates are ranked. And in an unprecedented event since the ranking began, a single school took the top spots in both categories—Babson College. Source http://www3.babson.edu/Newsroom/Releases/entrepreneurranking2009.cfm (29/1/2010).

Generative Topics were teaching through cases studies, the teaching of entrepreneurship, ideation and the entrepreneurial mind as well as the importance of selling to all stakeholders. Understanding Goals were that ventures are high risk, how to start and run a business, how ideas are created and how to develop the entrepreneurial mind. Performances of understanding included a rocket pitch performed by team members in class, having created a business idea in teams.

Table 7: Babson Exemplar Through TFU Framework

GENERATIVE TOPICS	Teaching Through Case Studies	Entrepreneur - ship Teaching	Ideation	The Entrepreneurial Mind- Selling
UNDERSTAND-ING GOALS	Ventures are High Risk	How to be Entrepreneurial and Start and Run a Business	How to Create Ideas	Think Like an Entrepreneur
PERFORMANCES OF UNDERSTAND-ING	Study and Debate Cases	Teach in Class with Academic and Entrepreneur	Improvisation and Exercises	Rocket Pitch

Source: from Blythe et al. (1998)

Generative Topics

Case studies were used widely during this course and were around the teaching of entrepreneurship. Much early discussion was around the "offended guest" case. An alumnus of Babson is asked to speak to the class as a successful entrepreneur. However the presentation goes wrong when the guest expresses offence at the behaviour of some class members, one sending emails, and another seemingly surfing the net. It turns out that the girl surfing the net was actually running a lingerie business while at class. Should the entrepreneur be allowed to trade online during class?

The point of the discussion was to identify important guidelines when inviting an entrepreneur to speak to the class:

- Send the course outline to the guest in advance
- Send the guest a copy of a case
- Establish a relationship with the speaker

- Tell him/her what to expect
- Tell the guest what it is you are trying to do by bringing him/her there
- Keep in touch afterwards

Understanding Goals

Spinelli (2007) suggested that students should write a brief description of something they had done that was entrepreneurial. He also suggested that an entrepreneur should have his "Heart on fire and brain on ice". He suggested that we should get students to think opportunity first (not swot, as that places the emphasis on analysis rather than opportunity). Timmons (2007) suggested that students must think big enough. He also suggested that anything that is worth doing, even if it is done poorly, it gets done. Timmons also said that the first 20% of effort gives 80% of results, so students should try not to be perfectionists. Most business plans are obsolete at the printer. In the implementation of the module to be taught, students must understand this, that the plan often doesn't become reality. By actually preparing the plan and then running the business on campus, this will become evident.

While this author was aware of these theories of teaching, my Meaning Making System was changed in that I became aware that, for instance, getting something done poorly is at least getting something done and that students should learn about this. In other words, the exemplar unearthed tacit knowledge inside me that I would not otherwise have used in the teaching of the module.

Timmons argued that the key to succeeding is failing quickly and recouping quickly. One should develop a helicopter mind: go abstract and think. Think of a sea-change going on in the world, such as climate change or paranoia about terrorism, and see what opportunities may be there.Debate! Disagreement is healthy.

Important understanding goals to be learned by students from running a business:

1. Entrepreneurial ventures are high risk
2. Entrepreneurial leader and team are key: Human Capital
3. Creativity is the most important capital
4. Entrepreneurs are time constrained
5. Do what is important
6. Context and timing
7. Happiness is a positive cashflow: don't run out of cash
8. Entrepreneurs are comfortable with change and new territory, and are even uncomfortable without it.

Performances of Understanding

In Babson's MBA programme, students had to actually develop, launch, manage and harvest a business. Each team was given $3000 as a loan by the university at the start of term and had to repay that at the end. Market stalls were provided on campus from which the students could trade from.The record of these businesses was excellent, with only one team ever failing to repay the loan. In this course, teams created a business idea and then performed a "rocket pitch" in front of the other teams and members of faculty.

During an intensive four-day period, participants explore the entrepreneurial process of teaching and learning entrepreneurship. It was recommended that we consider starting the first class other than in the classroom. Students should learn by doing. They should be encouraged to be mavericks as entrepreneurs are.

Spinelli said that students should be informed that every entrepreneur has failed at least once. They need to realise and practise the context of uncertainty and ambiguity in order to grow and prosper as entrepreneurs.Undisciplined entrepreneurs fail. Thought without action for an entrepreneur is frivolous, action without thought is dangerous. This is

why the students will run a business during the module, in order to experience uncertainty, bootstrapping and possible failure.

Spinelli also said that it may be a good idea not to give the students guidelines for their business plan. This is the approach that will be used in the module being designed, where students will need to learn how to make decisions, and creating their own business plan structure and design will be encouraged.

Good leadership means that whatever is wrong is the leader's fault, whatever goes right is the organisation's success and a good leader must be a good listener.

Marshalling of resources is the most creative part of entrepreneurship. Managing cash-flow and bootstrapping are essential entrepreneurial functions. Students as entrepreneurs must find a way of doing things without cash.

The program provides an introduction to case method teaching and live, venture-based teaching methodologies. There were trading areas within the college where students traded. Teachers then helped students understand the relevance of their experiences in creating and running a business.

Participants were encouraged to identify, plan, and personalise our entry (or re-entry) strategy into academia, and to improve as teachers, learners, researchers, colleagues, and entrepreneurs.

Each participating institution is required to send an academic member and an active entrepreneur, as a "team" to the symposium. In selecting the team we were given these guidelines: The entrepreneur should be the owner or CEO of one or more significant businesses (successful, i.e. profitable businesses with a minimum of 15 employees). It is advisable for the entrepreneur to have taught one course, or at least to have been a guest

lecturer, before attending. The entrepreneur should expect to be involved in teaching and/or program development at their institution. Time commitment expectations should be clear and realistically explained prior to inviting the entrepreneur to attend the program. The academic team member should recognize that teaching effectiveness and educational value in entrepreneurship courses could be greatly enhanced by educators who bring significant entrepreneurial experience to the classroom. One creates and buildsone's own classroom in dialogue and interaction with the students.

Building a Classroom

A classroom is a space for confronting and debating in the spirit of learning. The classroom is an organization. Organizations are comprised of people with shared mental models (Senge 1990: 69). Mental models shape behavior and decision-making. Understanding the mental models of students is important in "managing" the classroom. Student mental models can reflect that of the instructor. The instructor contributes to the mental model of the students by the way he or she interacts or how interaction is encouraged. You create and build your own classroom.

October Sky

The film was used as a case study, an alternative to the Harvard case method which is usually a read case. All elements of entrepreneurship are contained in the movie. A young man growing up in a coal mining town sees Sputnik in the sky in 1957 and gets a vision of his own potential. He overcomes scepticism and ridicule, starts building rockets and plans to go into space himself. He builds a team, experiments, and slowly makes improvements in the rockets until the team win scholarships at a science fair. Based on a true story, it has credibility, and shows students the endless possibilities in their lives as well as the characteristics of the entrepreneurial mind.

Selling

Great emphasis was placed on selling. An entrepreneur needs to learn to sell to:

- Venture Capital Companies;
- Banks (Penrose's "entrepreneurial services" – see page 117);
- Vendors;
- Customers; and,
- Employees to join the team.

Each of these stakeholders need to believe in the entrepreneur. The Venture Capital companies are most interested in the make-up and credibitilty of the entrepreneurial team in terms of market knowledge and experience. The entrepreneur must be able to convince the venture capitalists that the idea can be put into practice.

Banks are the lenders to the new company and therefore have to be convinced that there is sufficient profitability and cash-flow in the business. Many entrepreneurs underestimate the importance of suppliers, or vendors as stakeholders and these need to be convinced of the business plan, as their reputation and financial position (cash-flow, bad debts) is affected by the performance of the new business.

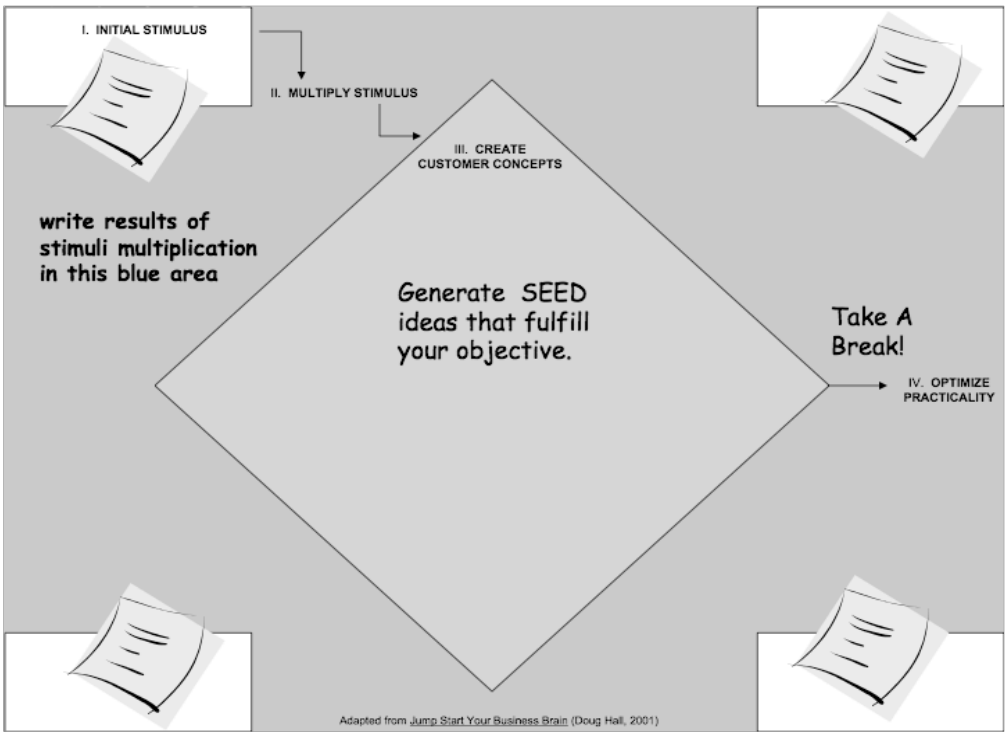
Customers and employees are equally as important, the customer believing that the product and company will survive and prosper, while key employees will need to believe in the founders in order to have the confidence to join the team.

Creativity and Ideation

Babson devotes one class to theatrical improvisation during the term. This class is held very early in the semester as part of a string of classes on creativity and idea generation. The use of theatrical improvisation in an introduction to entrepreneurship course has several outcomes. First,

improvisation helps students develop critical "entrepreneurial" skills that are demonstrated and practiced through a series of improvisation exercises. Second, improvisation is a great tool to use at the beginning of an entrepreneurship course to build camaraderie between students and between the students and professor. Finally, a "classroom culture" and a "sense of community" can be established through one day of improvisation that lasts the entire semester. An exercise took place on this course involving group activities such as hand waving and shouting to demonstrate to teachers how effective it can be in relaxing newcomers to a course or module

Figure 8: Idea Generation



Source: Neck, Babson Symposiun for Entrepreneusrhip Educators course.

In Figure 8, an exercise was used with post-its to generate ideas in free form thinking. At first, ideas about business opportunities are randomly and freely placed on the edges of the board without too much reflection. Then they are whittled down and multiplied towards the centre where a central seed idea is created. This exercise in ideation fulfilled the demand for the understanding goal "how to create ideas".

Summary

The Babson course for Entrepreneurship educators proved insightful and informative. It made clear how certain the universityis that the subject can be taught and they had many years of experience of doing this. The success they have had in employment of graduates within three months of graduation (92% in 2007) and starting salaries ($94,000 in 2007) points to a highly successful differentiated MBA in entrepreneurship.

The faculty at Babson stressed the art and craft of teaching entrepreneurship and encouraged educators to be creative and entrepreneurial in the way modules or degrees are taught. Their emphasis on “selling” as opposed to “marketing” is one that will influence my course design also.

There is no doubt that this exemplar had the greatest influence on this writer’s Meaning Making System, in that it uncovered the understandings of entrepreneurship that were tacit in this writer’s mind and gave me the confidence to allow a lot more knowledge to emerge during the teaching.

The concept of actually getting the students to create and run businesses seemed very important and appealled greatly to me. The provision of such learning by doing was considered essential and this will be considered in the design and implementation of my module. Babson actually provided the space and trading stalls for their students on campus.

Creativity and ideation are also an essential part of teaching the subject. At Babson for the running of the business, the students were loaned the money by the university to be repaid at the end of the course, which in all but one case has been repaid.

Table 8:Insights From Babson

GENERATIVE TOPICS	Prepare guest speakers	Learn by doing	In class interact-ivity	Teaching Entrepre-neurship	Selling
UNDERST-ANDING GOALS	Create relation-ship with speakers	How to start and run a successful business	Ensure creative Classroom	Uncert-ainty,am-biguity independ-ence	How selling matters more than market-ing
PERFORM-ANCES OF UNDERST-ANDING	Brief and follow up	Run business on campus	Make sure students participate	Business plan and execution	Sell products to custom-ers on campus

Source: Blythe et al (1998) and writer's attendance at Babson course.

Table 8 lists the principal insights gleaned from the Babson course relevant to the design and creation of an entrepreneurship module. Guests need to be briefed and followed up, starting a business on campus needs to be facilitated, classes should be interactive, students need to understand the importance of straddling uncertainty and ambiguity, and selling is of huge importance to all stakeholders.

Several concepts and ideas were internalised by this practitioner as a result of attending this exemplar and these informed and influenced the teaching later. In Babson, the learning-by-doing was achieved through the running of businesses on campus, so this confirmed that this would be a powerful method to use, imitating a leading entrepreneurship teaching institution. It was the first time that I was actually being taught how to teach and gave me frameworks and methodology to work with as a teacher rather than as an entrepreneur. That these frameworks were available for the teaching of the subject of entrepreneurship came as a surprise, in particular that these theories and frameworks were so well developed.

There was also strong emphasis on using entrepreneurs as teachers, although it must be pointed out that Jeffrey Timmons, a teacher and author in Babson, became a very successful teacher of entrepreneurship having come from an academic background.

3.3: Massachusetts Institute of Technology: Entrepreneurship Development Programme

This 5-day course took place in the Massachusetts Institute of Technology (M.I.T), Boston from January 25 – 30, 2009. (See Appendix B for course materials and Table 10 for timetable).

M.I.T. E-Centre (Entrepreneurship Centre) faculty members guided participants through the venture process, exploring the differences between the venture creation processes in various countries, but in particular the United States and explained how technical assistance from universities can be leveraged to help create new companies.

Generative Topics

The generative topics were: technology venture execution, the development of entrepreneurial skills and the focus on the customer. These lead to the understanding goals of knowing that innovation needs action, there must be a climate of innovation and as in the Babson exemplar, sales is the highest calling in business.

This course was different from the other exemplars in a specific goal: it emphasised the execution of high technology ideas and ventures. Innovation was seen as the commercialisation of technology ideas. The emphasis was firmly on commercialising new technology start-ups.

The Entrepreneurship Development Programme targets aspiring entrepreneurs, business-minded technologists, corporate venture officials, and university and regional development leaders. During the programme, these participants hone their customer focus and entrepreneurial skills, and

learn how to create a more favourable climate for innovation and entrepreneurship within their organizations. Lectures were almost all delivered by previously successful entrepreneurs, venture capitalists and senior academic staff of the Entrepreneurship centre at M.I.T.

As shown in Table 9, the steps to commercialising a technology require entrepreneurial skills and the backing of venture capitalists.

Table 9: EDP Through the Teaching For Understanding Framework

Generative Topics	Understanding Goals	Performances of Understanding
Technology Ventures	Innovation needs Action	Business Plan for Venture Capitalists
Entrepreneurial Skills	Climate must be created for Innovation	Rocket Pitch
Customer Focus	Sales is Highest Calling	Talk to customer

Source: adapted from Blythe et al (1998)

Understanding Goals

The understanding goals on this programme were as follows:

Marketing

Entrepreneurial Marketing was different from regular marketing in that it:

- Focussed on product marketing;
- Is a process of bringing new products to market;
- Comes with relatively small resources and short time horizons;
- Has a goal to dominate the market (globally);
- Has flexibility;
- Is done primarily by product testing in the market place;
- Is disruptive;
- Defines who is and who is not the customer;
- Defines customer needs; and,
- Defines the business model.

Table 10: Entrepreneurship Development Programme Timetable

MIT Sloan Executive Education
Entrepreneurship Development Program 2009
25-30 January 2009

Sunday, 25 January	Monday, 26 January	Tuesday, 27 January	Wednesday, 28 January	Thursday, 29 January	Friday, 30 January
		Breakfast	Breakfast	Breakfast	Breakfast
		E52-6th Floor 07:00-08:00	E52-6th Floor 07:00-08:00	E52-6th Floor 07:00-08:00	E51-Third Floor 07:00-08:00
	Breakfast	**Breakfast Meetings with Entrepreneurs & Start-Ups**	**Breakfast Meetings with Entrepreneurs & Start-Ups**	**Breakfast Meetings with Entrepreneurs & Start-Ups**	**Team Presentations & Feedback:** Four Tracks
	Welcome by EDP Team				K. Morse (Observing Judge)
	E51-Third Floor 8:30-09:30	Various Locations 07:30-09:30	Various Locations 07:30-09:30	Various Locations 07:30-09:30	E51-376 B. Aulet, J. Shanberge
	The Spirit of Entrepreneurship at MIT; The Importance of Sales & Quantifying the Value Proposition	Break 09:30-10:15	Break 09:30-10:15	Break 09:30-10:15	E51-057 C. Jarchow, L. Morse
		Entrepreneurial Marketing: Basics & Framework; Application in the Real World	**Models for Going Global**	**Capturing Value Through Technology & Commercialization Strategy**	E51-372 F. Murray, J. Pacheco
					E51-345 C. Calarco, M. Grandinetti
	Ken Morse	Bill Aulet	Rick Locke	Fiona Murray	
	E51-345 09:30-11:45	E51-345 10:15-11:45	E51-345 10:15-11:45	Wong Auditorium 10:15-11:45	E51 08:00-11:30
	Lunch	Lunch Seminar:	Lunch	Lunch	Lunch
	Coaching Sessions	**Entrepreneurial Marketing** (cont.)	**Your China Strategy**	**Coaching Sessions & Team Meetings**	**Final Team Presentations, Certificates & Letters**
		Bill Aulet	Janet Shanberge		
	E52-6th Floor 12:00-13:00	E52-6th Floor 12:00-13:00	E52-6th Floor 12:00-13:00	E52-6th Floor 12:00-13:30	
	Evaluating Market Attractiveness	**Organizational Models for Fast Growth Enterprises**	**IP Strategies to Achieve Sustainable Competitive Advantage**	**Examples of Great Pitches**	
	Duncan Simester	Diane Burton	Steve Brown	Ken Morse	
	E51-345 13:15-14:15	E51-345 13:15-14:15	Wong Auditorium 13:15-14:15	Wong Auditorium 13:30-14:15	E52-6th Floor 12:00-14:15
	Break 14:15-14:30	Break 14:15-14:30	Break 14:15-14:30	Break 14:15-14:30	Return to E51 (Wong Auritorium)
	Starting & Building a Successful High-Tech Venture **Finding the Inspiration to Start & Build a High-Tech Venture**	***Starting & Building a Successful High-Tech Venture*** **Critical Success Factors for Early-Stage Ventures**	***Starting & Building a Succesful High-Tech Venture*** **New Enterprise Strategic & Product Marketing & IP Considerations for New Enterprises**	***Starting & Building a Succesful High-Tech Venture*** **Financing & Governing the New Enterprise**	***Starting & Building a Successful High-Tech Venture*** **Selling Your Products & Solutions**
	Michael Grandinetti	Michael Grandinetti	Michael Grandinetti	Michael Grandinetti	
	Allan Will (Split Rock)	Laura Barker Morse (Entrepreneurship Ventures)	Mark Macenka (Goodwin Procter)		
	Marina Hatsopoulos (Z Corp)	Craig Driscoll (Highland Capital)	Timothy Oyer (Wolf Greenfield)	Paul Maeder (Highland Capital)	Ken Morse
	Wong Auditorium 14:30-17:00	Alan Crane (Cerulean Pharma Inc.)	Patrick Waller (Wolf Greenfield)	David Berry (Flagship Ventures)	Michael Grandinetti
Registration & Reception		Wong Auditorium 14:30-17:00	Wong Auditorium 14:30-17:00	Wong Auditorium 14:30-17:00	Wong Auditorium 14:30-17:00
E51 1st Floor 16:00 - 19:00	Break 17:00-17:30	Break 17:00-17:30	Break 17:00-17:30	Break 17:00-17:30	END
Program Orientation & Team Formation	**Winning Business Plans; Networking Tips, & What Makes a Good Elevator Pitch**	**The Importance of Social Capital: The Example of Paul Revere**	**Global Sales Strategies for Start-Ups: The Cases of Spotfire & Meridio**	**Team Presentation Preparation Work, Coaching Sessions & Dinner**	
	Bill Aulet	Diane Burton	Ken Morse		
E51 1st Floor 16:00 - 19:00	Ken Morse	E51-345 17:30-19:00	Wong Auditorium 17:30-19:00		
	E51-345 17:30-19:30	**MIT Networking Reception, Hosted by: MIT E-Center Team & MIT Sloan Executive Education**	**Reception & Dinner, Hosted by: Ken Morse & MIT E-Center Team**		
	Team Formation, Coaching Sessions, Some Rest...	E52-6th Floor 19:00-21:00	Harvard Club 19:30-22:00	E51 17:30-21:00	*Schedule subject to change.*
		Coaching Sessions	**Coaching Sessions**	**Coaching Sessions**	v24

Source: EDP course handout

Intellectual Property

It was argued by Stephen Brown (2009) that Intellectual Property is important because it blocks competitors and gives a product or service advantage for longer. Ninety eight per cent of patents are not viable[4]. There are patents, copyright, and trademarks. Total costs for a US patent can be $15,000 to $25,000. These costs are made up of prior art search ($1,000), patent application ($10,000), office action ($5,000), grants and maintenance fees ($3-$5,000). As an example, the BMW purchase of Land Rover was primarily for their trademarks.

Opportunities for entrepreneurs exist through patent searching. Patent classification exists at www.uspto.gov. M.I.T. also have their own patent office offering thousands of patents for licensing. Royalty fees vary from 2% up to 10% depending on category of product.

A patent is strong if it is difficult to provide the same benefits without infringing the patents. A patent is infringed if each and every element of a claim is present in the infringing product or process. Details were given on how to apply for a US patent. The use of patent agencies was recommended because they have the prior experience and knowledge of the process.

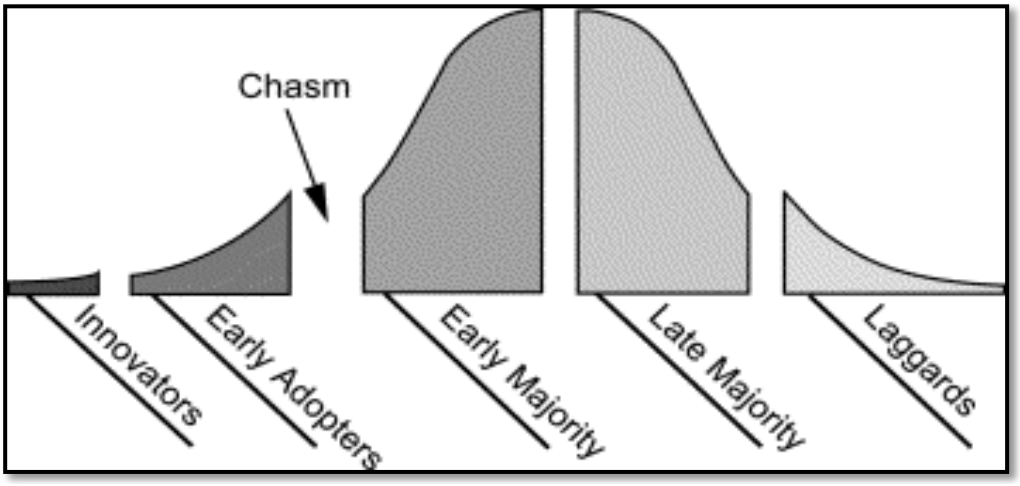
Technology Commercialisation Strategy

A strategy is a statement of the perceived opportunity. Opportunity is naming the problem one proposes to solve, the market, the customer pain, and the current market solution for that problem. It takes invested capital and uses it effectively to create and capture value by decreasing uncertainty and risk.

[4]There are around 1.5 million patents in effect and in force in this country, and of those, maybe 3,000 are commercially viable,' [Richard Maulsby, director of the Office of Public Affairs for the U.S. Patent & Trademark Office], source http://www.inventionstatistics.com/Innovation_Risk_Taking_Inventors.html, 2/2/2010.

If an inventor builds a prototype customers will not just come to the door. Much research of customers and markets is required and the market develops gradually as shown in Figure 9.

Figure 9: Market Dynamics



Source: Rogers (2003).

In Figure 9, making the transition from "early adopters" to "early majority" users often requires the development of quite different competencies: e.g. service, support capabilities, much more extensive training. The left column is revenue.

Common mistakes start-ups in technology commercialisation make include:

- Ignoring competing technologies: a business plan without competitors is not realistic;
- Forgetting that old technologies may improve on your new idea; and,
- Ignoring other emerging technologies.

Venture Capital: What are VCs looking for?

Driscoll (2007) said that people are the most important asset. They need to be both experienced and passionate. There needs to be a shared philosophy on team building and talent is extremely important; it is the main scarce commodity. A company will likely go through several management changes (including the CEO) from start to finish. The market needs to be large, a

minimum of eight-digit markets, in other words in excess of $10million annual revenue. The technology needs to be a unique and defensible solution and the deal needs a capital efficient approach.

The stages of evolution of a technology start-up are:

- Founder stage: idea leading to evangelisation and seed capital;
- Early stage: refine product and test and find first customers. 'A' round investors come on board, often taking 40% of shares; and,
- Expansion stage: Strengthen the team, broaden the organisation and structure, scale the business and get 'B' & 'C' round investors.

Ideas are a dime a dozen, for venture capitalists success is all about the people. Great teams are required to successfully execute. According to Craig Driscoll, venture capitalists are much more involved now than before in helping companies build great management team and making the right deals.

Performances of Understanding

On the opening day, participants were allowed to form their own teams with whom they would work. There were 134 participants and participant details were provided to aid the choice of teams. During the week, each team had to conceive a business start-up and present it to venture capitalists at the end of the week.

Sales were referred to by Professor Ken Morse as "the highest calling in business". Selling would need to be done by the founders of the company in the early months and years, as the cost of a selling team would be prohibitive in the early stages. Contacting the top people in companies was difficult and the value of a "rocket" or "elevator" pitch was examined and practised during the course. Practicalities like how to approach "Mr. Big" at a conference or even a cocktail party were demonstrated and practised.

Again the Meaning Making System of this writer was changed by this exemplar, in that, for instance, while I knew tacitly how important selling is, hearing it put forward so trenchantly as "the highest calling in business" encouraged me to teach this later.

Performances of understanding include delivering what venture capitalists want to see in a business, understanding the importance of the "rocket pitch" and actually going and talking to the customer well in advance of launching the business. Assessment in the real world involves convincing venture capitalists of the need for second round funding which leads to a dilution of shareholding for the founders.

Summary

In summary, critical success factors for technology commercialisation are around three pillars: technology, people and funding. M.I.T believes that the future growth in business lies in biotechnology and clean technology.

Table 10: Insights from M.I.T. Course

Generative Topics	Understanding Goals	Performances of Understanding
Technology Start-ups	Unique requirements	Rocket Pitch And Selling
People are Key	Team critical, experience and passion	Work in teams
Funding by VCs	Venture Capital	Use Specialist VCs

Source: Blythe et al (1998) and writer's attendance at course

As shown in Table 10, technology ventures are unique in that they are usually new products being launched and require patents to be strong. The team are critical, in that they should be committed and have experience in the field. Entrepreneurship therefore in Technology businesses is quite different in that venture capitalists are usually required and the bootstrapping nature of start-ups does not often work, as investors need to be found and robust business plans put in place. As this was not this practitioners experience, and

as this may very well be the area that the students end up being in, much can be drawn from the M.I.T exemplar to teaching this in class.

By forming students into teams at the beginning of the module to be taught and allowing them to develop team-working skills during the time the module is run will prepare them and make them "business ready" for technology ventures such as these. Students will be made aware of the existence of the M.I.T patents website where they can search for potential products to take to market.

A strong team with a moderate idea is often better than a weak team with a great idea. Students will need to work in teams and this will be a fundamental part of the course design.

Concentration on funding through venture capitalists with experience in one's chosen field is critical. Share dilution takes place with every round, with founders often being left with as little as 10% when going public. Entrepreneurs in Ireland are often unwilling to let go of a portion of their shares and fail to go global as a result. Students will be made aware of the importance of this.

Selling, more importantly, the ability to sell is thought to be crucial. Salespeople should be generously incentivised for success even if their earnings exceed that of the CEO. As part of the module to be taught the students will need to learn the importance of selling and actually practise it.

Because Irish Government policy is directly involved in the promotion and development of High Technology Ventures, including Science Foundation Ireland, this programme seemed very relevant. Science Foundation Ireland (SFI) is a key organisation in the implementation of the Irish Government's National Development Plan 2007-2013 and the Strategy for Science, Technology and Innovation 2006-2013. A sum of €8.2 billion has been allocated for scientific research under the NDP and SSTI of which SFI has

responsibility to invest €1.4 billion. SFI continue to invest in academic researchers and research teams who are expected to generate new knowledge, leading edge technologies and competitive enterprises in the fields of science and engineering underpinning three broad areas:

- Biotechnology;
- Information and communications technology; and,
- Sustainable energy and energy-efficient technologies.

The M.I.T. course has much to offer to teachers of entrepreneurship in Ireland today if this is government policy and knowledge of and access to venture capital will be crucial to the success or otherwise of these start-ups. For me the value and Meaning Making from this course arose from the fact that this was specifically about starting technology businesses - an area I have had little experience as an entrepreneur. Also my experience was in starting and running a small to medium enterprise, whereas this exemplar had dealt with global businesses and involved venture capitalists and patent law, all of which was of value for use later in teaching or even in executive workshops. Many students would be entering technology businesses and the understandings form this and other exemplars could be communicated in class.

3.4: Cranfield University: Teaching Strategy and Entrepreneurship Through Cases

This short course of one and a half days was run by the European Case Clearing House (ECCH) in May 2007 and was presented by Professor John Thompson. Attendees were mostly teachers of business courses in the UK and Ireland. The following are from notes from the series of lectures that took place and details of the course are contained in Appendix B.

This course was interrogated in Table 11 on the basis of the Teaching for Understanding Framework.

Table 11:Cranfield Course through the TFU Framework

GENERATIVE TOPICS	Different Media for Using Cases	Porter's 5 Forces and Case	Frame-work and case	Entrepreneur-ship	Strategy
UNDERSTAND-ING GOALS	Thinking and Analytical Skills	There are different ways of using cases	Decision making skills	Reasoning and Persuasion	Commun-ication skills
PERFORMANCES OF UNDERSTAND-ING	Understand Value Chain Through Case	Linking Porter to Case	Team Discussion	Case Studies	Present-ations

Source: Blythe et al (1998) and author's attendance at course

As shown in Table 11, generative topics on this course were mostly cases and linked to understanding goals such as industry analysis using Porter's Five Forces. Understanding goals are that cases can be used in different ways with different media, while performances of understanding include team discussions linking cases to frameworks and presentations are the performances of understanding of cases.

Generative Topics

The purpose of cases was to relate frameworks, such as Porter's Value Chain and Five Forces to cases to make sense of what organisations were doing and why. Learning took place through discovery and reflection. Cases are seen as vehicles for placing students in the position of real decision makers.

Understanding Goals

Professor Thompson says that cases should be used to:

- Promote awareness of issues;
- Challenge and provoke;
- Motivate, persuade and inspire; and,
- Capture knowledge and ideas.

Thompson argued that cases should be relevant to each other if they are being delivered as short multiple cases, e.g. Ryanair and Easyjet. In discussions among attendees it was generally accepted that many students did not read the cases before class so that it might be wise to get them to read in class, something I have applied to my teaching myself.

The case method is an inductive method of teaching. A theory has been developed, such as Porter's Five Forces and the inductive method is used to get the understanding clear to students. Practice in analysis and decision-making comes from cases.

Performances of Understanding

Through cases and interaction the student has the opportunity to experience discovery. The lecturer clarifies any misunderstandings. Often students like to talk about the organisations where they work, but that is anecdotal, as indeed is one practitioner's experience. Thompson claimed that through cases, students could develop:

- Thinking and analytical skills;
- Problem diagnosis and solving skills;
- Decision making skills;
- Powers of reasoning and persuasion; and,
- Communication skills.

Thompson suggested that for undergraduates mini-cases (2 or 3 pages) are recommended, as their attention span is less than postgraduate or master's students. Cases should be matched with a theory paper. Discussion took place about whether the most effective way to teach cases is to teach a framework first (PEST, 5 Forces etc.) and then use a case as an example. When using a case, and in order to effectively achieve the understanding goals, the teacher must ask:

- Why am I using this case? Do I want a case? And,
- Am I teaching with or through the case?

What Kind of Case?

In choosing cases, and in particular in order to achieve the understanding goals, a teacher ought to ask whether it should be a case that either the students or the teacher can relate to. Examples of well-known retailers such as Marks & Spencer or Apple Computers and the IPod make these attractive, but in reality some of the best cases written are about unknown companies. That this practitioner's life is a big case in itself is of course very relevant to the teaching but using cases helps to broaden the view of students and to allow the teacher to make comparisons between his own experience and the cases.

Decisions must be made whether to use short or long cases, with or without supplementary products, videos or even the actual entrepreneur in class? Can the teacher be sure the students will read the case in advance? The perceived wisdom is that they will only read the short ones in advance, but even that cannot be relied upon. On that basis I decided to get the students to read the cases in class, ensuring that everyone had read it. Other questions relating to performances of understanding are: How will I run my class? Will the students do group presentations prepared in class? Will they read the case in class?

The teacher should lead people to bring things out and flag the understanding goals they have missed.

The backdrop to every case should contain:

- What products and services;
- Who the target customers are;
- Why customers have a compelling reason to buy from this company and not a competitor;
- How to deliver the right quality at the right time; and,
- When to change the business model.

Thompson argued that the more unique the business model the higher the value received by the students, as it made the understanding goals more focussed.

Entrepreneurship and Cases

It is important to get graduates to think and feel entrepreneurship. Cases can be used to achieve this, to a degree. It is also important that the teacher gets a "feel" for the cases. A number of unusual mini-cases were offered as examples of entrepreneurial success. The pop artist Madonna was one of those cases as was the story of Robin Hood (teaching reality through fiction). While Robin Hood was emphasising strategy in particular, the entrepreneurship side of the story was to do with the entrepreneur's motivation, team building and the organisational and leadership challenges.

The case of Southwest Airlines, again a mini-case, was used to inform the students how new business models can dramatically change an industry and that the Internet has offered new strategic opportunities.

A page showing fifteen entrepreneurs' faces was used, and the students had to match the entrepreneur to one of fifteen businesses on the page. This was a simple but revealing mini-case that could be useful on my course, using Irish entrepreneurs, followed by videos of their businesses, which are available from accountancy firm Ernst and Young (www.eoy.ie).

Summary

This short course revealed that there are many different ways of delivering cases, such as different forms of media. The recommendation that cases should be linked to frameworks in order to explain them is an important one, in other words, cases should not be used in isolation but to explain some understanding goal.

This practitioner had learned through cases while doing an MBA but the understanding gleaned from this exemplar was that cases were not just the typical Harvard case but that they could be imaginative and different, e.g. videos, newspaper clips. This approach was actively introduced later in the teaching, so my Meaning Making was also changed by attending this exemplar. The rationale for using such a diversity of cases is that because this is the teaching of entrepreneurship, then the classroom ought to be dynamic and exciting for the student and teacher alike.
Participants, mostly lecturers in strategy or entrepreneurship, expressed frustration at cases not being read by students. In this regard Professor Thompson suggested mini-cases to be read at the beginning of class.

This course was leaning much more to strategy than entrepreneurship and was probably the least relevant of the four exemplars, because it concentrated purely on teaching through cases and contained relatively little information on teaching entrepreneurship.

As a result of attending this course, I decided to have students read mini-cases at the start of class to ensure that everyone read them, and also to try and keep cases short and accessible. I also decided to try to use as much different media as possible, e.g. film and podcasts. However, as my preference is to have the central theme the actual running of a business and reflection on that experience, I will make use of a few cases in my teaching course relevant to that.

This writer is somewhat unsure of the case study method of teaching. Learning by doing, which is the method I intend to use, seems to me a much deeper learning experience than reading a case and discussing it, but a mixture of practical learning and case studies may be the best way to teach entrepreneurship. The use of videos and other visual methods will also be considered. As cases are traditionally used for business and management courses and MBAs, the teaching of entrepreneurship may require more dynamic methods of teaching.

4. Findings and Directions for Further Research

While Harvard was aimed at senior executives and innovation in large companies, Babson was aimed at teachers of entrepreneurship and methods of teaching the subject. Cranfield emphasised case study teaching, while M.I.T. was run mostly for existing technology entrepreneurs on how to commercialise a high technology ideas. The generative topics varied on each course. Harvard used case studies of innovative companies to deliver understanding goals of innovation and change while Babson concentrated on what topics to use to teach the subject to students such as ideation and business creation. M.I.T used business plans and cases to get to the understanding goals of innovation and how to get venture capital.

Table 12 summarises and compares the four exemplars through the lens of the Teaching for Understanding Framework and gives direction for the design and implementation of a module on entrepreneurship at a university. The extra three rows, targets, duration and content serve to clarify the audience for whom these courses are developed and what they intend to teach.

Performances of understanding were generally case based teamwork and business planning, including “rocket” or “elevator’ pitches to fictional and real investors. While there was some follow up with Harvard with various materials being made available for a month or so after the course, there was little on-going assessment from the other exemplars.

There was much use of existing entrepreneurs in the delivery of these courses, both as guests and lecturers. Selling was regarded as the most essential skill, and teams of a high calibre were seen as key, more important than the idea itself. Both of these important messages will be adapted for use in the teaching of the module, described in Essay Three.

As demonstrated in Table 12, the programmes attended had varying customer focus, generative topics and understanding goals.

Founders of technological ventures need to think global dominance and take on board the needs and requirements of venture capitalists, including a large dilution of the ownership of their companies. Students in the module will be encouraged therefore to think globally, as well as locally.

Table 12: Comparison of Courses seen through the TFU Framework

	HARVARD	**BABSON**	**M.I.T.**	**CRANFIELD**
TARGETS	Senior executives	Teachers of entrepreneur-ship	Entrepreneurs	Case study teachers
DURATION	One week	One week	1 week	Two days
CONTENT	Innovation in existing large orgs	Methods of teaching entrepreneur-ship	How to launch high tech ventures	Teaching entrepreneur-ship with cases
GENERATIVE TOPICS	Case studies on innovation, Entrepreneur ship in large companies	Ideation, Entrepreneur-ship. Business creation	Technology venture start-ups Selling Venture Capital Teams	Different types of cases and media
UNDERST-ANDING GOALS	Innovate or die, Entrepreneur ial platforms	Entrepreneur-ship Can be taught And how	Innovation needs action. Selling is the highest calling Raising capital	There are many ways to teach through cases
PERFORMAN CES OF UNDERST-ANDING	Group and Class Business Creation, Elevator Pitch	Class participation Rocket Pitch	Business pitch to customers and plan for venture capitalists	Class discussion
ONGOING ASSESSMENT	Participation	None	None	None

Source: adapted from Blythe et al (1998)

Many elements from these exemplars will be selected for use in the design of a teaching course. All in all, the Meaning Making of this practitioner was

heavily influenced by attending these exemplars, both in the theories discovered and the tacit knowledge uncovered for teaching. It also revealed that the overwhelming view in the United States was that entrepreneurship could and should be taught in universities.

Together with selected materials from theorists in the field and combined with my own objective interrogation of my Professional Development Memoir, I now go on to create and implement a teaching course in entrepreneurship.

ESSAY THREE: EXPERIMENT - DESIGNING AND IMPLEMENTING A UNIVERSITY MODULE

1. Purpose and Approach

The purpose of this essay is to outline the experiment of designing and implementing a module on entrepreneurship for postgraduates in a university following:

- The insights of this writer as a practicing entrepreneur as presented in Essay One;
- Leading exemplars selected, attended and examined as described in Essay Two; and,
- The review of a selection of theoretical literature in economics on entrepreneurship in this Essay.

In a broader sense, the use of frameworks such as Kegan's (1994) Meaning Making Systems within his theory of Adult Mental Development and Blythe's Teaching for Understanding (1998) are used throughout the Portfolio to analyse the memoir, the exemplars and later the design and results of the module to be taught.

In Section Two of this Essay a theoretical foundation is constructed. Understanding entrepreneurship is more than simply downloading information. The experience of the practitioner matters and the attendance of a course or courses on the teaching of entrepreneurship, together with the application of the Teaching for Understanding Framework enables a practitioner to surface and communicate the understanding of that practical knowledge to students at a university. Theories from economic writers on entrepreneurship are selected, followed by the designing of a teaching module in entrepreneurship, which subsequently is implemented at University College Cork.

Students need to develop both an implicit and explicit theory of entrepreneurship in the economic system thereby developing their meaning

making systems in Kegan's terms, making object what they otherwise would have been subject to on their path to becoming entrepreneurs. By being able to locate what the students are learning about entrepreneurship, its role, its meaning, its function, its social role, its importance to society within the realms of the economic system, allows them to get the necessary insights needed to change their understanding of what entrepreneurship means.

Drucker's (1985:23) perspective that "every practice rests on theory, even if the practitioners themselves are unaware of it "is based on a theory of change in society. An entrepreneur not only welcomes change but also actually seeks it out. The entrepreneur upsets and disorganises. Drucker sees change in society as good, which gives students a way of looking at the world that sees change as good, a theory that will sustain them in life and in business and specifically in being entrepreneurial.

As this writer is not a theorist in entrepreneurship, the pool of economic theories of entrepreneurship is reached into in order to find organising principles and orientation to guide the design of the module within the context of the economic system as a whole. The organising principles come from reading and selecting these theories in the context of reviewing the experience of this practitioner as an entrepreneur and the insights from the exemplars. It also serves to bring a system perspective to entrepreneurship.

The process of design, implementation and development of the module is described in Section Three of this Essay. The Teaching for Understanding Framework (Blythe et al 1998) is used to describe the teaching as it took place. The experiment was conducted over three years of the Business Practice Economics programme. The hypotheses of the experiment is that entrepreneurship can be learned, and that learning by doing, linked with theories of entrepreneurship, taught by a practitioner in the field, is an effective method of teaching entrepreneurship.

Section Four deals with the assessment of the module through observation and surveys of both students, outside advisors, staff on the programme and teachers of entrepreneurship at other universities. The relevant findings are then outlined for practitioners in the field either considering or actually implementing courses or modules on entrepreneurship. The extent to which the Meaning Making Systems of this practitioner changed throughout the teaching process is also outlined.

2. Constructing a Theoretical Foundation

The purpose of this section is to highlight the most important theorists who recognised the role of the entrepreneur in economics and to decide which ones are relevant in the design and implementation of a teaching course.
Peter Drucker was selected as a practical writer on the subject. Schumpeter, Shackle and others also resonated with practical business life because they seemed to best understand entrepreneurship in practical terms as experienced by this practitioner. These theories also helped develop generative topics later contributing to the design of the module. Students will need to recognise the global nature of the economic system as a process of becoming aware of and subsequently exploiting the opportunities identified as a result.

Entrepreneurship

There are, of course entrepreneurship theorists outside of economics in management and other disciplines, but the reason for choosing economic theorists was to place the concept within the overall economic system to place students' understanding of the subject in a larger more complete context. Also, the author is working within the Economics Department of a university contributing to a postgraduate programme in economics.

The teaching of entrepreneurship cannot be done in isolation without taking into account its function in the broader economic system and the following writers have been chosen to place entrepreneurship and explain its relevance within the realm of the economic system.

It was Say, two hundred years ago, who coined the term entrepreneur; it was intended as a manifesto and a declaration of dissent. So an entrepreneur is an agent of change in society, and actually stirs things up in order to discover or create opportunities. Students can see change not merely as something that should be observed but that ought to be actively brought about to surface opportunities. Schumpeter (1934; 93-4) described the entrepreneurial process as:

"First of all there is the dream and the will to found a private kingdom, usually although not necessarily, also a dynasty…then there is the will to conquer: the impulse to fight, to prove oneself superior to others, to succeed for the sake, not of the fruits of success, but of success itself…. finally there is the joy of creating, of getting things done, or simply exercising one's energy and ingenuity. Our type seeks out difficulties, changes in order to change, delights in ventures."

Schumpeter (1934) went on to distinguish between the inventor and the entrepreneur. While many inventors became entrepreneurs, many did not. Very often, the entrepreneur gets things done, that is, brings the product or invention to market. Certainly this writer never wanted to be the inventor of the product as detailed in the memoir, but merely brought the product or box to market.

Entrepreneurial Discovery

Hayek (1948) and Von Mises (1949) introduced the concept of entrepreneurial discovery. This was in response to assumptions in neoclassical economics about perfect information. When an individual takes action to exploit an opportunity in the market place clearly the information available to agents is imperfect. However, in the act of testing his assumptions he learns even more about the discovery and deepens his understanding of the opportunity. This practitioner, as an entrepreneur, would have been endlessly watching for opportunity in the market place and would be aware of the imperfection of information. Students are encouraged

to straddle uncertainty, to effectively welcome or create it and see it as opportunity inherent throughout the economic system.

Sarasvathy et al. (2003) explain that an entrepreneurial opportunity consists of a set of ideas, beliefs and actions that enable the creation of future goods and services in the absence of current markets for them. So the economic system has potential markets that need products that are not currently being supplied and therein is the economic and entrepreneurial opportunity.

In the creation of this writer's first successful business, a portfolio of products for possible importation of about seven different items, from bathroom suites to valves to piping were chosen. The products picked were targeted at particular merchant outlets. These offers tested the demand for these products from merchants, and orders were placed when the order was received from the merchant. While this caused quite a delay in the actual delivery of the item, it allowed for testing what products were likely to succeed. The one product least expected to 'win' was the one that made the business successful. This experience is representative of a lot of smaller business start-ups, as the resources to do market analysis don't exist - in contrast with larger companies.

The way to entrepreneurial discovery and experimentation is to minimise the potential losses along the way. One learns by doing and if in the doing the losses are too great, the journey ends and often a new one begins. The economic system benefits from the availability of new products, as do individual entrepreneurs who get the wins although those who get the losses often gain valuable experiences.

The Enterpriser

Batstone and Pheby (1996) wrote about Shackle's vital contribution to our understanding of entrepreneurship. Indeed, Shackle preferred to use the term "enterpriser", arguing that the term entrepreneur referred to everyone actively pursuing any idea, whereas in the business world it should be

separated as the enterpriser. I prefer the distinction, as it is more specific and definite than the term "entrepreneur". It is enterprises that are being run and the word "enterpriser "is preferred for use with students to get a different and more explicit description of what entrepreneurship means.

Shackle (1966) followed Cantillon (1730) in believing that enterprisers must bear the risks associated with uncertainty by which he meant that in failure, the enterpriser suffers the losses. There is uncertainty about all aspects of starting and running a business, from finance to competition to debtors and product quality. He refers to imagination and creativity being the thing that makes people enterprising.

This practitioner always felt that the experience of setting up and running a business was a journey of discovery, an ever-changing landscape with many lessons learned along the way. Shackle (1966: 108) says that one imagines the future: "men's imagination shows them more often, not places to get to but directions in which to travel". He also claims that action is not based on exclusive knowledge but on anticipated outcomes, where this is guided not only by reason but also by the imagination and practical conscience of the businessman.

He goes on to say, "In judging what is possible and what is tolerable the businessman is guided by what we shall call his practical conscience, his instinct for avoiding those acts which seem to endanger his firms survival". This "conscience" as Shackle calls it, leads to many ways of doing business, such as after sales service as well as relationships with customers and suppliers being paramount to defend. Porter (1985) further developed and operationalised this concept with his Value Chain.

Economic Ignorance

There is much unknown in economic markets, a lot of ignorance. This is overcome in two ways. Hayek (1948) understood (from Von Mises) that the way markets overcome ignorance was this: when market prices are not

perfectly aligned to supply and demand conditions (which they never are), profit opportunities are made available to alert entrepreneurs who make discoveries. The profit motivation then realigns supply and demand conditions in an efficient manner. So then by observing the economic system and analysing price misalignment the entrepreneur can identify opportunities for profit.

Entrepreneurial Process

Schumpeterian creative destruction is seen widely. McCraw (2007) outlines what happened in the tyre industry. The French tyre company Michelin started mass producing radial tyres in the 1940's, a shift which by the 1980's killed off all the big tyre companies in America except Goodyear, because of an industry-wide complacency based on long-term success which prevented the companies from responding effectively. I had exactly this experience as a businessman: the product I introduced to the market, a plastic push-fit plumbing system, seriously undermined the existing system of copper piping. The incumbent suppliers and manufacturers ignored the presence of this new competitor for many years until it was too late and allowed my company to take a substantial market share in the region of 25%.

It is important to understand the processes that entrepreneurs go through in order to help to define the understandings that students of the subject will need.

Birley (2000) defines concisely what the entrepreneurial process is:

- Identification and development of an opportunity in the form of a vision;
- Validation and conceptualisation of a business concept and strategy that help attain the vision;
- Marshalling the required resources to implement the concept
- Implementing the business concept;
- Capturing the full opportunity through the growth of the enterprise;

- Extending the growth of the enterprise through sustained entrepreneurial activity; and,
- Capturing the value through business exit.

While the above is fully relevant to the process in the real world, teaching students these concepts will have to be somewhat theoretical, such as capturing the value through business exit as their small campus businesses will hardly capture much value on exit.

Timmons and Spinelli (2007) demystify Entrepreneurship and define it as a way of thinking, reasoning, and acting that is opportunity obsessed, holistic in approach, and leadership balanced. "Getting new things done" is not only a distinct process but is a process that produces consequences that are an essential part of capitalist reality.

The creation and recognition of opportunity is central to the process. Willingness to take risks, both personal and financial is part of the process, but done in a calculated fashion. Entrepreneurship is the process by which "opportunities to create future goods and services are discovered, evaluated, and exploited"(Shane and Venkataraman 2000: 218).

This writer believes that the entrepreneurial process is a highly creative process. There is a sense of optimism about looking at opportunities and an innate excitement in discovering them. It surprises this practitioner that many people are not thinking like this. When discussing opportunities or possibilities with people they immediately start seeing the problems and the reasons why you should not do something. As an entrepreneur one sees the problems as things that will be overcome, details, always looking at a bigger picture, the size of the opportunity. How big can this become?

Theodore Levitt (1963) suggests that creativity is not enough. While there are many creative thinkers in the abstract in companies, few go on to do the

hard work of implementation. Analysis of costs, risk and details of how to actually do what creative thinkers have suggested are rarely produced. Indeed in my own experience it was relentless hard work and commitment that eventually brought about success. Many people have an idea for a business but rarely implement it, because, perhaps, a fear of failure or a fear of the grinding hard work involved in its implementation.

Metcalf (cited in Casson, 2006) asks in what way entrepreneurs are different from artists generally. He says it is only that their conjecture is business plans rather than works of art. But the entrepreneur must implement the plans and there must be a profitable outcome. He identifies what is unique to the entrepreneurial process as business leadership.

This writer believes that there are many opportunities available; all one has to do is look. Some, indeed many, will result in dead ends, but discoveries are made throughout the journey and judgement and decision skills are developed through doing it. Every little step leads to a deeper understanding of how business operates and in my case, eventually lead to success. Timmons and Spinelli (2007) say that typically, entrepreneurs devise ingenious strategies to marshal their limited resources.

Entrepreneurship and Marketing

As marketing is ultimately the method through which the products decided upon are sold, there exists a close relationship between entrepreneurship and marketing. Entrepreneurship we have discussed earlier as a discovery process for opportunities in the market economy. Marketing is described by Casson (2006: 115) as "a set of activities undertaken by firms for aiding and organising market exchange. Casson goes on to say that when entrepreneurial orientation is too low, firms are risk averse and often miss the opportunities available in the marketplace. Entrepreneurial marketing is distinguished from classic marketing as being the willingness of the entrepreneurial firm to lead their customers rather than simply following them.

Creative Rebels

Much literature concentrates on the characteristics of entrepreneurs, and much seems contradictory, from personality dysfunction to irrational on one hand to being controlled and rational on the other. De Vries (1997) suggests much dysfunction as the driving force behind the personality such as a need for control, a sense of distrust, a need for applause and defensiveness. Birley and Muzyka (2000) argue that it is the mix of creative and irrational which makes entrepreneurs tick. Bhide (2000:113), on the other hand, disagrees: "Successful entrepreneurs are more likely to conform to models of rational behaviour than the population at large, along several dimensions; they have a lower aversion to ambiguity, a lower propensity toward information biases, and can exercise greater self-control".

Bygrave et al. (2004) suggests that there is no neat set of behavioural attributes that allow us to separate entrepreneurs from everyone else. There is a strong desire to achieve, but that holds for non-entrepreneurs as well. We no longer use psychological terms to describe entrepreneurs but everyday words like: dream, decisiveness, doers, determination, dedication, devotion, details, destiny, dollars and distribute. These descriptions are also much more positive and supportive that those of De Vries above.

Amit et al. (2001, cited in Casson, 2006) compared entrepreneurs in Canada with senior managers and found that wealth attainment was secondary to the senior managers to other decision dimensions including vision, stability, power, lifestyle, leadership, innovation, independence, ego, contribution and challenge. Licht and Siegel (2006, cited in Casson 2006)) propose that a plausible hypothesis would be that entrepreneurs' value priorities emphasise self-enhancement and openness to change over self-transcendence and conservation, respectively.

The following are the listed characteristics of entrepreneurs by Kuratko and Hodgetts (2007), which they cited from *Entrepreneur of the Year* Magazine (1999):

- Recognise and take advantage of opportunities;
- Resourcefulness;
- Creativity;
- Visionary;
- Independent thinker;
- Hard Worker;
- Optimistic;
- Innovator;
- Risk Taker; and,
- Leader.

If we are to follow Kuratko and Hodgetts then the characteristics listed above seem to this writer to be learnable in terms of entrepreneurship as disciplines and not as symptoms or feature of any personality type.

In this writer's view, entrepreneurship represents a particular way of looking at the world, which recognises and exploits opportunity and change and it is something, which can be learned and developed. There are of course environmental and sociological factors as well including the attitude to risk described in the following section.

Sociological and Environmental Factors

Kuratko (2007) argues that a social system that highly values venture creation and risk-taking is more likely to produce more entrepreneurial events. Culture bears a profound influence on all facets of entrepreneurship in societies. Bygrave and Zacharakis (2004) suggests sociological factors as being relevant such as age and family responsibilities being important in the likelihood of a decision being made to proceed with an idea. Timmons and Spinelli (2007: 59) quote Kauffman:

"Live what you talk, make your actions match your words. You must live what you preach and do it right and do it often, day after day. As an entrepreneur, you really need to develop a code of ethics, a code of relationships with your people, because it's the people who come and join you. They have dreams of their own. You have your dream of the company. They must mesh somewhat".

Agreeing with Kaufmann, the entrepreneur, in this writer's experience, needs to believe passionately in the vision, and live an ethical and honest existence, respecting all those around him. This pays dividends with staff and customer loyalty and builds trusting long-term relationships with all stakeholders and is most important from a sociological point of view.

Risk and Uncertainty

Risk-taking is inherent in the entrepreneurial process, and the entrepreneur's ability to straddle risk in the formation of a new business is seen as crucial. Schumpeter (cited in Hitt 2005) regarded the risk taker in the entrepreneurial process as not necessarily the entrepreneur but the financial intermediary. This writer believes that risk is based on the level of uncertainty looking to the future, as all future events are really beliefs and only become facts when the future arrives.

Knight (1921) distinguishes between risk and uncertainty. Risk is seen as randomness but with knowable probabilities whereas uncertainty is randomness with unknowable probabilities. Shackle (1970: 21) considers that:

"The businessman is not merely the helpless victim of uncertainty. He is at all times actively promoting it. For he hopes to discover and apply new knowledge, knowledge of natural principles or market principles, and in so far as knowledge is genuinely new it must subvert in some degree what has been accepted as knowledge hitherto. New knowledge is in part destructive of old knowledge".

So opportunity therefore in the economic system consists of new knowledge that replaces or subverts old knowledge.

As one of Shackle's 'enterprisers 'this writer often felt only comfortable in a world of uncertainty, that somehow when not uncertain, one is not aware or open to learning. The whole spirit of business is to outdo one's rivals by inventing or adapting a new technique or new product and exploiting its potentiality during some interval before it can be imitated (Shackle, 1970). In my business, many imitators followed us into the market place, but our strong channels of distribution proved very difficult for them to penetrate. The products were similar, and often cheaper but quality and reliability in the plumbing business is vital and distribution channels can be hard to break down due to loyalty and quality of service built up over time.

Judgement is a vital element in decision-making when dealing with uncertainty. Shackle (1973:64) says:
"An enterprise in contemplation does not offer its outcome as an observable fact, for that fact is in the future, beyond the eyes of men". This practitioner was often surprised when my enterprise being contemplated actually was implemented and real. Often the contemplated enterprise turned out to be quite different when implemented as changes and discoveries along the way force changes in the direction the business is going. Shackle argued that "choice", which is the freedom to decide in economics, is an exercise of free will. The agent of choice, as an entrepreneur is, does not know the outcome of his choice with any certainty, which certainly matches my own experiences in starting a business and is an important lesson to be learned by students on the module to be taught.

Cantillon (1730) described an entrepreneur as someone who reduces risk for others by taking it on him or herself in the form of a fixed price contract over time. The risks in price fluctuations are borne by the entrepreneur while workers and suppliers are paid in advance of the price level being known by

the entrepreneur. Guessing right ensures a profit, but getting it wrong generates losses.

Kirzner (1997) refers to the alertness of the entrepreneur as being the basis for his views on entrepreneurship. What Kirzner referred to as alertness, Von Mises (1966) saw as human action seen from the aspect of the uncertainty inherent in every action. An entrepreneur sees the risk in every action as an opportunity. Hubbard (2007) says that entrepreneurs take on risk, with only their own judgment as protection against failure; and although some do indeed fail as individuals, together the entrepreneurs reduce the economic risk for society by taking on those risks and therefore are an essential good for society.

Innovation

Martinez et al. (2010) suggest that it is commonly accepted that entrepreneurship is vital to the success of modern economies. Casson (2006) identifies the entrepreneur as the locus of economic innovation and experimentation and, therefore, the engine of new knowledge creation. In modern society, information is more widely available through the Internet, and therefore information is more accessible to entrepreneurs than before the information age revolution. By acting entrepreneurially, an individual can actually change the information as others observe it, making the economic system constantly change and increasingly unpredictable.

Kirzner (1973) suggests that profit opportunities arise when something is being sold in two markets at different prices, as a result of poor communication between the markets. The entrepreneur notices the discrepancy before anyone else does. Kirzner quotes Von Mises as having said that the entrepreneurial function- as seen from its speculative aspect- is inherent in every action. Schumpeter (cited in McCraw, 2007) assessed capitalism as an expression of innovation; human drama and sheer havoc all going on at once. This writer believes that the successful entrepreneur

manages the chaos and assesses it as risk and opportunity at the same time while being aware of the uncertainty of the outcome. Schumpeter (cited in McCraw, 2007) described the advantage to society and economies that entrepreneurs represent: the way in which high earnings motivate entrepreneurs to translate innovation into actual production and thereby raise the general standard of living.

It is important to refer to Schumpeter's classic "Creative Destruction" (1942) which he defines as the fundamental impulse that sets and keeps the capitalist engine in motion coming from new consumers, goods, new methods of production or transportation, new markets, new forms of industrial organisation that capitalist enterprise creates. The process abounds with uncertainty, as the entrepreneur is under threat from the next product or service that may destroy his existing business. Entrepreneurial activity is the very engine of Schumpeter's creative destruction. However, Hubbard (2007) quotes Nobel laureate Edmund Phelps as saying that Schumpeter was wrong: entrepreneurship can generate stable growth. Phelps sees the role of growth enhancing entrepreneurship differently. Innovation leads not to "creative destruction," but to "nondestructive creation," in which the free and uncoordinated contest of ideas generates growth. However, in this practitioner's experience, Schumpeter's concept of creative destruction seemed evident on almost a daily basis in business with businesses starting and ending regularly due to competition in the market place.

Hayek (1948) describes knowledge in society as dispersed bits of incomplete and frequently contradictory knowledge which all the separate individuals possess. He also suggests that the solution of the economic problem of society is a voyage of exploration into the unknown, an attempt to discover new ways of doing things better than they have been done before. Hayek said that price tells producers what to produce, that it is a system of telecommunications in the market place. This process is often highly volatile and full of uncertainty. The whole acts as one market, not because any of its

members survey the whole field, but because their limited individual fields of vision sufficiently overlap so that through many intermediaries the relevant information is communicated to all.

Entrepreneurial Management

Schumpeter (cited in McCraw (2007) described entrepreneurial management as fundamental policies needed to endow a business with entrepreneurial management; to make a business and its management greedy for new things; to make it perceive innovation as the healthy, normal, necessary course of action.

Students, in the module to be taught, will need to understand that innovation and entrepreneurship in the management of a business are an essential part of running a business.

Because this writer's direct experience is about the creation and running of a small business, it is important to introduce to students the theories of entrepreneurship as they pertain to large businesses also. Peter Drucker (1985) is one leading theorist in this field.

Drucker (1985) also used the term Entrepreneurial Management. He says that entrepreneurship is based on the same principles, whether it is the individual businessperson, the company manager, or a business or non-business organisation. This is true for governmental organisations as well. That is not to say that there are not differences in strategic needs and problems; existing organisations possess management skills but need to learn to innovate, while the budding entrepreneur is innovating but may need to learn management skills.

Drucker (1985) says that today's businesses simply will not survive without what he calls entrepreneurial competence. He says that entrepreneurial management requires policies and practices in four distinct aspects:

- Receptiveness to innovation and seeing it as an opportunity rather than a threat; be organised to do the hard work of the entrepreneur;
- Systematic measurement or appraisal of the organisation's performance as entrepreneur and innovator;
- Specific practices pertaining to organisational structure, to staffing and managing, and to rewards and compensation; and,
- "Don't dos" exist in entrepreneurial management, such as not mixing managerial and entrepreneurial units, as their functions are often different.

Therefore, a module that includes the teaching of entrepreneurship should demonstrate how opportunity identification can be systematically done and that entrepreneurial structures need to be in place.

Drucker (1985) suggests that for the existing enterprise, whether business or public-service institution, the controlling word (in the sense that it differentiates it from other forms of management) in the term entrepreneurial management is "entrepreneurial". For the new venture, it is "management". In the existing business, it is the existing culture that is the main obstacle to entrepreneurship. In the new venture, it is the absence of management.

Drucker (1985) also suggests that it is not size that prevents or stifles entrepreneurial activity within large firms; it is the existing operation itself, and especially the existing successful operation. Any new idea always looks tiny and unattractive, particularly to a mature successful company, and if the idea looks big it is to be mistrusted. The temptation in the existing business is always to feed yesterday and to starve tomorrow. Drucker also argues that the conventional wisdom that entrepreneurship and innovation are somehow natural, spontaneous and creative is misplaced. There are some examples of entrepreneurial companies such as J&J, 3M, IBM and GEC who have somehow prevented the stifling of entrepreneurial activity in their businesses, which is the death-knell of many companies.

Drucker (1985) is quite specific in what principles should be followed and where the sources of innovation and entrepreneurship exist. Indeed he believes that there is no such thing as a "resource" until man finds a use for something in nature and thus endows it with economic value. He argues that entrepreneurs in existing companies will need to practice systematic entrepreneurship. Managers can identify the sources of opportunity:

1. The unexpected - the unexpected success, the unexpected failure, the unexpected outside event;
2. The incongruity – between reality as it actually is and reality as it is assumed to be or as it "ought to be";
3. Innovation based on process need; the need will probably exist in an area like medicine where a particular solution is needed by, say, medical consultants;
4. Changes in industry structure or market structure that catch everyone unawares;
5. Demographics (population changes);
6. Changes in perception, mood, and meaning of customers and potential customers; and,
7. New knowledge, both scientific and nonscientific.

As can be seen from the above list there are many sources of opportunity, all of which can be addressed in a module on the teaching of entrepreneurship. As students from this module may end up working in large companies these principles will need to be understood by them.

Entrepreneurship in Large Companies and the Penrosian Perspective

In order to further address the essential differences between my experiences, that of setting up a small enterprise and those of larger companies, I interrogated Penrose (1995 [1959]) to examine her economic theories of entrepreneurship in large firms.

Penrose uses the term 'entrepreneur' in a functional sense. She refers to individuals or groups within the firm providing entrepreneurial services, no matter where they exist in that firm. She goes on to describe these services as contributions to the operations of a firm relating to the introduction of new ideas, be they products, location, or significant changes in technology. This also applies to the hiring or acquisition of new managerial personnel, to fundamental changes in the administrative organisation of the firm, to the raising of capital, and even the making of plans for expansion, including the way this expansion takes place.

Penrose contrasts entrepreneurial services with managerial services, which are relevant to the execution of entrepreneurial ideas and proposals and to the supervision of existing operations. She explains that the same individuals may provide both types of service to the firm. The nature of the organisation of a firm and the relationships between the individuals within it have often as important an influence on the competence and enterprise of management and on the kinds of decisions taken as do the inherent characteristics of the individuals themselves.

Penrose (1995 [1959]: 33) says we know that large numbers of firms have survived for long periods, and that they have not reached or are even near the end of the road – that they will continue to grow indefinitely. She says that enterprisers are people with a psychological predisposition “to take a chance in the hope of gain, and, in particular, to commit effort and resources to speculative activity”. She argues that enterprise, or 'entrepreneurship', is a slippery concept, not easy to work into formal economic analysis and it is too closely associated with the temperament or personal qualities of individuals. She says that many of the most important services that a firm's entrepreneurs can produce are not the result of 'temperamental' characteristics of the individual people involved but are shaped and conditioned by the firm itself.

The enterprising large firm will permanently commit part of its resources to the task of looking for profitable expansion, acting on assumptions, supported perhaps by past experience, that there are always likely to be opportunities for profitable growth. Penrose (1995 [1959]: 34) describes the decision to search for opportunities as: “An enterprising decision requiring entrepreneurial intuition and imagination and must precede the 'economic' decision to go ahead with the examination of opportunities for expansion”.

Penrose (1995 [1959]) suggests that when a company is young its resources define what it can and cannot do. Its resources are people, technologies, cash, brands, and suppliers. As a company grows, it becomes more defined by its capabilities, such as product development, budgeting, and manufacturing. How big an idea is defines whether it will go ahead. Resources are more adaptable than processes and the smaller company sees and takes advantage of shifts and opportunities in the market place.

Penrose (1995 [1959]) says that to the extent that a firm is capable of producing only a given range of products, any limitations on the market for those products will restrict the firm's opportunities for expansion. An adaptive kind of management service is needed if expansion requires major efforts on the part of the firm to develop new markets or moving into new lines of production. Penrose (1995 [1959]: 37) says:
“Here the imaginative effort, the sense of timing, the instinctive recognition of what will catch on or how to make it catch on become of overwhelming importance. These services are not likely to be equally available to all firms”. This is related to the nature of entrepreneurial ability itself and varies across firms. For those that have these services however, much greater range of investment opportunities are available to them than to firms with a less versatile type of enterprise, although the mere existence of 'enterprise' is not sufficient to enable a firm to move indiscriminately into any kind of activity.

In order to help my students to understand the broad scope of entrepreneurship within large companies as well as small a large part of the

course will need to be dedicated to explaining the concepts according to Penrose and Drucker. That entrepreneurship can exist within management in bigger companies and that it can be perceived as a resource will have to be explained. That entrepreneurship is a discipline that can be learned is an essential lesson of Drucker's and will provide generative topics in the design of the module.

Fund Raising Ingenuity

The importance of fundraising as an entrepreneurial function is not widely recognised. Penrose says that the type of entrepreneurial service needed to raise capital may not be closely related to the type of services needed to run a firm efficiently, for successful raising of capital depends on an entrepreneur's ability to create confidence. This could be among the many stakeholders or investors available to the entrepreneur. Thus small firms have often relied on having an inventor or a skilled production manager, and a 'businessman' able to raise capital and buy on credit. For Penrose (1995 [1959]: 38) the excuse that 'shortage of capital' is the cause of failure of small firms often means merely that: "A very particular and possibly very rare sort of entrepreneurial ability is required to launch successfully a new firm on a shoestring or to keep up the rate of net new investment required to enable it to reach a size and position where its general credit standing is well established". This, in other words, is bootstrapping, an essential skill of entrepreneurs.

Penrose (1995 [1959]: 38) further explains that "capital is a problem for the small and new firm in much the same sense that 'demand' is a problem – the same kind and quality of 'enterprise' that might be successful in a known and established firm, may not be successful in 'selling' a firm or its product to cautious and skeptical investors or consumers".

On the other hand, even firms with plenty of financial resources but weak managerial resources can succeed, only if their functional entrepreneurial services are sufficiently flexible and imaginative to know the kind of management needed by the firm.

Entrepreneurial Ambition and Judgment

Penrose (1995 [1959]) describes two distinct types of entrepreneurial ambition. The first refers to those who are primarily interested in the profitability and growth of their firm as an organisation for the production and distribution of goods and services. She calls these 'product-minded' or 'workmanship-minded' entrepreneurs or 'good-will builders'. Their activities are aimed towards the improvement of the quality of their products, the reduction of costs, the development of better technology, the extension of markets through better service to consumers, and the introduction of new products in which they believe their firms have a productive or distributive advantage.

The second type of entrepreneur she describes as an empire builder who wants to create a powerful industrial 'empire' extending over a wide area. He delegates the entrepreneurial functions within his firm and extends the scope of his enterprise through acquisition or the elimination of competitors by means other than competition in the market place. He is a business politician and strategist who can out think his competitors.

She says the problem of entrepreneurial judgment involves more than a combination of imagination, common sense, self-confidence, and other personal qualities. It is closely related to information-gathering and consulting facilities within a firm.
It is ‘expectations' and not 'objective facts’, which are the immediate determinants of a firm's behavior. She goes on to say that the 'environment' rejects or confirms the soundness of the judgments about it, but the relevant environment is not an objective fact discoverable before the event. The soundness of judgments of decision makers in the firm rather than anything else determines its future success or failure. Good judgment is an entrepreneurial function while the environment is an image in the entrepreneur’s mind.

Therefore students will gain an understanding that the way they observe the world and decide on what to do about it of great importance. They will learn this by designing a business and then implementing it, recognising the soundness or otherwise of their decision-making.

Conclusions

The goal of this section was to highlight the most important theorists who recognised the role of the entrepreneur in economics and to decide which ones are relevant in the design and implementation of a teaching course.

Several economists have identified the entrepreneurial function in the economic system that it delivers a service in the realm of risk-taking and delivers goods and services to society at competitive prices. From Schumpeter's "private kingdom" to Hayek's "dispersed knowledge" and on to Shackle's "enterpriser" as well as Penrose's "managerial resources" we have concepts that appear relevant to me as a practitioner and therefore can be employed in the teaching of entrepreneurship. The theories raise some issues for the teaching of entrepreneurship in that they enlarge the students' view of the opportunities that can be identified in the wider economy. Although this writer considers the actual running of a business to be the primary source of understanding on the teaching course to be designed, the mix of economic theories offer substantial support for the necessary understanding of the economic system for students.

Because this practitioner has had what can be called an anecdotal experience of starting and running a few businesses and believes that starting a business on campus will be an important learning experience, a broader use of theorists' arguments in class offers a strong complimentary theoretical foundation and raises the status of the module to university standard and gives the students a global and more complete view of the economic world. The study of Drucker and others to help them reflect on their experiences of running a business will help in this regard.

Kuratko and Hodgets (2004: 30) offer the following to guide me in my teaching:

"Entrepreneurship is a dynamic process of vision, change, and creation. It requires an application of energy and passion towards the creation and implementation of new ideas and creative solutions. Essential ingredients include the willingness to take calculated risks– in terms of time, equity, or career; the ability to formulate an effective venture team; the creative skill to marshal needed resources; and fundamental skill of building a solid business plan; and finally, the vision to recognise opportunity where others see chaos, contradiction, and confusion."

In teaching these concepts of searching for and creating new ideas, the module itself will need to have the qualities of vision, change and creativity within it. The passion will have to be in the teaching and the delivery of workshops, an excitement will need to be generated. The apparent chaos in the economic system will be seen as an opportunity, not a threat.

Kuratko (2007: 44) also says that an "entrepreneurial perspective "can be developed in individuals. The characteristics of seeking opportunity, taking risks and having the tenacity to push through an idea to implementation define this perspective. This perspective can be exhibited inside or outside an organisation, in profit or not-for-profit enterprises, and in business or non-business activities for the purpose of bringing forth creative ideas.

Although Penrose (1995: 33) stated that entrepreneurship was a "slippery concept", for this Portfolio and for the teaching of entrepreneurship to students, a firm concept of entrepreneurship can be gleaned from the theories, and from her *Theory of the Growth of the Firm*. While some writers suggest that there are certain characteristics that make someone entrepreneurial, many more contend that there are no characteristics that set them apart from anyone else. Drucker (1985) argues that there are many aspects of entrepreneurship that can be learned or instilled systematically in an organisation. These include the systematic search for opportunities

through demographics or the application of managerial resources to new products or services.

Levitt's (1963) contention that creativity is not enough, and that the hard work of implementation needs to be undertaken leads this writer to believe that the students will need to actually implement a business plan as part of the course to be taught. Risk is undertaken in the face of uncertainty, products are introduced to the market place and finance needs to be raised and managed. Marketing needs to be done. Penrose differentiates between managerial and entrepreneurial resources, arguing that managerial resources must be present to put the entrepreneurial ideas in place. All these functions can be approached with a perspective as entrepreneurial services.

However, the author that stood out for this writer, particularly from the point of view of teaching, was Drucker. His business-like and accessible language, as well as his clear understanding that entrepreneurship is a discipline that can be taught, makes his writing the most useful in the context of teaching a postgraduate course. Drucker's assertion that every practice is based on theory and that it is a discipline is the ultimate generative topic for use in teaching entrepreneurship as outlined in the Teaching For Understanding Framework in the next section.

Students will learn the discipline of practising entrepreneurship, as all the knowledge gained from running a business cannot be gleaned from theory alone. Decision-making and judgement are important facets of entrepreneurship and students will need to make decisions and observe their results. The value of complimenting the practice with theory encourages students to reflect on their experiences through the lens of the leading theorists in the field of economics and adds deeper understanding to their experiences in practise. Students need to understand what risk means in business and the importance of Kirzner's (1997) concept of alertness in order that they begin to observe with more intensity the workings of the business economy around them.

Schumpeter's (1934) suggestion that the inventor is often separate from the entrepreneur will be emphasised in class, as the difference is not widely understood. As a practitioner I noticed that the inventors were not always the best ones to sell the products they had made.

Schumpeter's "creative destruction" is important in giving the students an understanding of the workings of the economic system from a business point of view. Businesses are created and die on a daily basis and Schumpeter explains this as a creative process that ultimately benefits the consumer and the wider economy while not the failing business, although the experience gained can often be used in the creation of a new business by the entrepreneur.

Penrose's assertion that managerial services are different to entrepreneurial services but that both can be supplied by the same people needs to be understood by the students as many will work in large organisations in a management capacity and may become entrepreneurial managers in both Penrose's and Drucker's terms.

I believe from my own experience that learning by doing is the best way of achieving this and that no amount of lectures or books can offer the same dynamic and experiential perspective that creating an actual business will. I want my students to learn to straddle uncertainty and chaos, which I believe to be the essence of the innovator and entrepreneur. The combination of doing and the linking of the theories to the action add strength to the learning, which would not be sufficient with theory alone. In order to do this they will need to come up with their own original business ideas.

3. Initial Design of Module

The purpose of this section is to use the Teaching for Understanding framework to organise and structure the design of the module to be taught.

Generative Topics are identified and Understanding Goals, Performances of Understanding and Assessment methods planned and selected.

The content of the course design is organised under two headings as presented in Table 13:
(i) The experience of this practitioner, including exemplars attended, and
(ii) The theories interrogated in Section two of this essay

Table 13:Module Headings

	Generative Topics	**Understanding Goals**	**Performances of Understanding**
Practitioner Experience	Learn by doing, Exemplars, Principles of Entrepreneurship	Understand concepts, principles and skills of entrepreneurship	Set up and run business and present plans and reports
Economic Theories	Every practice based on theory, Entrepreneurship as a discipline	Essential Concepts underlying entrepreneurship	Assignment on Drucker linking business to theory

Source: Blythe et al (1998).

Key Features of Generative Topics

Much of the material presented in this section is taken from the Harvard Teaching for Understanding website [5]

- Generative topics are central to one or more domains or disciplines. Issues that foster understanding allow students to gain the necessary skills and understanding to proceed successfully to more sophisticated work in the domain or discipline. Typically such issues are also of interest to professionals in the field". On the module and programme students learn by doing, i.e. start a business as well as connecting their experience to the domains of economic theories (both in this module and the programme as a whole). This allows

[5] http://learnweb.harvard.edu/apls/tfu/info3c.cfm (accessed on 2/1/2011)

students to gain the necessary skills to make them ready for the business world;

- Generative topics are interesting to students. The generativity of a topic varies with the age, social and cultural contexts, personal interests, and intellectual experiences of students". The module is designed in a way that makes it exciting and innovative and the language used in the classes should be kept business like to make the messages of entrepreneurship clear and accessible to a postgraduate class;

- Generative topics are interesting to the teacher. Their teacher's passion for and curiosity about a particular issue or question serves as the best model for students who are just learning how to explore the unfamiliar and complex territory of open-ended questions". The passion for the subject that this practitioner has will be communicated to the students and the act of discovery through the running of a business and giving feedback to professionals through presentations brings them into the complex area of self-reflection and decision-making;

- Generative topics are accessible. Accessibility in this case means that lots of age-appropriate resources are available to investigate the topic and that it can be addressed through a variety of strategies and activities that helps students with various strengths and inclinations make sense of it". The use of online facilities and mobile phone communications to investigate and develop their businesses is encouraged; and,

- Generative topics offer opportunities for multiple connections. They give students the chance to make connections to their previous experiences, both in and out of school. They have an inexhaustible quality: they can always be explored more and more deeply". The students make connections between their own and an external

business in the economy, between theory and practice and this learning continues after the module hopefully throughout their lives.

Planning Understanding Goals

On the Teaching for Understanding website advice is given on how to plan understanding goals. The following questions are posed:

Your overarching goals: ask yourself, "What do I want my students to get out of their year's worth of work with me?"

The students should be able to understand how business works both at a micro and macro level and they should be thinking and acting entrepreneurially in their lives and careers. Barbara Bird (2009, citing John Biggs) suggests that the point of education is conceptual change, not just the acquisition of education.

The generative topic that links to the understanding goal: ask yourself, "What is most important for my students to understand about this topic?"

The students must understand that entrepreneurship is a discipline, that it can be practiced and that it is a way of observing and looking at the world. Business provides a service to society and is ever-changing and within that change lays opportunity.

The performances of understanding: ask yourself, "What do I want students to understand about this topic?"

That entrepreneurship can be learned, that it can be practiced in big and small companies, that it is about selling, pricing, relationships, perseverance, ideation, observation, decision-making, teamwork, bootstrapping and risk management.

Your on-going assessments: ask yourself, "What criteria will help me and my students figure out what they understand?"

Students present to professional banking and business experts their business plans and results of running businesses as well as an assignment on the theory of entrepreneurship which links theory and practice.

Understanding Goals from Practitioner Experience

As is outlined my Professional Development Memoir most of my learning took place in the day-to-day activities of my business career. The implications of that are that the biggest part of learning the students are likely to get is from the actual creating and running of a business on campus. Through this they discover uncertainty and the opportunity that comes with embracing that uncertainty.

However, my own business education has developed my thinking further. My story should become a regular part of the teaching, with references to my experience, raising awareness for different questions around the theories of entrepreneurship. Being a business practitioner involves awareness through intense observation, the actual experience of running a business all connected to theories in the field.

The Principles of Entrepreneurship detailed in the Memoir in Essay One can be used to determine the Understanding Goals from what parts of the life lived can or should be brought into the classroom[6].

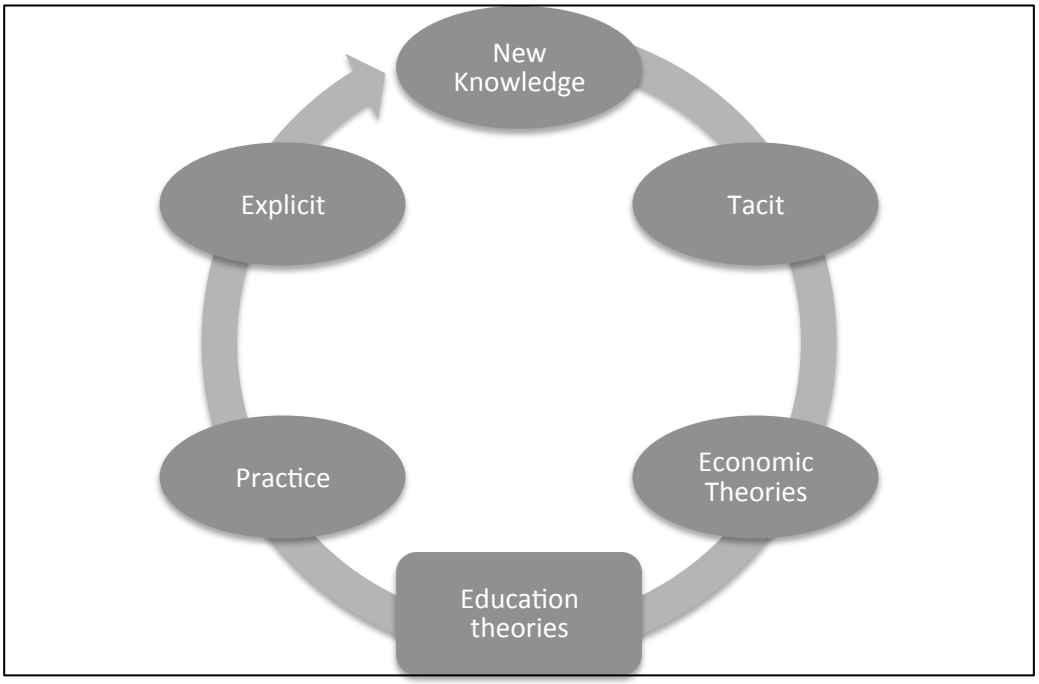
Understanding Goals from Economic Theories

“Everyone who can face up to decision making can learn to be an entrepreneur and to behave entrepreneurially. Entrepreneurship then is behavior rather than personality trait. And its foundation lies in concept and theory rather than intuition” (Drucker 1985: 23).

[6]See Section 1, p. 46.

I decided to use Drucker's *Entrepreneurship and Innovation* (1985) as the course book for the module. The students reflect upon the theories of entrepreneurship and innovation as they run their campus businesses, effectively combining explicit and tacit knowledge as suggested by Nonaka and Tonno (1998: 42) who state, "Knowledge creation is a spiralling process of interactions between explicit and tacit knowledge. The interactions between these kinds of knowledge lead to the creation of new knowledge." This writer as practitioner acted mostly on tacit, or instinctive knowledge and then reflected on his actions through education at a later stage. The Drucker book struck this practitioner as very relevant to his own entrepreneurial career and provided the essential economic and management theories to match this experience. For example, opportunity identification through demographic or geographical knowledge was clearly described as obvious and simple ways to find opportunities. The geographical identification by this entrepreneur of products that were in one market but not another was the source of the business success.

Figure 10: Tacit and Explicit Knowledge



Source: adapted from Nonaka and Konno (1998).

As in Figure 10, therefore, in the design of a module on entrepreneurship, the combination of tacit and explicit knowledge must be considered. The tacit knowledge will be gained in the running of the businesses on campus while the explicit knowledge will be gained by the combination of theories and practice. The economic theories studied gave an economic platform from which to apply the theory to practice in the classroom, while the exemplars attended supplied examples of teaching from leading universities, which would subsequently be applied in the teaching. The combination of these new understandings provided a rich source of material and, that, combined with the practical experience of the teacher, provided a powerful teaching method as well as changing the Meaning Making System of this practitioner in the lead up to the start of the module.

Concepts from other writers, such as Schumpeter (creative destruction - opportunity in change), Von Mises (entrepreneurial discovery) and Penrose (entrepreneurship in management of large companies) will be introduced and discussed alongside Drucker (focussing on the discipline of entrepreneurship, most opportunities exist outside technology, opportunity identification) in order to offer students a broad economic view of entrepreneurship as well as an experiential and practice based one. This practitioner's experience was deep and very relevant to students studying entrepreneurship but was also limited to running small to medium enterprises, therefore Penrosian economics will be introduced in class to cover that shortfall in the teacher's knowledge.

Exemplars and Teaching For Understanding

All four exemplars outlined in Essay Two, Section Three brought differing perspectives on aspects of teaching entrepreneurship as presented in Table 14.

Table 14: Exemplars Used for Module Design

	Harvard	Babson	M.I.T.	Cranfield
Generative Topics	Innovation Ideation Entrepren-eurial Platforms	Teaching Entrepreneur-ship Business creation	Technology Idea Implemen-tation	Case Methods In teaching
Under-standing Goals	How to Innovate in Large Companies	How to teach students to be entrepreneurial	How to Launch a Technology Company	Use Mini - cases and Different Types of Media
Perform-ances of Under-standing	Business Plan/ Elevator Pitch	Start and Run a Business	Rocket Pitch, Cases	Videos, Presentat-ion

Source: based on application of Blythe et al (1998) to exemplars attended by the author.

In implementing a module on the teaching of entrepreneurship, table 14 shows some of the generative topics and understanding goals that can be adapted from the exemplars for the design and implementation of the module.

Performances of Understanding and On-going Assessment

Jeffrey Timmons at Babson suggested allowing students run a business on campus and that is central and probably the most important element of my module offering a mix of theory and practice, which is essential for a successful entrepreneurship course. A lot of student learning revolves around this performance of understanding. Idea generation and creativity as taught in Babson is something I decided to include.

Doing a business plan and presenting a "rocket or elevator pitch" as in the Harvard and M.I.T courses are adapted to the module. The preparation and provision a business report by students, on exiting their on-campus businesses offers them an opportunity to reflect on their experiences.

However Read et al. (2011) point out that only 28 per cent of Inc. 500 firms in America completed a formal business plan and that most developed their businesses through what they describe as "effectual logic" through going out a doing it and adjusting as they go along to customer demands and logic. Students will experience "effectual logic" through starting and running their businesses on campus in a master/apprentice relationship with this practitioner.

The Cranfield exemplar left me in no doubt that cases, when used, should be short ones as longer cases are often not read by students at all and also should be read or viewed (as in videos) by the students at the beginning of class.

Key Issues for Module Design

As the content of the module design takes place under two themes, my experience as a practitioner (including the exemplars attended) and the theories examined, a combination of these are introduced through an experiential teaching method using the Teaching for Understanding Framework as the organising principle. Running a business on campus with mentoring from this practitioner as well as support from cases and readings on entrepreneurship theories combine to fulfil the understanding goals set out. In the next section outline the process of implementing the module. This is done by combining the generative topics gleaned from my own experience with those of the exemplars to create understanding goals and performances of understanding.

Central to the delivery of this module is the inclusion of metrics to allow for assessing the extent to which the module achieves its goals. For the economy, success would be the chances of graduates starting a business, or being entrepreneurial in their jobs afterwards. For the graduate students, it would be enhanced job satisfaction, increased earnings and capital gains. For the

students it would be the insights, knowledge and experience gained in learning the discipline of entrepreneurship and that they can demonstrate that they have combined that experience with the theories studied. For this writer, success would be gaining the skills necessary to communicate to students the way to be entrepreneurial in life. To fulfill the requirements of the Small Business Forum (2006) as outlined in the introduction on page 6, and in particular on maximizing the number of start-ups aspiring to and achieving high growth the module should

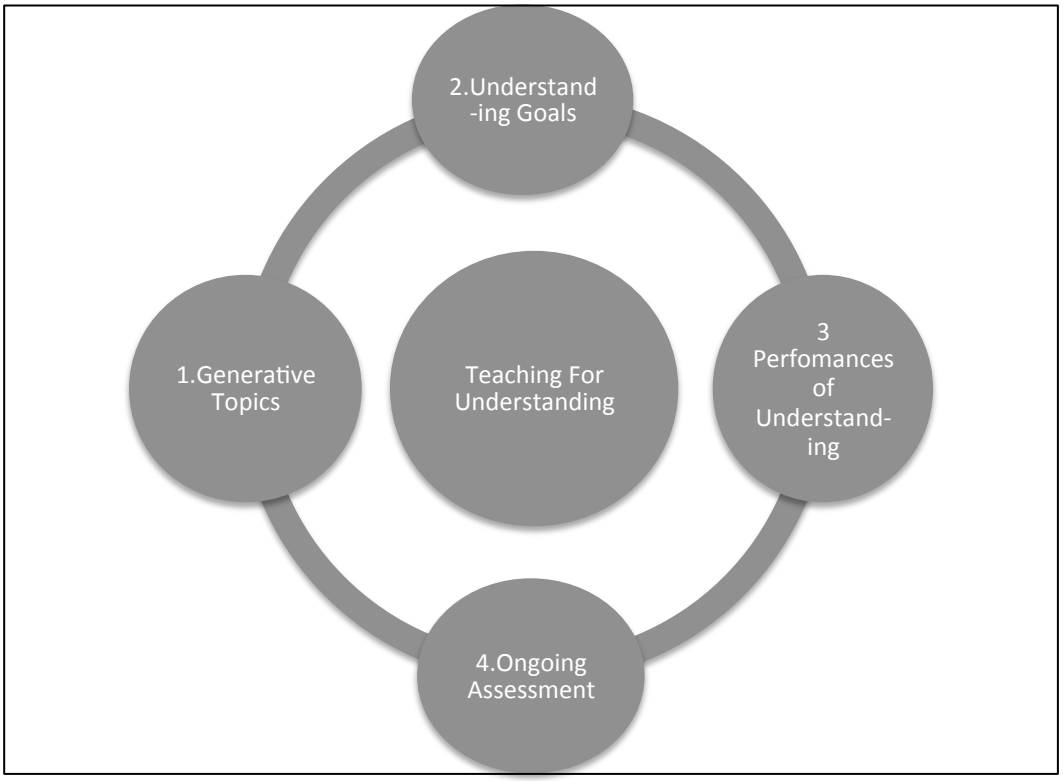
1. Stimulating latent entrepreneurial potential,
2. Reinforce entrepreneurship in the education system and
3. Enhancing the culture for entrepreneurship.

4. Implementation and Development of Module

In Essay Two were examined a series of teaching exemplars from leading universities. From the conclusions drawn about these exemplars and on the basis of the findings in Essay One, I set about teaching a module in entrepreneurship at university level. The decisions made in the previous section are now implemented.

The challenge in teaching entrepreneurship is how to communicate the knowledge developed over 20 years in business to a group of postgraduate students, over nine months, and to connect that to theories in Economics, Business and Entrepreneurship. Blythe et al (1998) provide a suitable framework for the teacher to frame his experience as an entrepreneur into a structured teaching module.

Figure 11: The Teaching For Understanding Framework



Source: based on Blythe et al (1998).

In Figure 11 the four parts of the framework are seen as interconnected and can be used in any order for either planning or implementation.

The Teaching for Understanding Framework's four key concepts are: Generative Topics, Understanding Goals, Performances of Understanding, and On-going Assessment and these categories were used to organise the module.

Generative Topics

As the learning outcomes of the programme (see Appendix D, Module Outline) are heavily based on learning about business in the economy, the generative topics in this module are highly relevant to the programme overall.

Table 15: Generative Topics from Essays 1,2 and 3

Professional Development Memoir	**Exemplars**	**Economic and Pedagogic Theories**	**Under-standing Goals**	**Perfor-mances Of Under-standing**
Think Entrepreneur-ially Observe	Entrepreneu rship in Large Companies	Entrepreneurs hip in the Economic System	Anyone can be an entrepreneur	Create Business
Trial and Error	Ideation	Risk and Uncertainty	Minimise the Downside	Change Direction
Do it!	Venture Creation	It is a Discipline	Know how to Start a Business	Run the Business
Sales	Selling	Learn by Doing	Win the Argument	Sell the Product
Cash is King	Technology Start-ups	Fundraising Ingenuity	More Cash in than Out	Invest Own Money
Customer is King	Case Studies	Price Informs Market	Concentrate on the customer	Find Customers
Key Relationships	People are Key	Dispersed Knowledge	Stakeholders Customers	Create Relation-ships
Think Big and Long	Business Idea	Creative Destruction	It takes time	
Opportunities Everywhere	Innovate	Opportunity Identification	Observe	Exploit Oppor-tunity

Source: Portfolio Elements

According to Blythe et al. (1998) generative topics are central to one or more domains or discipline. In this module there is domains of practice and theory, which need to be integrated. The passion of the teacher for these topics

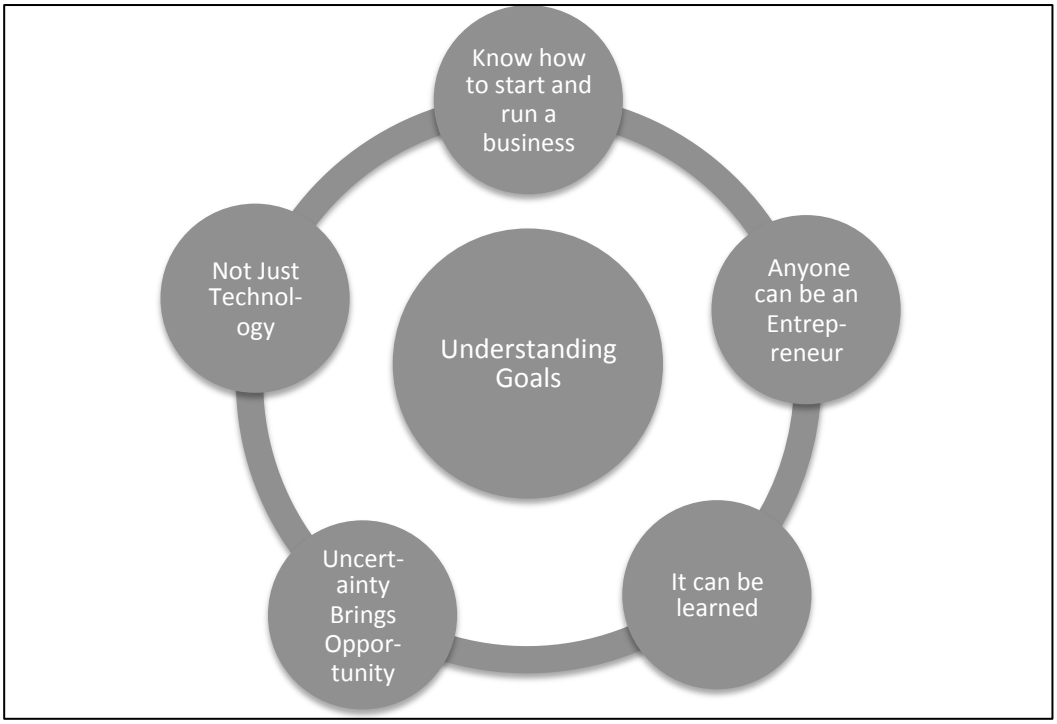
should be obvious and be interesting to the students. Throughout the course being delivered these topics are explored and experienced by the students from both experiential and theoretical points of view, combining their experiences with theories, and over the time of the course will deepen the students' understanding. The Generative Topics listed in Table 15 are supported and delivered through reading materials, workshops and the actual planning, launching and running of on-campus businesses. These Generative Topics are developed from the Personal Development Memoir (See Table 16) in Essay One, the exemplars analysed in Essay Two and the economic and pedagogic theories examined in Essays Two and Three

Understanding Goals

Understanding goals are the understanding goals developed by this practitioner as well as understanding of theories taught during the course, linked to the starting and running of a business, unit long goals.

Understanding goals set out the concepts, processes and skills the module aims to impact and develop in the students.

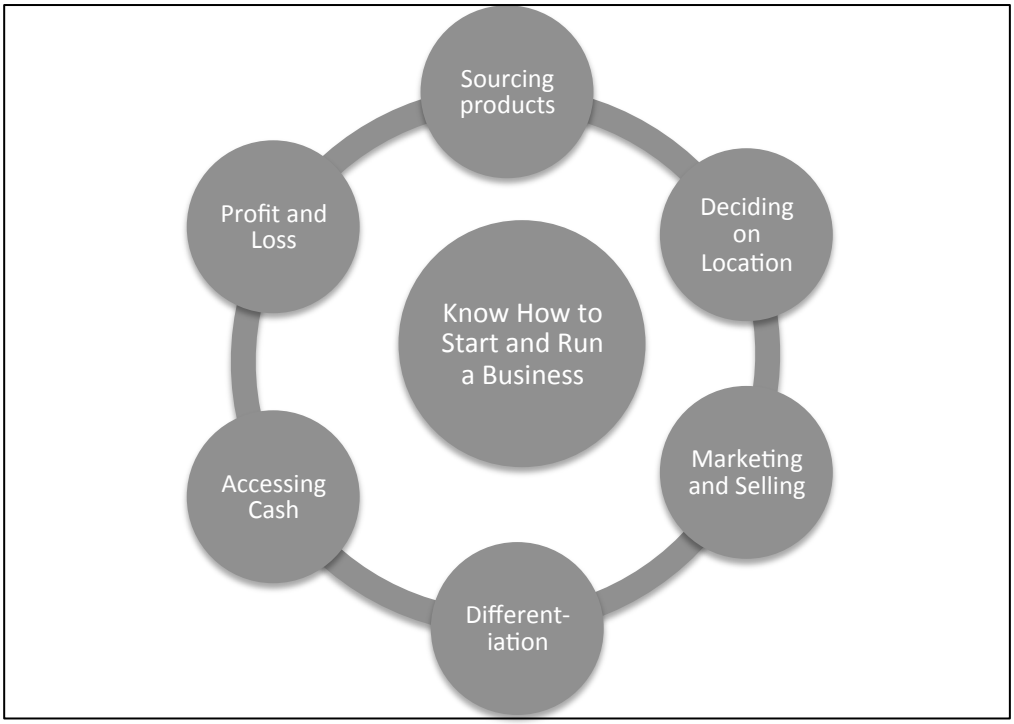
Figure 12: Understanding Goals



Source: adapted from Blythe et al (1998).

Figure 12 shows the understanding goals I set for my students. Knowing how to start and run a business emerges from the generative topic learn by doing in Figure 13. Each one of the learning goals can be then used to generate subsets of understanding goals.

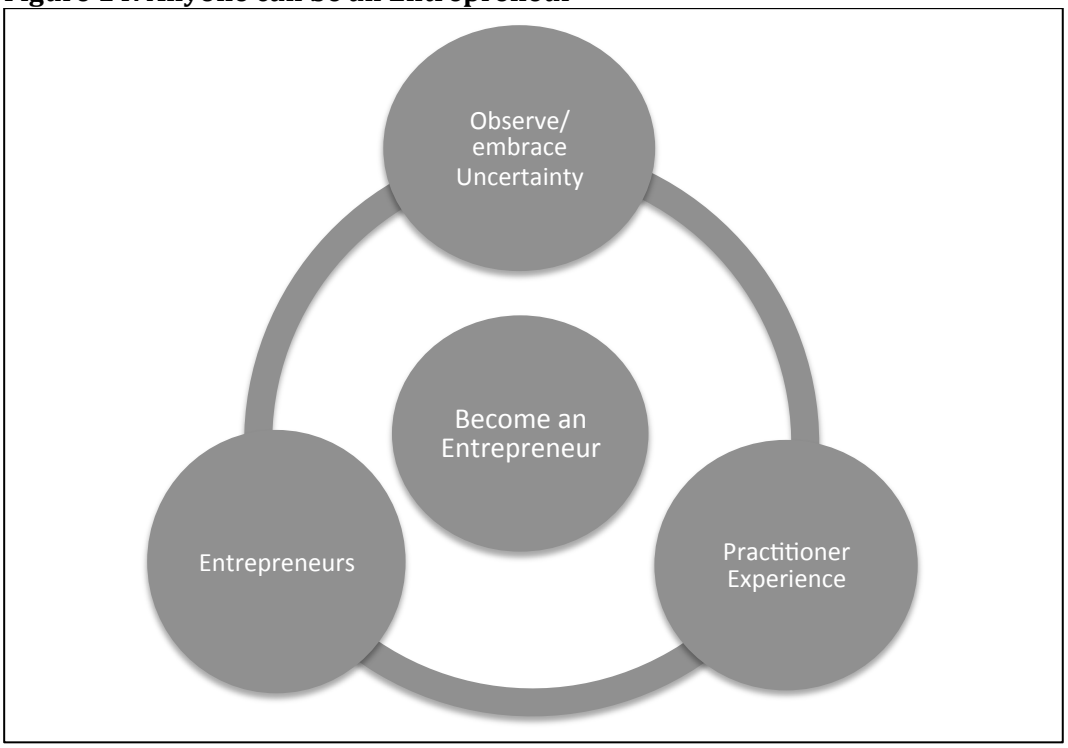
Figure 13: Subset of Understanding Goals



Source: adapted from Blythe et al (1998).

In Figure 13 above a breakdown of one understanding goal is illustrated. In order for this goal to be achieved its subsets will also have to be understood. The breakdowns of the other understanding goals are:

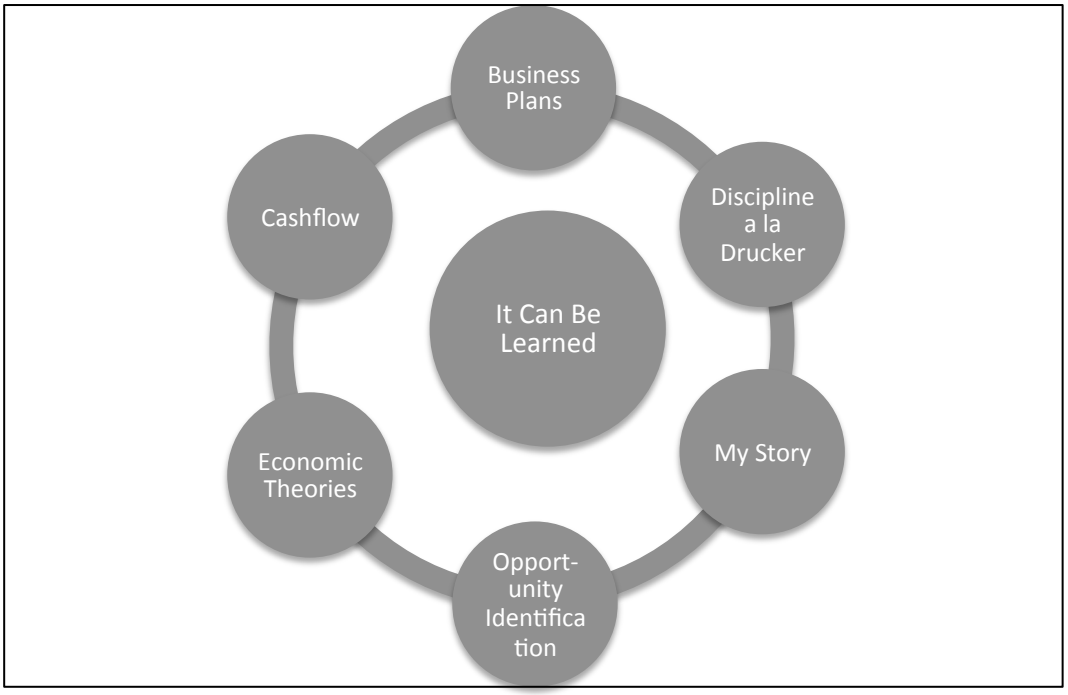
Figure 14: Anyone can be an Entrepreneur



Source: adapted from Blythe et al (1998)

In Figure 14 students learn from the experience of this practitioner by the students, in terms of opportunity identification, the process of starting and developing my business from nothing, finance, profit, product differentiation, staffing and practical details. Students must learn to observe and embrace uncertainty.

Figure 15: It Can Be Learned

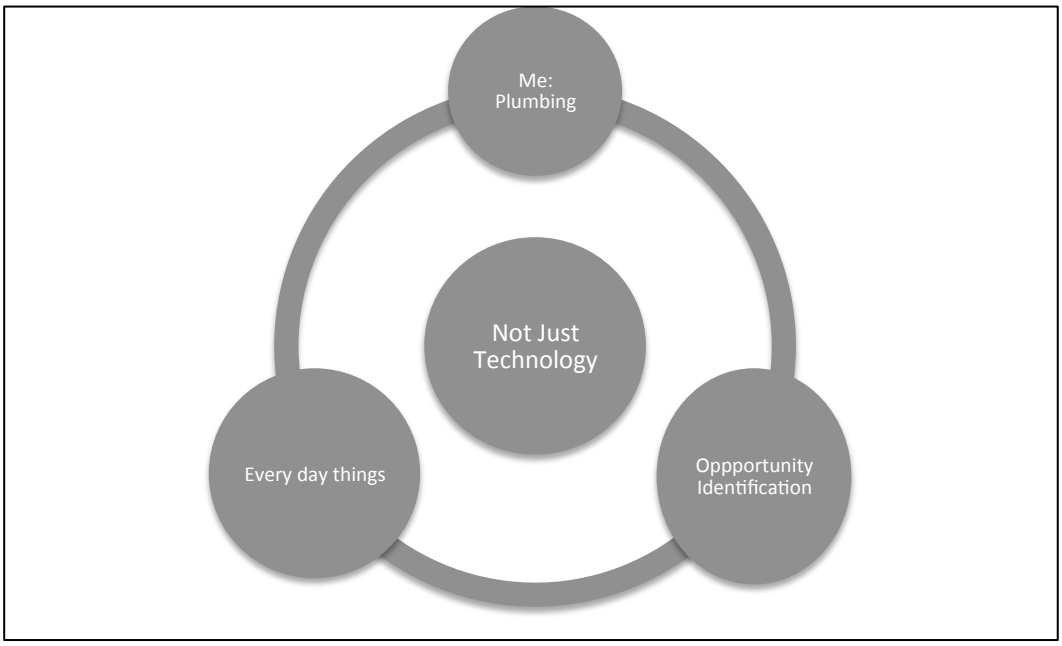


Source: adapted from Blythe et al (1998)

The understanding goal in Figure 15 is broken down into its subsets that it is a discipline and the link between theory and practice is shown.

The story of this practitioner is delivered in class. Emphasis is placed on the early beginning as a sales representative and eventually the discovery that I could create my own distribution company. This is in order to encourage students to create their own businesses. Emphasis is on the importance of selling (as against 'marketing') and the reality and importance of profit margins. Hayek (1948) and Von Mises (1949) introduced the concept of entrepreneurial discovery and their insights are combined with practice to deepen learning. For this practitioner, the experience very much matched this concept and the professional journey was one of constant entrepreneurial discovery. Insights on how to control cash flow through supplier credit and bank finance and the art of bootstrapping are explained. My experiences, knowledge and skills feed into the understanding goals around entrepreneurship.

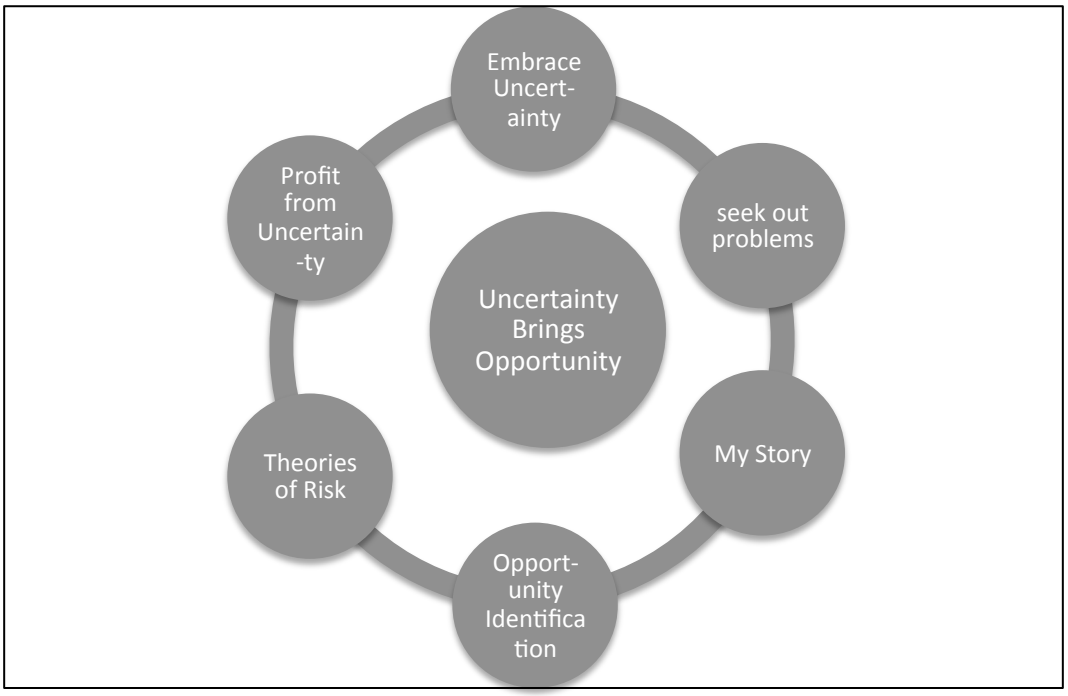
Figure 16: Not Just Technology



Source: Adapted from Blythe et al (1998)

In Figure 16 we see that science and technology are not the only business opportunities in the economy and that most innovation takes place in everyday things. This is because there is a common misunderstanding that most new businesses should be technology led whereas Drucker (1985) stresses that technology businesses generally have the longest lead times and are the riskiest. The experience of this writer confirms this: it was a change in plastic plumbing that was introduced into a traditional market in copper piping that was the opportunity exploited.

Figure 17: Uncertainty Brings Opportunity



Source: Adapted from Blythe et al (1998)

In Figure 17 the opportunity in uncertainty are shown. Students are encouraged to embrace uncertainty as an opportunity.

Performances of Understanding revolve around the setting up of a business on campus and on-going assessment comes from my mentoring and that of non-university business practitioners invited to attend presentations during the module and observe the businesses in action on campus. Other staff on the programme provide further assessment during the programme, both in the module and their own modules (assessment criteria and overall programme details in appendices). Understanding goals are developed, again, with regard to what I believe these should be through being a practitioner. Performances of understanding need to be achieved through practice and theory with on-going assessment taking place throughout the course.

This module was first delivered at the Department of Economics, University College Cork**,** during the academic year 2006/2007. The module was called "Innovation in the Market Economy." The Course Outline is detailed in

Appendix E. The module was part of the Postgraduate Diploma in Business Economics programme, which had been running for two years and included modules in Strategy, Finance, Survey Methods and Business Simulation and Innovation, but did not involve starting a business on campus or focus on Entrepreneurship.

The Teaching for Understanding Guide (Blythe et al 1998) provides a framework for exploring and defining what it is the students will need to understand as well as a method of inquiry as to what it is they have understood.

The Teaching for Understanding Reflection Checklist (Blythe et al. 1998) is used to interrogate the results at the end of this "experiment". While the Teaching for Understanding Framework was considered sufficient to reflect on the exemplars analysed, the use of the checklist was considered by this writer to be an additional method of interrogating the impact of the module.

Performances of Understanding

In the Teaching for Understanding Guide (Blythe et al. 1998: 121) performances of understanding are described as activities that require students to use what they know in new ways or situations to build their understanding of unit topics.

The performances of understanding in this module are:

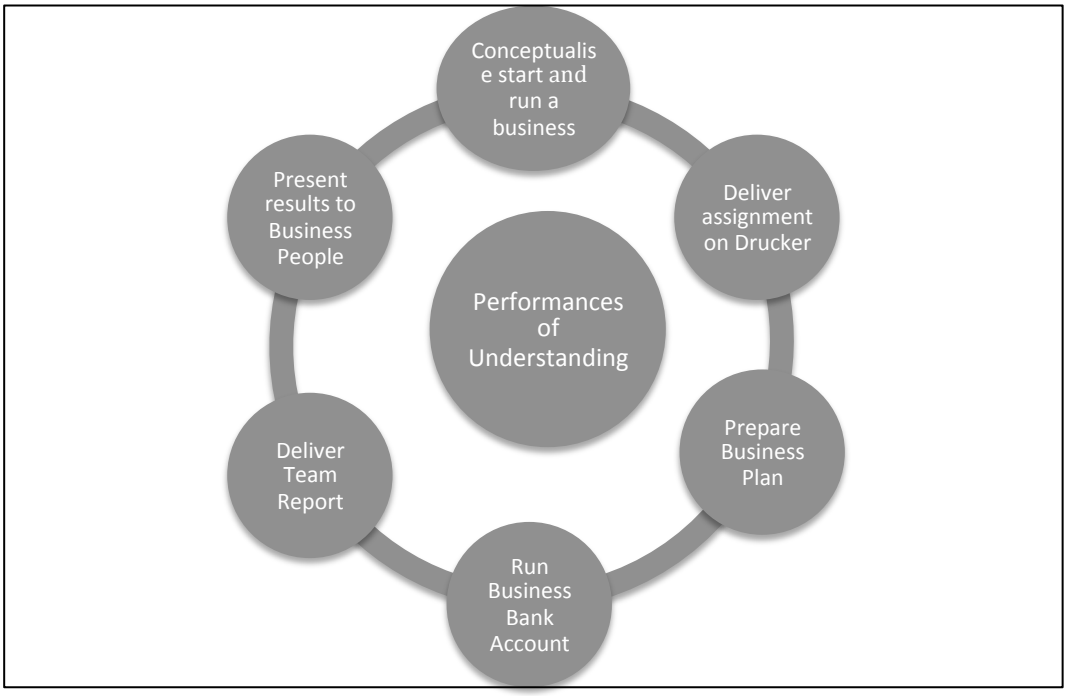
- The conception, planning and running of the business in teams, in order to replicate real world situations where people have to work in teams.
- The delivery of business plan and end of term report demonstrating learning achieved together with presentations to business practitioners. The understanding gained through this process is that of the real business world, both in the preparation and presenting of these reports and the feedback received from practitioners and experts in the field.
- An assignment on the principles and practices of entrepreneurship according to Drucker's Innovation and Entrepreneurship (1985) in order that students understand the discipline of entrepreneurship,

opportunity identification and the linkages to their own business experience on campus to the theories of Drucker.

However, it is important to know what it is the students understand from the teaching. Feedback is given to this practitioner from bankers and business people who attendstudent presentations and assignments. The students' Business Plans are presented to these business people early on while their Business Reportsare presented at the end of the module. Other lecturers on the programme attend also and give feedback to both the students and to this writer.

There is open discussion in class and private one to one meetings with students as well as teams. Business problems will be discussed with myself as their mentor but decision making is expressly left to the students themselves. Discussions take place with other members of the teaching team both around the business performance on campus and their observation of progress in class. On campus observation of businesses in action is undertaken by me, the campus bank managers and other members of the teaching team.

Figure 18: Performances Of Understanding



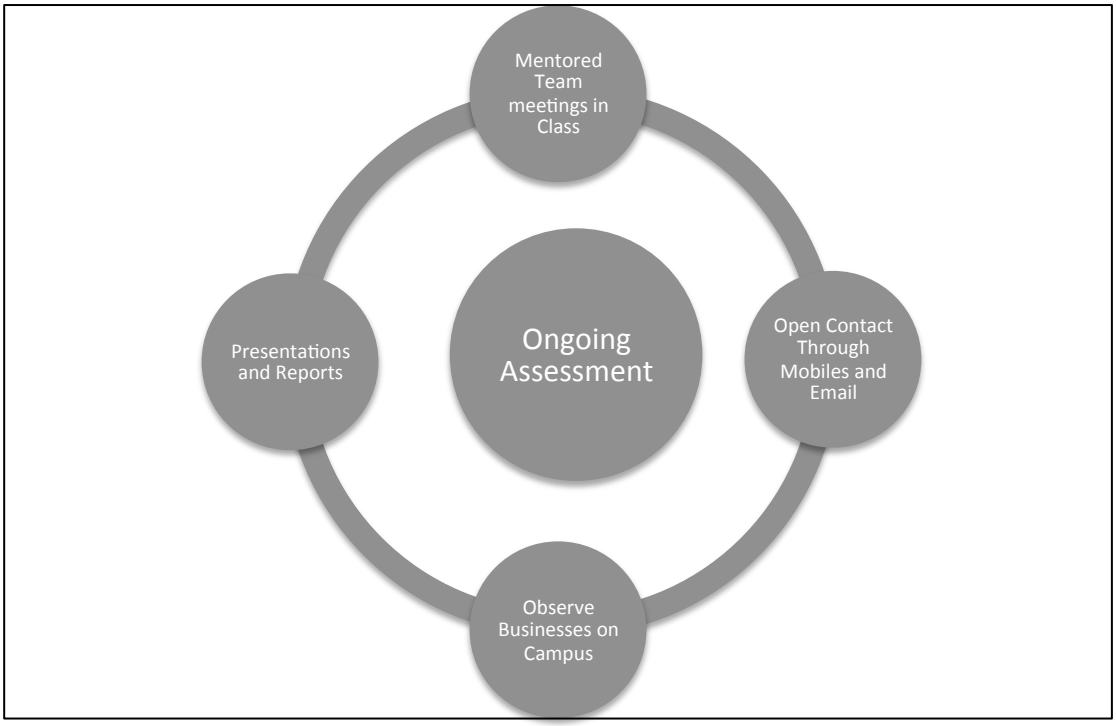
Source: from Blythe at al. (1998).

In order to achieve the understanding goals in Figure 12 above, the performances of understanding in Figure 18 need to be delivered. The results of the running of the business are presented to a panel of business and bank experts, twice during the module, who give feedback. The students present to the panel who give direct feedback to the teams at the presentation.

On-going Assessment

In experiential modules, such as the one I implemented, on-going assessment and reflection must happen in order to provide feedback to both students and the lecturer about the on-going nature of understanding.

Figure19: Assessment



Source: Adapted from Blythe (1998)

The means of on-going assessment selected for this module are shown in Figure 19. Assessment continues throughout the course through a variety of contacts, reports and in class discussions, as well as visits to the campus businesses. I continue to discuss the students' business plans, development and final reports with them and compare my own experiences as feedback in and out of class and they contact me by phone, email and on-campus encounters.

- 25% is allocated to class participation, that is the extent to which students participate in class discussions and activities.
- 50% is for the running of the business and the business report and presentation
- 25% is for an individual assignment linking the theory in the Drucker coursebook to students' experience of running a business

The learning process is regarded as the most important, as first businesses often fail, although the ultimate measure of success is profit. However a team

with a failed business need not necessarily receive a low mark, if effort and learning are displayed in the final business report and presentation and the Business Report gets 15%. This report is presented to the panel of experts and handed up at the end of term. The written report contains all details of the business experience with surveys, accounts and a comparison between what was planned and what actually transpired.

The Business Plan gets 5%. This is prepared and presented within a few weeks of the beginning of the module. It is a written plan, which is also presented to the panel of experts. There is no fixed template for this and students are encouraged to design their own, to enhance originality.
Presentations are also given 5%, presentations of the business plan and report to the panel of experts twice during the module.

Because the main purpose of starting the campus business is to learn by doing, a failed business can be as deep a learning experience as a successful one. This is made clear to the students, while encouraging them to succeed i.e. generate a profit.

In a paper presented to the American Educational Research Association Schon (1987) said that the concept of a reflective practitioner is that in the experience of the students in any reflective practicum they must plunge into the doing, and try to educate themselves before they know what it is they're trying to learn, in that the students are plunged into the doing of the business from the very start of the module.

In simply teaching the theories of entrepreneurship students are unlikely to achieve the goals of learning the tacit understanding of running a business. The students are challenged to learn the realities of business leadership and life by being required to launch a company of their own.

Module Details

The purpose of this section is to detail the content of the module. Referencing Table 15, Table 16 shows the development of the module content through the Teaching for Understanding Framework.

Table 16: Module Content as Delivered

Generative Topics	Understanding Goals	Performances of Understanding	Ongoing Assessment
Business Delivers	Business Delivers to Society	Experience Real Business Environment	Cases and Class Discussions
Start Business/ Embrace Uncertainty	How to Create a Business	Start Campus Business	Presentations and Reports
Innovate or Die	How to Think Creatively	Find Product; Brainstorming	Mentoring from Practitioner
Learn by Doing	That it is Possible for Anyone to Succeed	Run Business and Compare Experiences	Class Participation and Business
Finance	How to Raise Finance/bootstrap	Invest Money in Campus Business	Reports/ Presentations
Entepreneurship	That is a Discipline/observe	Drucker Book Study	Assignment

Source: adapted from Blythe et al (1998).

Generative Topics

Generative topics are developed to lead to the understanding goals, which then lead onto the performances of understanding.

Business Delivers: The Market Economy

This is a class on the various activities and categories (retail, services, banking/financial) and the likely profitability of these businesses. Students understand what business means to the city, what it delivers to the economy. An actual walk around the city takes place, which provides a real environment for this. The understanding goal that business delivers to society is in the form of products (food, clothing, electronics) and services (building maintenance, medical, banking, solicitors).

Start your Own Business/Embrace Uncertainty

This is the second generative topic. Students are formed into groups by the programme director to start and run a business. The lemonade stand example is suggested as the most basic of businesses. The parameters in which businesses can operate within the University Campus are explained and discussed. While every attempt is made to replicate the "real world", there are certain safety and health issues, which must be adhered to. The trading stalls are provided free of charge as is the location on campus. The teams put up their own money, about €100 each, and open an on-campus bank account. The decision to do this was made on the basis that the business should feel as real as possible. They must present their business plans to the bank manager and borrow money for cash flows, as they would do in the real world. The encounters with the bank manager teach them how to raise finance and how to develop relationships with various stakeholders. This is in order to give them an understanding of what needs to be done in the business world. Putting their own money up makes the experience more realistic and the risk is being borne by them directly.

The importance and limits of a business plan are explained. What details are key to a startup are: cash, people, opportunity, market, knowledge and contacts. We also discuss the students' business plans, and startup dates.

Physical location as an advantage in retail is discussed. How to get funding and sources of funding are explained. The customer is emphasised as being at the centre of all business. Sources of products are discussed as well as pricing and the essential differences between turnover and profit margins. There should be more money coming in than going out, i.e. the realities of cash flow.

Practical examples are given in how products are positioned in the market place, profit and margins, distribution networks, marketing, strategy, as well as linking this to established and current economic and business theory. Opportunity results from Hayek's assertion that the way markets overcome ignorance was this: when market prices are not perfectly aligned to supply

and demand conditions (which they never are), profit opportunities are made available to alert entrepreneurs who make discoveries. This would have been experienced by this practitioner repeatedly throughout the running of a business - there were, literally, hundreds of opportunities taken in this way.

"Bootstrapping" is an essential entrepreneurial skill and needs to be learnt. Bootstrapping is the ability to manage the business setup with very little money and to acquire assets and skills for the business often for no cost. Most entrepreneurs start with inadequate funds and that would certainly have been my experience. What is needed to start a business are: customers, products, finance, and premises.

Shackle's "enterpriser" is explained. Shackle (1966) believed that enterprisers must bear the risks associated with uncertainty. There is uncertainty about all aspects of starting and running a business, from finance to competition to debtors and product quality. He refers to imagination and creativity being the thing that makes us enterprising. Students need to learn to live with uncertainty as explained by Shackle, indeed that the source of opportunity exists within it.

Innovate or Die: Techniques for Producing Ideas

In order to deliver this generative topic brainstorming for ideas is encouraged. In order to create a business, the students wmust be creative and come up with ideas. The Ideo video (1999 ABC TV) shows brainstroming in action in a Californian design company. While consideration was made regarding the Neck ideation exercise from the Babson exemplar, because specialist materials were required for this, I decided to use the ideation philosophies of James Webb Young.

Young (2003) offers the assurance that coming up with an idea is a process, not an accident. He also says that it is a technique that can be taught. The

mind can be trained in the method by which all ideas are produced and that there are principles, which are the source of ideas.

His first principle is from Pareto: that an idea is nothing more or less than a combination of old elements. His second is that the capacity to bring old elements onto new combination depends on the ability to see relationships. A habit of mind must be developed which leads to a search for relationships between individual facts. His method follows five steps:

1. Gather raw material. Get intimate knowledge of a product and customer. Gather general knowledge about every facet of life relating to that customer;
2. Bring the facts together and think. Put ideas on paper;
3. Turn the problem over to the unconscious mind. Drop the thinking;
4. Idea will come from nowhere;
5. Expose the idea to judgement of critics and the market.

These concepts are relevant to the ideation and brainstorming exercises that the students do in their early efforts to create and start their own businesses.

Old products dominate markets. Innovation comes in small steps improving old things. Examples are taken from Edgerton (2007) and also from my own experiences. Acorn, the product I sold as an entrepreneur, is a great example of this. Product samples are brought into class.

Regular discussions on students' developing business ideas are held. Links to Drucker's arguments around innovation and entrepreneurship are made in regard to opportunity identification (Drucker 1985).

Creativity Workshop

Following on from the exemplars, where creative thinking was encouraged, a creativity class was ddelivered by an actor from the region who specialises in these courses. As this was to allow the students freedom to think and act as they wished, I stayed out of the class, as I felt my presence would inhibit the

students. Students were encouraged to remember dreams and what the meaning of those dreams might be, in order to turn them into stories. Because this writer had had involvement in music before going in to business I believe that it helped me think creatively in business. Feedback was positive from students afterwards with many of the quieter students participating for the first time.

In subsequent years students were given creative activities in class such as coming up with imaginative products to sell to the Irish community in the United States and methods of creating channels to that market. This central Penrose's (1959) idea of entrepreneurship being an image in the mind of the entrepreneurial manager.

Learn by Doing/Finance

Students meet the bank managers. Managers from local business banks are introduced to the class. One manager is from the on-campus bank and outlines requirements of banks for businesses. Profit and cash flow are discussed as well as how to present a business plan to the bank. Who you borrow from is key and banks are shown to be extremely important to the startup entrepreneur. Fund raising ingenuity is explained in relation to Penrose (1959). The difference between profit and loss and free cash is explained as a key concept in business survival.

In order to allow the students to see what government support is available for start-ups they visited a local business incubation centre.

The Rubicon Centre is a government sponsored business incubation centre in Cork and the students were given a presentation by the centre's director Mr Paul Healy. Students learned what support is available in terms of accomodation and grants.

Students are introduced to the basics of how to sell. From my own selling experience I explain the "us and them" principle of customer relations. "Us" is the sales person and the customer; "them" is the company. This is an

important lesson in how to develop lasting relationships and develop networks in the professional world.

Changes in channels to market are explained. The distribution model, which was what I had used, is being usurped through the Internet by the likes of Dell and Ryanair, cutting out the middleman, making those companies more competitive. Tesco have recently begun doing this in Ireland. I explain how I did it from a selling and marketing perspective. The marketing case from the Harvard exemplar on the principles of marketing is examined, as this is an in depth paper outlining how to segment markets and customers.

Entrepreneurship

Examples of entrepreneurs are shown on video. These are selected Irish entrepreneurs who partook in an annual competition and so are contemporary and identifiable as local people. A meeting with an entrepreneur is held. This is a local businessman who promotes franchising and who has actual opportunities to offer to the students.

Module Development and Outcome: Assessments

This section details the teaching that took place and its development over three years. The reactions of students are detailed, both in surveys in class and externally after the three years teaching was completed. Suggested improvements are examined and the opinions of outside business advisers are listed.

Diary of module development

In order to give the reader a flavour of what actually went on in lectures I give some examples of how the teaching took place and changes that were made over the three years of the teaching "experiment".

Torbert and Cook-Greuter (2004) describe four territories of experience. These are relevant because they offer a sound framework to describe the teaching, which is largely done around experiential learning.

They define the first territory as:

Outside events i.e. results, assessments, observed behavioural consequences, environmental effects.

In terms of experiential student learning the outside events are their actual business experience…running the market stalls. Results and assessments are the business report and presentations at end of term. Observed behavioural consequences will be their reflection on how they performed in teams as well as individually, which is dealt with on a separate module in the programme. Environmental effects are the reactions and behaviours of their customers as they trade.

The second territory is:

Own sensed performance i.e. behaviour, skills, pattern of activity, deeds as sensed in the process of enactment. Through in class discussion these issues are dealt with, as well as the inter-team exchanges on which they will reflect.

The third territory is:

Action-logics i.e. strategies, schemas, ploys, game plans, typical modes of reflecting on experience. The building and running of a business contains all of these.

The fourth territory is:

Intentional attention i.e. presencing, awareness, vision, intuition, aims. As the students experience the actuality of business on campus they get to reflect on these issues. Each territory is particularly relevant to the creation of a business and the thinking processes associated with entrepreneurial thinking.

Torbert maintains that few people achieve the fourth level of intentional attention. He describes the four parts of speech that draw their timely content from across the four territories of experience:

Framing: Attention,intention, vision;

Advocating: Strategy,structure,goals;

Illustrating: Behaviours, operations;

Inquiring and Listening: Outcomes in the external world.

The first class with the students was a full day and was treated it as a "framing" session. The film "October Sky" was used as a case. The film describes the success of four young men in a coalmining town whose future seemed to be down the colamines but who became successful despite all obstacles. I had seen this presented in Babson and felt it would inspire the students to see beyond the limited horizons of their region and learn valuable lessons about entrepeneurship and innovation. The concept of a vision being the driving force of success, and the refusal to give up no matter what were demonstrated, trial and error, mentors, networking, taking responsibility as well as integrity and honesty were discussed during and after the film. In this way the framing attributes of attention,intention and vision were achieved.

I also pointed out to them that I myself had started my business at 27 and was totally penniless at the time. This was to show that one can start with nothing and "make it". I actually told them how much money I had made during my business career, to let them see what can be done and also to impact them with the vast amounts that can be made. This was "Illustrating" as well as "advocating" on my part.

After lunch they were shown Ideo, an ABC television programme about a Californian company which designs products for lots of different companies. As well as understanding the process by which they create ideas, students could actually use the method for creating ideas for their own businesses. Again this adheres to Torbert's "framing" described above.

The students were asked to brainstorm their business ideas for their market stalls using the Ideo method as an example. In the Ideo case all ideas are valid for the first two or so hours or so and nothing is rejected. After that they are eliminated by consensus.

Business teams were chosen based on their primary degree results ensuring that every team had a balance of people from different backgrounds such as Commerce degrees, Arts degrees and gender.

The teams came up with many ideas and some were quite surprising. Among the ideas were: Selling UCC branded "cool" clothing, soup stands, coffee, flowers, promotional stands for night clubs, cigarettes, renting the space to an outside company. They were encouraged not to discount any idea and to think of wild ideas as well as conservative ones. I went from team to team discussing their plans and encouraging them to develop their ideas.There was great enthusiasm among the students at the prospect of running a business and a noticeable "buzz". In this way the "framing" – attention, intention, and vision had clearly worked.

The students were brought them on a walk around Cork city. This exercise is to allow the students to learn the art of observation and to start seeing what is going on in an economic sense in Cork. This is the Attention part of Framing. In the following years of the module they would calculate the turnover of different businesses such as coffee shops and work out their profit margins in order to get them thinking about how different businesses generate profits.

The "Advocating" was done by getting the students to prepare their business plan, and plan how they would actually source products and achieve profits over time. Cashflow forecasts were emphasised. Strategy and structure were enacted through this exercise.

"Illustrating" was done by actually putting up the stalls, sourcing products, negotiating with suppliers and bank, and financing the operation. This very valuable experience is then reflected on in class and in encounters with myself as mentor. The bank manager from the bank on campus, who would have seen the businesses develop and would have seen their performances both in the bank, on campus and at presentations, commented that they had

developed considerably over the time of the course and had changed from being shy students to, in his words “ready and able for the business world”. The students experience first-hand the difficulties and excitement of running a business, in a relatively safe educational environment. This obviously doesn’t replicate the business world in all its dangers and risks, but however the essential experiences were generated.

In the second and third years of the teaching students were encouraged to think of creating businesses that were not strictly on-campus retail operations and to consider trading online, which some did successfully, one team importing shoes from China and selling them on E-bay.

Teamwork

The students work in teams, replicating what is likely to happen in the real world, and operationally teams are more manageable, as the number of stalls is limited to four, so having 15 individual businesses just is not feasible.

In "Teaching Teamwork Skills", Breslow (1998) suggests education in the so-called “soft skills” includes not only training in writing and public speaking; it also involves improving social and interpersonal communication skills such as leadership and the ability to work with others in teams. She argues that teaching students to communicate with, listen to, and work well with one another is not simply a matter of putting them in groups and letting them go about their business. Like any skill, the ability to work effectively with others requires some basic knowledge of best practice (in this case of team dynamics, consensus building, decision making, etc.), a chance to practice the skills to be mastered, and feedback on the success or otherwise of these efforts.

I was forced to think about how to structure teams, assignments, and class time so that the teamwork experience is optimised and the most learning that is possible occurs. Some excellent research has been done in using teamwork as a pedagogical tool (Breslow 1998), and several faculty members

at M.I.T. have run extremely successful experiments in using student teams, which included letting the students rotate the chair at meetings and how to set agendas, as well as what to do if one member of a team is not contributing. Student teams that operate for longer periods of time (usually the entire semester), working on either several short assignments, on one large project, or both, allows team members to watch the group process unfold, and, encourages trust and cohesiveness to build, which is at the foundation of all successful teamwork.

In order to succeed at this the following guidelines are recommended by Breslow (1998):

Assign the teaching staff the responsibility of creating student teams. If students are allowed to choose their own groups, it is only natural they are likely to team up with friends, housemates, the obvious disadvantage of permitting students to select their own teams is that they would not choose difficult people to work with, an essential reality of the business world.

Four to five people are generally the number that is advised, but there may be good reasons to make groups larger or smaller. In making that decision, I had to decide about how much work was required, the time frame in which it is to be done, and logistics.

Provide some training in teamwork skills. Students do not come with knowledge of working efficiently with others. Again, students need to be taught the interpersonal communication and team building skills that will help to ensure smoothly functioning groups. And teachers have a responsibility if they expect students to work together to provide that training.

My team-building workshop, covered such topics as setting norms, using a facilitator, listening, and giving and receiving feedback; it also gave students some guidance on how to deal with common problems teams often encounter such as a single dominant talker or someone who does not contribute at all. These issues did arise and teams managed to sort out their own problems.

Give students time to work together in class. The "cost" of students getting together outside of class is often so high that the most common practice is for students to meet only to divide up the work at hand, and then to do those tasks independently; I personally witnessed this happening in my MBA at UCC in 2003/4. Giving students time to get together in class guards against that. According to Professor Mindell (1997): "There's no question that giving the groups time to meet in class improved their effectiveness. It also gave us the opportunity to oversee their work and help out where we could." However, Mindell did say that the drain on class time was a difficulty, and in future a discussion section would be added to the course for group meetings.

Give feedback throughout the semester. When students have no way to gauge how well they are doing, groups can flounder. Providing immediate, unambiguous feedback helps to promote both team development and learning.

As a result of the above guidelines the programme leader and I picked the teams according to students' previous education so as not to have similar skills all concentrated in one team. People with family business backgrounds would work on separate teams and there was an attempt to keep a gender balance as well.

As well as giving team workshops, I encouraged teams to hold their meetings in class, and allowed time for this.

Much of entrepreneurial activity is a discovery process, and the students would learn this by running their own businesses. This activity is a major part of the Performances of Understanding in the Teaching for Understanding Framework.

Because this is a class on the teaching of entrepreneurship it is expected that there will be many unexpected turns during the year. What businesses the students come up with are unpredictable. My actions as a successful entrepreneur will have involved many tacit experiences, which remain below

conscious thought. Through reflection on my Professional Development Memoir and combining the theories and exemplars attended, I hope to unearth this knowledge in my teaching of the students and communicate it to them. Knowing in action and reflection in action will be important for both teacher and students. The following are details of two workshops that took place with the students and serve to delve deeper into the content of the course as it occurred and make clear to the reader the nature of the teaching and learning that actually took place.

Towards Understanding the Practice of an Entrepreneur

As one of the Teaching for Understanding goals was understanding how entrepreneurs do it, I decided to explain in detail my own business life. This was organised as a four-hour workshop. The products that were sold were shown to the class. These were plumbing fittings. I explained the technical arguments for selling the products and detailed exactly how I commenced in business and the bootstrapping nature of my experiences. Many new start-ups have very little capital and it is possible to acquire resources with little funds. Assets can be rented or leased, appeals can be made to advisors for a moratorium on fees until the enterprise is up and running, creditors can extend the date of payment. The changes in this practitioner's meaning making over the years as a result of experiences gained provides a powerful message for the students. The overwhelming evidence both from in-class surveys and subsequent desk surveys demonstrates that the students' themselves felt that the practical experience of the teacher was the best thing about the module (see pages 175/6).

Students were shown details of cash flow as it happened as well as how the growth of the business was managed. I emphasised that the business was started with very little capital and that creditors and banks bankrolled the growth of the company. I then asked them to read excerpts from Drucker (1985) in the session and discuss their interpretation and understanding of what they had read. I then connected my own experiences to Drucker's theories of opportunity identification and implementation.

A consequence to this detailed workshop was that I was approached by one student about a business start-up he wanted to create. I suggested that he register the business and do a detailed business plan. He subsequently attended a start your own business course in the Rubicon centre, an incubation centre here in the city of Cork, at weekends following the class site visit there and then began implementing his idea with a partner.

Communicating the Entrepreneur's Message

As effective communication is an essential understanding goal in becoming an entrepreneur, I gave two examples of how to deliver an effective presentation. I used Edgerton (2007) *The Shock of the Old* in two separate presentations on PowerPoint, one all text and the other all pictures. Because students will need to do many presentations I wanted to emphasise the importance of interesting and dynamic presentations. The subject matter suggested that most innovations take place in ordinary everyday things, IKEA being a key example, the assembly being done by the customers and not in the factory. We subsequently discussed the concept of the entrepreneurial personality versus the disciplined innovator as suggested by Drucker (1985) and students were shown photo examples of successful business people who look quite ordinary, such as the owner of IKEA in order to impress on them that anyone can be entrepreneurial.

Development of Module: Years 2 and 3

This "experiment" took place over a three-year period. Generally, much of the content of the second year mirrored the first, with the students undertaking action inquiry as they created and ran their businesses while learning theories of entrepreneurship. Generally, the teaching style of this teacher became more interactive rather than lecture based and classes became longer workshops rather than regular two-hour sessions, creating a business like environment. Students were encouraged to have business meetings during these workshops and interact with this writer as mentor.

Innovation began to be the nature of the workshops, such as the use of new technologies to interact with students. The use of Friendfeed[7], a streaming online texting system, where the students texted their reactions to a case onto the screen from their laptops proved useful in getting shyer students to interact in class.

In terms of the programme itself, the name changed from The Postgraduate Diploma in Business Economics To Business Practice Economics, which reflected a shift in the way the programme, was being developed. The programme itself then became centred on the entrepreneurship module in strategy, finance and surveys. The modules are:

- EC6113 Industry, Market and Strategic Analysis (10 credits)
- EC6114 Field Work in Business Economics (5 credits)
- EC6115 Economic Survey Techniques for Business Research (10 credits)
- EC6116 Innovation in the Market Economy (10 credits)
- EC6117 Reflective Journaling (5 credits)
- EC6118 Practice Laboratory in Business (10 credits)
- EC6119 Resourcing for Entrepreneurship and Innovation (10 credits).

An additional workshop given in the second year was an interactive training board game on Finance developed by Celemi, a Swedish training company. Staff of the Department of Economics were trained in teaching this course in recent times and the students were given the one-day course called “Apples and Oranges” (see www.celemi.com). This helped the students understand how money moves around a manufacturing company and simplifies the overall financial understanding of how of a company operates.

There was evidence of further start-up business coming out of the programme again in the second year. It is difficult to say whether this business would have happened without the programme, but it does seem to

[7]www.friendfeed.com

be occurring after the programme ends and therefore could be suggested that a pattern is emerging of entrepreneurial behaviour in the students as a result of their experiences in the programme as a whole. However caution must be employed in making firm claims of widespread entrepreneurial behaviour as a result of the teaching or lessons learned on this module.

In Year 3 the workshops became more interactive. Rather than use Power-point presentations I began doing experimental workshops such as ideation and brainstorming and demanded much more input from the students. The role of the teacher increasingly became that of mentor and less of a lecturer.

As this DBA Portfolio developed, it influenced the thinking of this practitioner as a teacher of entrepreneurship. The reflection on the first year and the changes that came about altered the content and quality of the subsequent years. While much of the course material used was the same as year 1, the decision not to use power point, for example resulted in more creative workshops, which were largely interactive between student and teacher. This allowed students to think for them and moved away from the lecturer/student relationship to a master/apprentice relationship, in that they were not simply given information in class to regurgitate but were in a position to discover more about of whatever topic was being discussed or explored. As a result, satisfaction ratings from the students were highest in year 3 (see Appendix D).

Understanding Goals Delivered in the Module EC5016, 2007/8

Table 17 shows the Understanding Goals for the teaching of the module. Probably the single most important outcome of the course was the actual intense learning and discovery process the students got from their Performances of Understanding, the creation and running of a new business.

Table 17: Understanding Goals Delivered

Understanding Goals
Business delivers to society
How to create a business
How to think creatively
That it is possible for anyone to succeed
How to raise finance
That is a discipline
Business is about innovation and marketing
State Support

Source: adapted from Blythe et al (1998).

The early challenge of creating a business also worked, forcing the students to think like entrepreneurs, one of their Understanding Goals.Quoting directly from two end of term Business Reports submitted by students:

"We have definitely learned a lot from this experience of setting up our own business. If we could go back and do it again we would have done it differently. Firstly we would have tried to get it started faster. We would have been more organised in the beginning and divided the work that needed to be done better".

This expresses the Understanding Goal that entrepreneurship is a discipine, as does the following:

"We did too much thinking in the beginning and not enough action".

"We learnt that when you set up a business you need to have 100% commitment".

"Overall we learnt a lot about working in a team and the communication skills that you need in order for it to work well."

They also understood how to raise finance:

“We did well on setting our margins and cash-flow wasn’t a problem”.
“We know that this experience will benefit us immensely in the future and will no doubt expand our frames of mind whatever area of business or work we go into”.
“Our teamwork skills were good, as we each had specific roles which ensured the efficient running of the business.”
“We also learnt about the price elasticity of our product.”

Lessons were learned about selling and marketing:
“We did not market our business well enough and did not make potential customers aware of when we were opening.”

As these are selected from two of four business reports, it is evident that a good learning experience occurred.October Sky Movie and Ideo workshops on opening day were motivational and set the scene for what was expected of the students. Some students expressed strong emotions on the day, even coming to tears.

The Drucker book was useful as a teaching tool and coursebook. His pragmatic approach and use of language was accessible and relevant. The following are excerpts from two of the Drucker assignments handed in by students:

“Overall the book was simple and easy to understand which was down to his years of experience and his style of writing. I felt quite motivated after reading it to go out and be innovative and be entrepreneurial for the good of myself and for society.”

“..it goes through the fundamentals about spotting and exploiting an opportunity, growing the business and knowing when it is time to leave”.
“Entrepreneurship and innovation are behaviours that almost anyone who is willing to apply themselves can learn. Drucker describes these behaviours and the ideas behind them so that the willing pupil can learn them and apply

them. This is one of the main reasons why I thought this book was such an interesting read because it basically sums up what I have learned through my college year".

Mini-cases being read at the start of class, discussed, then gone through again by me, effectively gave the students three opportunities to study at the cases and ensured they understood them.Making attendance and participation 25% of marks assured high attendance at lectures and workshops.The creativity workshop got quieter class members to get involved. It also made students aware of the importance of creativity in business. I may introduce an art or music class in future in order to get them to see different forms of creativity that they may not have been exposed to, as well as making the connection between creativity and business.

Teamwork sessions were very important and instructed students on how to handle themselves at their team meetings and set ground rules for the team. Allowing team meetings in class was beneficial as I was able to sound out each team and their progress. Moving from one team to the next I could observe team dynamics as well as discuss their businesses and mentor each team.

Following the Cranfield example, getting the class to read cases in class instead of at home ensured that everyone read the cases, which otherwise may not have happened. I found this to be very useful, as some of the other lecturers on the programme were finding it difficult to get the students to read cases beforehand, which seriously disrupted their classes. In one or two cases the situation was so bad that lectures were postponed.

Improvements Required

Some of the business teams failed to get up and running in business quickly enough. There were four teams in all in each of the years. The groups in which there were people with a natural affinity to business through family experience had the greatest success. The others dithered and didn't quite get

going. The most successful team chose a simple business...sweets, and then found a franchise that they were able to bring on to campus. The dynamic in the team was energetic and they worked quickly and confidently. A second team managed to convince the university to allow them sell the UCC branded clothing on campus and were also very successful, to such a degree that they have started in business as a result after finishing the course. The slowest to start, and in terms of business success, the least successful, proposed selling computer game time on monitors on the campus. This proved expensive to get off the ground and was months behind the rest. The team were doubful in nature and seemed to find it hard to make decisions.

The students were allowed trade whenever they wanted to, with the result that some worked much harder than others leading to improved performances of understanding. Consideration was given to specified trading weeks when each team must trade. e.g. one week in each term. However, the continuing nature of the trade is better learned over time rather than in one concentrated week.

Storage facilities were poor and the students struggled with the stalls and finding storage for them and their stock. Attempts to rectify this with university authorities were made in year two but little changed.

In year one leaving it too late to explain in detail the marking systems for assignments, the business and participation was a mistake. This needs to be done early on in the year. Deadlines were not clear enough. This was rectified in years two and three and students participation increased markedly in class.

Relenting and allowing the class to sit in the same places each week was not beneficial. They gathered in cliques as a result and the less attentive students sat at the back.

Students were not given enough time to meet as teams during their classes with mentoring support from me. As explained in teamwork guidelines previously, students need to hold meetings in class, otherwise they may not have productive meetings outside of class.

The marks for the business practice module did not reflect the amount of work or time put in. Many students felt that it should have had 20 credits. This was discussed with the programme team but no change was brought about as the programme director felt the marks to be adequate.

This teacher often had too much material to get through and rushed the lectures. This is, I am told by colleagues, common with new lecturers. I didn't keep materials sufficiently up to date on the Postgraduate website, which is essential. The website is a dedicated site for the programme and students access it often.

Clearer guidance on content and dates of assignments should be given in order to ensure that the learning is directed in the appropriate way.

The closer integration of the various modules on the programme was implemented in years two and three. This allowed the whole programme to revolve more closely aroung the business being run on the campus.

Feedback from 1st, 2nd and 3rd year students

Feedback forms were completed by students in the class on a regular basis as part of the departmental guidelines in the university. While caution must be exercised in concluding too much from these short surveys some conclusions can be made. 60%of students rated the module excellent with the reality of business and the experience of the lecturer being the most common remarks (see Table 19). When asked what was their overall impression of the programme 60% said excellent, with 40% saying above average in the first year. This became 100% excellent in the 3rd year (Table 20) indicating that the programme content and communication had evolved successfully during

the three-year development of the course. When asked what the best aspects of the programme in year one were most said that it was the setting up of a business, the hands on real experience and the sense of applying theory to real practice. In year three the best aspects were and the practical knowledge and enthusiasm of the lecturer. When asked what the worst aspects of the module in year one were students responded that the lack of proper storage space for their stands and produce was a major problem. They also said that they needed more time to trade and maybe more credits for the module as the time applied was not reflected in the marks awarded.

Table 18: Student Feedback Year One

Question		
Overall Impression	Excellent: 60%	Above Average: 40%
Attended Lectures	90%	
Best aspects	Practical/hands on	Setting up Business
Worst aspects	More time for trading/ poor storage facilities	More marks should go to this module than others
Suggestions	Permanent trading positions for stalls	More group discussion time

Source: Author's analysis based on students' feedback forms.

Table 19: Student Feedback Year Two

Question		
Overall Impression	Excellent: 76%	Above Average 18% Average: 6%
Attended Lectures	80%	
Best aspects	Setting up business	Theory and Practice
Worst aspects	Lack of storage space for products	The amount of time spent on business
Suggestions	More marks for this module	Two days for trading

Source: Author's analysis based on students' feedback forms.

Table 20: Student Feedback Year Three

Question		
Overall Impression	Excellent: 100%	Above Average: 0%
Attended Lectures	95%	
Best aspects	Inspirational/innovative	Practice/enthusiasm
Worst aspects	More entrepreneurs	More workshops
Suggestions	Some business law	Business plan advice

Source: Author's analysis based on students' feedback forms.

As can be seen in Tables 18, 19, and 20, which reflect student feedback on completion of their module in years one, two and three, there was a marked change in overall impression, moving from 60% excellent to 100%. Students found the module inspirational and practical, would prefer more workshops and more advice on how to create a business plan. Permanent stands to be built on campus and a request from one student for Business Law to be included, were other suggestions.

Desk Survey of Graduates

In order to ascertain if the Understanding Goals as set out were achieved, two desk surveys of graduates from the three years of the programme was undertaken. The first survey was constructed around the expected understanding goals as set out in the design of the module and the second survey was a standard university questionnaire used for assessing the effectiveness of a module and asking what could be improved. Both Survey Instruments and Sets of Performances are available in Appendix E while the raw data is available on request from the author. Table 22 below shows the responses to questions one to five of the survey and an edited version of the responses follows. Of forty one students who attended the modules over the three years thirty were contacted and twelve responded to Survey One while eight responded to Survey Two.

Survey One: Understanding Goals

1. Students should be able to understand how business works both at a micro and macro level and they should be thinking and acting entrepreneurially in their lives and careers. Do you believe you got this understanding and has it influenced your life?

Students feel that they have a got a deep understanding of how businesses works and how to act entrepreneurially. While this may not have influenced everyone's life to date they expect it to do so in the future. Understanding of business at both practical and economic levels improved.

Several said it helps them in their current job to hunt for a successful career.

One student said it also gave him more confidence to take the plunge and start a business. 20% said they try to find opportunities to start some form of business on a regular basis.

2. Business provides a service to society and is ever-changing and within that change lays opportunity. Do you believe you understand this and do you see it more clearly than before the module?

Students said they understood how opportunities occur in times of major change in the economy such as a recession and how to look for opportunity in everyday things/processes.

Students said the course helped them to understand this better with business and society being inter-related.

Opportunity is endless and everywhere.

3. Entrepreneurship is a discipline, that it can be practiced and that it is a way of observing and looking at the world. Did you understand this and has it impacted your thinking and actions?

Having previously believed that any innovation would require some new major technological advance or some new science discovery students now realise that opportunities are everywhere, and can be exploited by anyone who has the vision and determination to succeed. Students now believe that entrepreneurship is a process, which is both theoretical and practical in

nature. The module demystified the whole area of entrepreneurship and gave one student confidence to start his own business. Students said it changed their view of life. They identified the need to see a gap or unfulfilled need in society and people are not born entrepreneurs, they become entrepreneurial through hard work and with the help of others.

4. Entrepreneurship can be learned, that it can be practiced in big and small companies, that it is about selling, pricing, relationships, perseverance, ideation, observation, decision-making, teamwork, bootstrapping and risk management. Do you believe you learned to be entrepreneurial and learned these lessons from creating a business on campus?

Students said they learned more in setting up the campus business than they have learned from "three years looking at books". The practical experience gained has benefited them, and they now have a much greater understanding of the work and dedication required to succeed when starting a new business. Students believe that they have learned perseverance, decision-making and teamwork, knowing how to act as an integral part of a team and how to make a team a success. It is not easy to put the theory into practice but actually creating a business really shows you the complexities involved in getting it off the ground. They admitted to making a lot of mistakes but learned lots. There was an understanding of how important is to find right people to work with. Students said that setting up a business was a brilliant experience and one that should be included in all business courses. Gathering information so as to reduce the risk of failure is one of the most important lessons of setting up a business. One student said that business on campus was a great idea in theory but not in practice and that exposure or experience in larger scale set up would have been better.

5. Did presentations to professional banking and business experts of both business plans and results of running businesses made you more professional in a business ready sense?

Students believe that doing presentations has certainly helped in current employment, and as a result are a lot more comfortable and confident doing presentations. The presentations were one of the best aspects of the course. They helped students to become more confident with professional public speaking and they taught them how to present some difficult subjects or issues in an effective manner. The opportunity to present in front of professionals in a controlled environment was very beneficial. Respondents stated that it was good having to explain decisions made and having to answer questions to a bank that you would be answering questions to if you were really borrowing big sums of money or accounting for losses. It forced them to be honest and pick through things as well.

The experience was good. However if one was not happy with the way the business progressed throughout the course then it can be discouraging to present with a lack of pride in the business.

Table 21: Graduate Survey One: Questions One to Five and Answers

Understand Business Macro and Micro?	Business is a service and change brings opportunity?	Is Entrepreneur-ship a discipline?	Learning from creating business?	Present-ing to business people?
Understands but not yet influenced career	Sees opportunity in current climate	Vision and determination	Learned way more in short time than reading/ studying	Has helped in current job
Understanding vastly improved	Sees opportunity in everyday things	Understood this from Drucker	A lot of realisation in hindsight	Learned to defend position
Understands and is more ambitious	Inter-relationship between business and society	Entrepren-eurship theoretical and practical	Perseverance, decision making, teamwork	Much more confident now
More knowledge and interest in business	More observant of businesses and opportunities	Now much more business minded and entrepreneur-ial	Difficult but rewarding	More confident
Absolutely. Has started own business	Opportunities in recession	Yes definitely, gave confidence. There is a method	Lots of mistakes but lots of learning	Has become more profess-ional
Yes	Sees different ways of finding opportunity	Look for opportunities	Find right people, take responsib-ility	Valuable experience
Yes	Definitely	Thinking and view has changed	Couldn't be learned in lectures	Not sure
Acting entrepreneurially	Opportunity endless	Yes it is a process	Idea, actuality, maintenance	Good learning to talk to bankers
Yes and innovating constantly in work environment	Business must reinvent regularly	One can become entrepren-eurial, not born	Information to reduce risk of failure	Depended on success of business

Source: Survey conducted by author September 2010

6. Do you think that having a lecturer who had real business experience made a difference and if so what impact had it on your thinking?

The enthusiasm of the lecturer was acknowledged as motivating by most students. The lecturer made them realise that opportunities are all around and they just need to be grasped. “Having done this all before himself, it was clear that he knew what he was talking about, and he had experienced the highs and lows of setting up a business, that he was able to tell us about to back up his argument”.

There is no substitute for experience. At the same time having grounding in theory is of course beneficial. It's better to learn from people who have already made the mistakes. “The lecturer definitely made the course a reality. If we had a lecturer who hadn't had business experience, I think it would have lessened the credibility of the module”.

“It's one of the first times in college that I can recall looking forward to a class and feeling positive and motivated afterwards. The fact that the lecturer had put theory to practice and been successful was also a motivating factor”.

When you have a person who has the experience it makes all the difference and really helps you believe what is being said. It makes you believe that you can apply the theory and be successful. That’s huge in getting you to believe in your idea and get you started.

The person from real business has a better understanding of reality in the market, can give more clear directions how to start, how to run business, how to solve various problems. Theory and practice are not the same, the best mix is when a person has both and can use knowledge to improve business.

7. Did studying Drucker's *Innovation and Entrepreneurship* connect with your business experience both on campus and subsequently and if so, in what way?

Much of what the students came across while starting up the business, in terms of identifying opportunities and the challenges faced were discussed by Drucker in his book. It is the ideal book to compliment the first hand experience generated from starting the business. It made students think with a new mind-set, view everything as an opportunity. One of the main things learned from Drucker was that a business would not exist without a

customer and how you create and keep customers is central to success. It is clear, simple and to the point - exactly what an entrepreneur needs.

8. Do you believe you now know how to start and run a business?

Some felt they would fully have the capability to start a business but will first need to get more work experience before thinking of setting up a business. Several said that they believe they could start a business and intend doing that. One has already started a business (Paradering.ie). Courage and confidence was stated as a factor in hindering start-ups. Some said that they have a better understanding about whether a business will be viable and profitable.

9. What are you doing in your professional life now and do you have opportunities to be entrepreneurial in the way that you learned on the module.

Respondents in a range of careers such as trainee accountants, financial analysts, commodity traders and pub managers replied to this question.

One respondent currently works in Ernst & Young and is studying to become a chartered accountant but would like to start his own firm. Another joined the consultancy/accounting profession. . Another works in a large multinational IT company with much room for promotion. He believes the module has given him the skills and more importantly, the confidence to push for a successful career. One is a Financial Analyst and can quickly generate ideas, to bring them and just need right team to start his/her own business.

One currently works in a family business in the Netherlands. It is a bar and nightclub business. He is looking at expanding this and doing something himself in Ireland or in the Netherlands. One hopes to set up his/her own business in no later that five years.

10. Are there any other comments you would like to make?

Several felt that the course benefited them greatly. There was a suggestion of cross course/department integration when running campus businesses from a student in year one, and this was actively brought about by the teaching

teams in years two and three. One wished he could have done something like that for 3 years as an under graduate.

Table 22: Graduate Survey One: Questions Six to Ten and Responses

6. Lecturer with real business experience?	**7. Druckers *Innovation and Entrepren-eurship?***	**8. Know how to start and run a business?**	**9. Opport-unities to become entrepren-eurial?**	**10. Other Comments?**
Enthusiasm and experience important	Ideal companion to business	Not fully capable yet	Ernst and Young. Would like to start own firm	More module integration
Real business experience vital	Sees everything as opportunity	Could start but unsure about running one	Consultant now. Yes being entrepreneurial	Great experience
Made course a reality	Very Relevant	Yes would know how	IT Company. Course helps job promotion	Very informative and relevant
Highly motivating	Importance of customer	Skill yes but courage no	Masters thesis	Real life experience
Experience makes all the difference	Clear and simple to understand	Yes knows enough	Running own online business	Loved lectures
Market reality	Very interesting	Not confident yet	Financial Analyst. Thinking of own business	Would like to have done this as full undergraduate degree
View from real business world	Can link book to campus business	Not sure	Family business. Being entrepreneurial	Has a clear understanding of entrepreneur-ship
Very positive	Explains business decisions	Yes and intends to start one	Studying	
Inspirational	Look at life as opportunistic	Yes and has course notes to guide	Own business within five years	

Source: Graduate Desk Survey by Author

Survey 2

1. What Worked? What was Right?

The practical nature of the module worked. While lots of modules in college involve just reading from a book, this was practical and students felt really involved in the lectures. The combination of the teacher's entrepreneurial

experiences with theory and the running of their own businesses gave a broad understanding of entrepreneurship. There was a feeling of positivity in the class and a lot of participation by students.

Students thought that the lecturer made the course interesting. He was enthusiastic, friendly, down-to-earth and knowledgeable. It was so refreshing to have a lecturer who was practically focused and was always in great form. He was nothing but positive during the presentations and that was not forgotten. The subject material was different from the others in that it was being taught from experience and its practical nature made it easy to engage with.

2. How did it Work -What made it Right?

The lecturer's enthusiasm rubbed off on all the class and made it interesting. The right selection of required reading such as Drucker's *Innovation &Entrepreneurship* was important.

It was a positive environment that encouraged participation. The guest speakers and lecturer had real business experience and shared this knowledge. The sheer enthusiasm in the lectures, made students feel like they could become entrepreneurs. The teacher made it sound very simple which is needed, at the start especially. The material was clear and concise and was practical. All of the advice and material was trusted because the teacher had gone out and done it unlike most lecturers.

There was a willingness for all of our team to work hard together. The business set-up was definitely the aspect that made it the most interesting.

3. What is the ideal? What would it look like if it were perfect?

It would be great if all companies made profit.

There should be more contact with other local entrepreneurs who are successful or have 'made it'. Some said it was very good and wouldn't know how to make a class perfect.

There should be more hours in the week and have a bit more structure in the approach for setting up the business. There should be more mentoring for each business group.
Some students said that the module was very 'user-friendly'. Perhaps an exam should be added to the course. Make the module more academic focused.

4. What was not quite right -How could it be tweaked in the future?

Maybe if some of the groups were in direct competition with each other they would get a greater appreciation of the competition that exists when one goes out into the market.

More deadlines for running company, i.e. to have to trade a specific number of days, to be set up by a particular date.
The lack of capital students have has an impact on the business that they run. It is also very hard to balance class work and trading. Even though team environment is important, there should be more individual marks.

Could give more help in applying the theory for the business, have more scheduled classes for work on business. Break the year up into stages more so parts done by certain date. Keep track of group activities with weekly meeting and set goals and objectives.

Some thought the course lacked structure at times. Even though the course was always enjoyable, some felt that the course sometimes fell away from the academic side of teaching.

5. What "resources" would be needed to make it right?

Better facilities i.e. indoor trading facilities. This is especially relevant for groups who are cooking or selling food, e.g. for health & safety reasons.

Have business deadlines incorporated into module such as when to start and how long to trade. It might be interesting to back ideas with small bank loan or have the teacher be an angel investor to help make businesses better. Get work placement for students.

6. Any Additional Remarks?

This is a great module and has potential to be even better with a bit more involvement from all staff in setting up the business. There should be more monitoring and mentoring of the businesses. It should count for more marks so more effort put into it by all class members. More hours of lectures, should be one a day!

Congratulations to Owen for his great work!!!

Summary

As these surveys were conducted in 2011 after the module was run three times, changes that were suggested by participants who took the module in 2008 the first year had already been incorporated in the following two years, such as deadlines for business start-ups and more cross programme involvement by the different modules on the programme. Clearly the students felt their attitude to the world and their work environment had changed substantially as a result of doing the module. The practical knowledge of the teacher, combined with relevant theory together with running the business gave them a deep insight into entrepreneurship. The fact that the teacher had actually run a business himself gave credibility to the module. The suggestion of work placement was incorporated into the second Masters stage of the programme, which began in the second year of this experiment.

Observations of the External Programme Advisor

Throughout the three years of the programme the External Programme Advisor Ms. Anne Nagle, MBA, interviewed the students individually, attended presentations and chaired programme teaching team meetings.

These are her edited observations over that time. The full correspondence from the business observers is available in Appendix H.

Ms Nagle said that she believed that one of the most important roles the module plays is that it gives students the opportunity to experiment with being a business owner. Some of the students would never have considered this as a career. It is evident from the plenary forum/end of year presentation on this module that for some this has been a door opener in terms of them thinking of their future career. We may not see this play out immediately for some students - it may not be reflected in what they do immediately after the programme but could play a role for some as they establish themselves in the working world over the next few years. Secondly, and more importantly from an adult development perspective, trading as a team pushes students into an environment where they have to start considering others' perspectives. Loosely we develop through challenges and stepping outside of our comfort zone – and for some that is exactly what this module creates for them – a zone of discomfort. Some students have taken on the challenge and others hide behind the team. For those that embrace the challenge it has to contribute to their development. Finally, the students get an understanding of entrepreneurship through its practice. Many students enter the programme with views on business that are not anchored on data – we have all listened to sweeping statements from students on various business-related topics as they start out on the programme. Many students change their views (or more precisely, form deeper views) on entrepreneurship and entrepreneurial business people as they exit the programme.

Observations of Bank Managers

Two senior bank advisors attended the early presentations of the business plans by students and then attended the final business reports. Their observations are offered below. Full correspondence is provided in Appendix H.

Mr Gerry Ryan, Manager, Bank of Ireland UCC Cork:

"Based on the group presentation of business plans my initial impression was individuals were often hesitant and unsure, unable to place the academic principles in practical framework, clearly displaying their lack of business experience. However, at the results presentation some five months later the transformation was often remarkable. Having run a real business they now had a much greater understanding of the principles and how they are applied. Confidence levels had increased; sometimes a new leader had emerged, deals had been done, mistakes made, problems solved, plans changed and compromises reached, just like a real business. Some groups succeeded in reaching pre-set financial goals, others didn't. The best learning was often with the latter".

Mr Frank Bowdren, Senior Business Manager, Bank of Ireland, Cork:

"My first observation is that the level of presentation has improved over the years. This comes from experience of the lecturers/mentors and also the students talking to previous participants. The students are understandably nervous on the first presentation, as few of them would have made such a presentation before. Their projections and business plans are optimistic

On the second presentation and after they have actually run the businesses for some months, the second presentation is better as they have a realism about them and the students are more appreciative of the difficulties of running a business, even in a closed environment of UCC campus. They would come across as more mature at second meeting and more aware of the practical difficulties of running a business and dealing with real customers and suppliers as well as banks and customers".

Feedback from Staff on the Programme

Regular team meetings between lecturing staff - the teaching team - took place during the three years of the programme. During these discussions it

became clear that there was a disconnect between the various modules and that each lecturer was operating essentially as an island. While we may have accidentally crossed over in what we were teaching, it wasn't happening deliberately or systematically. However, in the second year the teaching team attempted to co-ordinate efforts more closely and there was much more real connection between modules. Modules in Surveys Methods and Entrepreneurial Finance became directly involved in the business being run by the students, the students subsequently doing their surveys on campus to research the viability and on-going impact and results of their businesses.

Staff attendance and feedback at student presentations provided information on their observations with regard to the changes that took place in the students' knowledge and learning over the two semesters. Together with the observations from outside participants, the External Business Advisor and two bank managers, there was a strong opinion offered that the students had grown into business-ready adults from the less mature students they had begun the module as.

Results

In order to examine the results of my research and teaching, I refer to the Teaching for Understanding Framework again to frame the criteria for judgment. The Teaching for Understanding Reflection Checklist, taken from the Teaching for Understanding Guide (Blythe et al. 1998) lists the following for assessment and reflection on teaching:

Teachers manage to teach for understanding when:

The learning is generative:

This occurs when:

- Instruction is focused around a few central topics;
- The topics are personally significant for students;
- Students are actively engaged in their work; and,
- An atmosphere of genuine inquiry pervades the classroom.

On the basis of the responses to the surveys above, these topics delivered on the learning outcomes that were formulated and students understood through their performances of understanding what was presented and worked through with them and by them. With regard to these points the few central topics were clear:
Entrepreneurship is about doing, as well as theory and it applies to all types of organisations and it is a discipline. Business delivers lifestyle to society in the form of products and services and anyone can do it. Business is not just about technology it is in everyday things.

Not only were the topics relevant to my own story but also were vital to the students' learning of business. They were very enthusiastic and challenged in their work of setting up and running their own businesses. There was constant inquiry throughout the module, both inside and outside the classroom. The link between theory and practice was emphasised by the introduction of cases relevant to economic theories and the comparison of this practitioner's experience in light of these theories clarified for the students the relevance of theory in practice and also further deepened this practitioner's understanding of both practice and theory.

The understanding goals are clear and explicit

- Overarching goals or through-lines are explicitly stated and posted in the classroom;
- Goals for particular units are closely related to overarching goals;
- Teacher and students regularly discuss and reflect on unit-long and overarching goals to help students make the connection between what they are doing and why they are doing it;
- Students are working on performances of understanding almost constantly;
- Students work actively in varied formats: pursuing projects and reflecting alone, collaborating and conferencing in small groups, and interacting in whole groups;
- Students can explain why they are doing what they are doing;

- The teacher spends time coaching, conferencing, leading, participating in discussions, and sometimes lecturing;
- Students are thinking and making that thinking visible in the contexts of performances of understanding that challenge their misconceptions, stereotypes, and rigid thinking;
- The room is filled with student work, both finished and in process; and,
- Responsibility and authority for the work is shared between the teacher and students.

The module took place in a dedicated programme room where many of the materials relevant to the understanding goals were present, both in charts, messages and notice boards. Students did most of their work in that room, with the exception of site visits and the campus based businesses. Students fully understood the reasons for what they were doing and regularly made connections between each of the units and the overall concepts of the module. They often made it clear to me how their thinking had changed, sometimes completely. One student told me privately that the module had inspired him to change the way he sees the business world.

In Essay Two the Teaching For Understanding Framework was examined, which suggested that understanding is a matter of being able to do a variety of thought provoking things with a topic such as explaining, finding evidence, applying, analogising and representing the topic in new ways. The students experience many of these things while creating, planning, running and reporting on their businesses. They found evidence of the demand for their products through surveys and actual sales, they applied and analogised by actually selling to their customers and they represent the topic in a new way in their final business report and presentation when they reflect on what happened to them.

The assessment is on going:

- Students engage in cycles of drafting, reflecting, critiquing, responding to, and revising their own and others' work;
- Students share responsibility for assessment;
- Everyone assesses work according to stated criteria and standards for quality, which are closely related to the understanding goals;
- Assessment is often casual, conversational, and spontaneous; periodically it is more formal, recorded, and planned; and,
- Responsibility and authority for the work is shared between teacher and students.

Having designed and implemented a module on entrepreneurship and examined the results I now move on to the conclusions of the Portfolio overall and offer a review of research as well as suggested guidelines for the teaching of entrepreneurship in universities. A review of my personal and professional development is also included.

CONCLUSION OF PORTFOLIO

1: Review of Research

This Portfolio of Explorations was conducted over a three-year period of teaching entrepreneurship in a university programme to postgraduates. The community for which it was written is teachers of entrepreneurship at university level, universities seeking to introduce entrepreneurship programmes and education authorities creating entrepreneurship policy. By drawing on the experience of twenty-five years as an entrepreneur, and combining this with knowledge gained from economic and pedagogic theories while researching, an effective module on the teaching of entrepreneurship was developed. The Meaning Making Systems of this practitioner were profoundly influenced by these experiences and the view of the environment, of other businesses and of teaching methods changed the way this writer saw and experienced the world. This in turn influenced the teaching methods employed, and indeed the experience of the students as a result. These Meaning Making Systems continued to evolve and change throughout the doing of this Portfolio.

The Professional Development Memoir was written in order to examine the professional life lived and the changes in Meaning Making with a view to identifying the relevant (often tacit) knowledge gained while being an entrepreneur and subsequently to communicate that to students in a university in the design and implementation of a module to be taught.

So how does one evaluate the success of teaching entrepreneurship, and in particular, the success of this module, and therefore the answer to the question: How can a practitioner, such as this researcher, become an effective teacher of entrepreneurship? In order to answer this question the understanding goals must be examined to see if these were achieved.
The stated Understanding Goals were:

- Entreprenuership is possible for anyone, anywhere;
- Entrepreneurship is a discipline;

- Business delivers a service to the economy;
- How to minimise risk in business;
- Understand how to plan and run a business.
- That most things are ocurring in normal everyday products, and not necessarily in electronics or science; and,
- How others have made it and what it did for them.

Through feedback from the students, other staff teaching on the programme and outside business advisors it is evident that students themselves believe they have learned to think entrepreneurially in business and have changed their Meaning Making Systems as a result of the module. This was stated quite clearly in the Desk Survey responses. The changes in this practitioner's meaning making over the years as a result of experiences gained provided a powerful message for the students. The evidence both from in-class surveys and subsequent desk surveys clearly shows that the students' themselves felt that the practical experience of the teacher was the most important aspect of the module.

It is too early track the career choices of all the students subsequently at this stage. In the case of this module this can only be done at this stage for the first year of 18 students, 12 of whom details were received from, two started their own business together ("Campus Guys" – university apparel, the business they created while doing the module) on completion of the module. There is no doubt that this business started directly as a result of the students being on the module, but it closed after 12 months due to poor sales. Five went on to do Masters degrees, mostly in Economics while at least five got jobs in private companies. Several said that the experience of running a company was seen as important to interviewers for the jobs they got and therefore made a difference in an unexpected way.

Other than the business start-up, these statistics reveal very little about the success of the module, but having an actual start-up may be significant. There is also a strong indication that another student is planning another start-up

from the second year of the module. However, many of the students ended up in administrative positions in multinationals, so evidence of entrepreneurial activity is limited at this stage.

To assess the effectiveness of the module reliance must be placed on the reactions of the students themselves, particularly from within their written assignments, the in-class feedback and desk surveys, observations made by both myself, the business consultants involved in the presentations and other staff on the programme. As outlined earlier in this Portfolio, students stated quite strongly in their written work and surveys that they found it to have been a very positive experience and found it very encouraging in relation to being entrepreneurial and many were considering the possibility of starting a business. They also found Drucker and this practitioner to have given them a sound understanding of entrepreneurship as a discipline, which can be learned. In an email received from one of the students, he said:

“What appealed to me most about your module was the hands on approach you took to teaching. I think entrepreneurship is a difficult thing to teach, but what you managed to convey was that entrepreneurial activities can be seen everywhere and that you can find inspiration in the simplest thing, it doesn't always have to be the high tech/multi million euro business”.

Not all students will have the same insights such as that above, but it does indicate that effectiveness has emerged as having been achieved on the module. The Desk Surveys also indicated that students considered they developed a deeper understanding of how business works by actually creating one on campus and that the fact that the lecturer was previously a practitioner gave credibility to the lectures. However, the protected nature of the on-campus experience must, by its nature be somewhat limited in its effect as compared to starting a business in the “real” world. Rent, rates, staff costs etc. were not part of the experience.

With regard to the reactions of outside observers involved, both the bank managers and the External Programme Advisor were in no doubt about the change in the students as a result of the programme. Having seen them at the beginning of the year for their business plans and then again at the end of the year they commented that the change was noticeable and that "the students are ready for the business world". This was evidenced in their end of year presentations, which displayed both professionalism, and knowledge of entrepreneurship, which was not at all there at the beginning.

With limited cohorts of students, the findings should be taken as provisional at present. Having attended several exemplars, this module can be compared to the exemplars in content and quality and this writer believes that the quality of workshops given and the understandings achieved by the students would be of the highest standard.

It must be pointed out that there were five teachers on the programme overall, teaching various modules, all of which will have impacted the students in different ways, so this one module cannot claim to have been the sole reason for the success, or otherwise, of the teaching. The surveys carried out, however, referred only to this module, but students might not be aware of the overall impact of the entire programme on them.

The process of attending exemplars and examining them with a view to designing a module, together with the implementation was a long and challenging one, and indeed teaching for the first time what I understood to be the various elements of entrepreneurship was an extensive learning experience on my part and brought about changes in my Meaning Making Systems as a result. For instance, the researching of economic and pedagogical theories heavily influenced the design of the module and the attending of exemplars informed the content profoundly. The use of the Teaching for Understanding Framework brought structure and clarity to the design of the module and the decisions to be made about understanding goals

and performances of understanding were made simpler by examining the exemplars through that framework also.

2. Assessment and Findings for Practitioners

The audience for this Portfolio of Research is practitioners, i.e. business people considering becoming teachers of entrepreneurship, existing teachers of entrepreneurship, universities such as University College Cork intending to introduce courses or programmes in the subject of entrepreneurship and government agencies, both the Higher Education Authority and Enterprise Ireland who set and follow government policies in this area.

In this chapter the role of the Portfolio is summarised and then my reflections as a result of the research and "experiment" are offered. In answering the main question of the Portfolio: How can a practitioner such as this writer become an effective teacher of entrepreneurship, I break the answer down into sub-questions dealing with benefits, challenges, professional experience, balance of practice and theory and the module effectiveness. Reference is made to the exemplars attended, Kegan's Theory of Adult Mental Development, the economic theorists researched and the Teaching for Understanding Framework, as well as the students' feedback.

This Portfolio dealt with personal, professional and organisational development over a three-year period, and the development and changes brought about in Meaning Making Systems as a result. Through the reflection on a professional life and the subsequent delivery of a module on entrepreneurship in a university this practitioner targeted development of what Barzun (1987, 2003) describes as "the well made self." He says that:
"When the will to self-searching has you by the throat, there is immense value in being able to find a self."

Certainly, in this practitioner's professional experience of living an entrepreneurial life and subsequently getting a business education, self-searching took place and Meaning Making was profoundly influenced. The

designing and implementation of a teaching module forced this writer to examine what such a "well made self" might look like in order to be able to communicate the nature of entrepreneurship to students in a university.

In designing and implementing a teaching module my intention was to bring the students on a journey of discovery, what Kegan (1994) calls a judicious balance of challenge and support that encouraged them also to create "the well made self" oriented towards business life. They are embarking on their business lives, and the module hopefully laid the foundation stones that provides the experience through practice and theory that can enable them to understand the role of business in society. The module also attempted to assist students in identifying and, perhaps, changing their suppositions, getting them to learn to think with fewer boundaries while understanding the discipline of entrepreneurship; offering essentially a new lens for seeing the world and reflecting on it.

The professional element of the Portfolio focussed on the development of this practitioner through a business life lived and the subsequent change in my Meaning Making System, which lead to a business education and subsequently a decision to develop professionally through the challenge of teaching. The professional development of the students was developed through the creation of a module on entrepreneurship using the Teaching for Understanding Framework (Blythe et al., (1998). The organisational development was that of a university department experiencing change through innovative programme development.

The research carried out in this Portfolio was based on two beliefs: that entrepreneurship can be learned and that this learning can be facilitated and perhaps accelerated. By attending entrepreneurship courses at leading exemplars and also from seeing the results of my own teaching I suggested, following Drucker (1985), that entrepreneurship is actually a discipline that can be learned.

This writer believes that the most effective way of developing an understanding of the nature of entrepreneurship and its practice for students is through experiential learning, and that an experienced practitioner can make the transition from entrepreneur to teacher through the application of the Teaching for Understanding Framework (Blythe et al., 1998) and by interrogating his own business life through the lens of Kegan's (1994) Theory of Adult Mental Development and specifically, his Fourth Order Consciousness and the subject/object relationship. By becoming aware of one's Meaning Making System throughout the development of a business and teaching life, one can then teach the subject of entrepreneurship more effectively as reflection on the actual mental development of this practitioner reveals the changes students have to make. The actual teaching in the classroom should in itself be entrepreneurial, and the experience of the students in class should be an interactive and innovative one.

With the exception of the Cranfield course, all exemplars made strong use of entrepreneurs as teachers. These, in this writer's observation, were successful in business and could be considered as dynamic and good communicators of their knowledge and experience. This is an important observation and has implications for universities planning entrepreneurship courses or creating entrepreneurship centres. However, there have been successful academic teachers of Entrepreneurship as was seen in the Babson exemplar in Essay 2 (Timmons). In order to further examine this decision by these leading universities to use practitioners as teachers, a short desk survey was undertaken of teachers of entrepreneurship in universities in America and Canada[8] to elicit views on what kind of practitioner they would choose to teach the subject (entrepreneurship), bearing in mind that not all practitioners are capable of communicating their knowledge effectively and that not all practitioners are necessarily suitable to influence the minds of young adults at a university?

Kenneth Morse, former Professor of Entrepreneurship at M.I.T. said:

[8]The responses are contained in Appendix G.

“MBAs and other graduate students need a blend of theory-based and practical training. The nuts and bolts, nitty gritty part of their education can only come from someone who has done it before, who knows what will work, and what won't, and says so clearly”.

Ron Morris, Director of the Entrepreneurial Studies Program, Duquesne University said:
“Insofar as what type of practitioner should be teaching entrepreneurism, I further agree with you. Just because you have done it, does not mean that you are capable of teaching it. So, it is my belief that one must strive to find real practitioners with, at a minimum, these experiences:
They should have failed somewhere along the way, preferably spectacularly.
They should be entertainers - as you know I host a talk radio show (have since 1999) and the advice I was given right upfront was to make sure that I had an equal mix of knowledge dissemination combined with entertainment of the listener. You know as well as I do that students respond very well to unstructured lectures and occasional silliness. Finally, the practitioner in question should strive to put students in environments where they can actually become personally involved in a start-up's activities. I believe they call this ‘participative learning’."

Many of the responses recommended the use of practitioners as teachers. They also must be good communicators, which by their nature, entrepreneurs are. However the experience of this practitioner demonstrated that theories of economics are highly relevant in the classroom alongside practice and that theories such as those of Schumpeter and Shackle and others help to deepen to understanding of business in wider economic terms and served to change this writer’s Meaning Making System from the narrow view of the business world from the perspective of a Small to Medium Enterprise to the broad economic view of the world.

It is this writer’s conviction that an ethical standard should be set, in that the entrepreneurs who teach, indeed all teachers, need to have lived an honest

professional life and this understanding must be and indeed was communicated to the students in class

The Teaching for Understanding Framework was used to examine the exemplars visited in order to create a solid framework for interrogating them with a view to subsequently designing and implementing the module.

3. Personal Professional Development and Final Reflections

It is necessary at this point to refer to my life story and also where the future lies. I have made some of the transition from entrepreneur to lecturer and am continuing to teach at the university, and my Meaning Making Systems continue to develop._It is my intention to deliver entrepreneur education across the university and into the further community that in the economic climate of the University in 2012 is a big ask, but essential. For universities and for education authorities setting policy for the future, the message is clear: entrepreneurship courses and programmes need to be introduced as a matter of urgency throughout the third level sector, in all disciplines (see European Report in Appendix F). Practitioners who have made the transition to teaching, or who at least have grounding in theory as well as practice should preferably teach these programmes.

Because this is a practitioner based study, refecting on a life lived and a module taught, it is important to refer to other research on the success or otherwise of entrepreneurship education before coming to a conclusion about the effects of teaching entepreneurship. If, as Henry and Leitch (2005) say, there is a science and an art to be taught and if the art is to be taught in a different way to science then innovative means are required to teach the art of entrepreneurship.Instruction therefore, should seek to provide mastery experiences or opportunities to act entrepreneurially, as well as exposure to several real-life entrepreneurs. This exposure serves to let the students see how others have done it and give them insights and encouragement to think in an entrepreneurial way.

The MBA and DBA programmes (Business Economics) have exposed this practitioner to a range of theories. As a businessman I would have had little belief in academic theory. Prior to my business education decisions would be made on instinct and little theory was consciously utilised even if theory was being used subconsciously. My meaning making changed with the realisation that theory could help me to think about, and solve, problems I encountered in business. Everything we see is through the lens of theory. As Drucker (1985) put it, every practice is based on theory and I as a practitioner became increasingly aware of this.

When I look back I can attempt to identify what were my theories, or in Kegan's terms, elements in my Meaning Making System. Because I was not aware that I actually had theories, the journey into education was a combination of both realising that I had theories before studying but was unaware of them, to arriving at a point where new theories were discovered which I had not known about. The journey started before doing an MBA with the reading of a strategy business book (Johnson, & Scholes, 1999) given to me by a consultant employed to examine my business, and the MBA gave me models and frameworks through which to analyse the business and change the way it was being run. Important decisions were made with regard to the selling of both properties and indeed the business itself as a result of this education and my Meaning Making Systems changed in a profound way. The discovery of the power of the combination of practice and then theory was subsequently used in the design and delivery of a teaching module. This particular journey influenced my thinking, changed my way of seeing the world, gave me a calmer and more analytical mind and ultimately allowed me to exit my businesses and go on to teach the subject of entrepreneurship.

Having had the early experience of running a market stall, and two experiences of starting businesses that didn't quite succeed, before the third finally did, shows the extent to which my meaning making system developed in the understanding of how business success is gradually brought about by

experience. I had no business training prior to starting in business and literally learned by doing it. Each failed or abandoned business created a new conviction about the requirements for success and changed my Meaning Making continuously. The process of conceptualising, creating and running a business demands continuous examination of one's decisions and questioning of one's judgement and role in a business. The introduction of a HR consultant in order to solve difficulties with staff motivation during my time as a business owner accelerated this process and the psychology of being a business owner and an employer was well understood. Getting a formal business education also played a major part in this process. Through doing the MBA I became much more aware of the changes that were needed not just to the business, but to my attitude to myself as owner of it.

The business vision was originated and carried out by myself. Marketing campaigns and methods were created by me and not by the company who made the products I sold. In fact the company who made the products not only copied the methods used by us, but eventually offered me a part of their own territory to manage. In my business experience I understood well that the responsibility for what happened in the business was ultimately my responsibility and not that of my employees. However, by doing an MBA I realised that I had to take much more responsibility for the casual way the business was being run, and not merely delegates that responsibility to members of staff. This was a major change in my own meaning making system.

In reference to the core question: how can a practitioner such as this writer become an effective teacher of entrepreneurship, other questions are raised such as what benefits does a successful practitioner bring to bear in teaching? What challenges are there? What experiences from one's professional background are most relevant to the teaching? How to balance the practical and academic learning? How should the module be delivered? How to consider module effectiveness?

Benefits

That the teacher is already a successful entrepreneur can be beneficial. This is evidenced by the types of people chosen to teach in major entrepreneurship courses delivered across the world at leading institutions, such as the exemplars at M.I.T. and Harvard. Confidence by students is vested in the person who has already done it. There are many expert researchers, writers and teachers of entrepreneurship in academia who make excellent lecturers on the subject, so this is not the sole domain of entrepreneurs. However, students learn many facets of the business world through the activity of running a business and the feedback through the experienced entrepreneur/teacher. The themes described in the Professional Development Memoir such as learning by doing and cash flow innovation were taught in the classes and made the biggest impression on the students (as evidenced by their feedback) which time and again referred to the experience of the teacher of having been an entrepreneur as being a major advantage of the module. The students described the module as being practical and real and several described the change in their thinking and attitudes as a result of running the business and the insights they got from it. Anecdotally, two students described to me personally the transformation in their thinking and the change in direction it brought about in their lives. A number actually started businesses as a result. Students interviewing for jobs found that the potential employer showed a lot of interest in the experience they gained on this module and that they felt it was to their advantage in gaining employment.

What Challenges are there?

Teaching entrepreneurship is, in Kegan's terms, a judicious balance between challenge and support. This challenge and support needs to be introduced in such a way as to overcome the student's immunity to change.

This practitioner was always turning over new stones, or as Schumpeter (cited in Casson, 2006: 513) says:

"Our type seeks out difficulties, change in order to change, delight in ventures". This is how the Meaning Making Systems of an entrepreneur are constructed.

Living in constant uncertainty was referred to by Shackle and is an essential element of entrepreneurship. Shackle says the businessman does not have exclusive knowledge but through "imagination and practical conscience" anticipates a successful outcome. I spent my life "imagining" or as Arendt and Beiner (1982) say, "one trains one's imagination to go visiting. "Throughout the module, students were encouraged to imagine and observe. The challenge in teaching entrepreneurship is how to get the students to think in this way. I would also describe myself in terms of De Vries's (cited in Birley and Muzyka 2000) "creative rebel". Conservatism was not my game. The life lived was full of Schumpeter's "innovation, human drama and sheer havoc". Many students want to live lives of security and will not want to think in this way but the aim of the module was to enable this freedom of thought. A clear challenge is how to get this "creative destruction" into students' minds and actions. The benefit to students of thinking in an entrepreneurial way is that they will be more innovative in their careers, potentially, rather than being passive or even negative in the way they view the business world.

When teaching entrepreneurship I show the students a new way of viewing the world, how to observe the business world. This can be challenging, encouraging them to learn to look at opportunities with interest and enthusiasm, create ideas in an unlimited way, be non critical, seeing the possible, not the impossible. They are expected to look for opportunity in everything, to be interested in every facet of life. This is what I believe it is to be entrepreneurial. Students can be entrepreneurs in business, or enterprising in how they approach business opportunities or problems.

What Experiences from one's Professional Background are most Relevant to the Teaching?

The actual running of a business as part of an education in entrepreneurship

is a key learning point and without which the subject would be overly theoretical because entrepreneurship is far from an academic subject and much more of an action learning subject. Because the nature of entrepreneurship itself is one of discovery by doing it is virtually impossible to teach it through books alone. However there is validity in studying theory alongside practice as the two elements combine to allow the students to understand their performances of understanding. The locating of the business in a university campus setting allows the students to experiment in a relatively safe environment with a captive student customer base.

While the exemplars attended by this writer were academic, in that they were lecture and case based, there were several action-based activities, such as the "elevator pitch" and ideation workshops in the Harvard exemplar. Similar action-based exercises can be used in teaching a module in entrepreneurship if the facility of actually running a business is not available or practical.

Learning the basics of generating ideas, sourcing products, pricing, profit margins and cash-flow, as well as sales and marketing can be done intensely through the actuality of creating a business in the albeit safe environment of the college campus. The experience of the practitioner, this writer, proved important, in the sense that the entrepreneurial attitudes and beliefs, and the enthusiasm were evident in the teaching throughout. Regular references to the practical experiences of the teacher gave credibility in the classroom, or workshop. This proved relevant in the module, both in helping the students reflect on their business experience on campus but also in the insights gleaned from my own life as an entrepreneur. As I had actually sourced products, imported, priced and marketed them, sourced finance and managed cash flows, this knowledge was then subsequently communicated to the students as they developed their own businesses.

How to Balance the Practical Experience with Academic Requirements?

While saying that the subject should not be taught solely through theory, the importance of theory in teaching entrepreneurship cannot be underestimated. Peter Drucker was the clearest proponent of business theory and proved excellent for the student's understanding of business opportunity, bringing the various factors of business, management and entrepreneurship together as well as suggesting that entrepreneurship is a discipline and a skill, which can be learned and taught. Drucker also brought into the teaching the essential view that innovation and entrepreneurship is the business of everyone, not just individual entrepreneurs. This has implications for educational policy and organisational policy at the highest levels. It suggests that in the teaching of entrepreneurship as a discipline, there should be a mix of both academic work and practice. The linking of economic theories such as those of Penrose, Schumpeter and Shackle broadened the students' understanding of entrepreneurship as not merely being an individual or team issue, but an important issue for the global economy and society as a whole.

How Should the Module be delivered?

The exemplars visited provided a range of platforms for designing the module, without simply copying what had been done in these universities. There is strong belief, particularly in the leading American universities that entrepreneurship can and should be taught. Entrepreneurship centres abound, and Babson College, Boston, for example, is entirely dedicated to the teaching of the subject.

The module should be delivered through a combination of a campus businesses with theories delivered in class through cases, linking the theories with both large and small companies and some cases involving technology ventures.

The Teaching For Understanding framework provided depth in design, implementation and analysis for the teaching of an "art and science" subject and was particularly helpful in the integration of a practitioner learning to design and teach a module for the first time.

Entrepreneurs come from very different worlds to that of educational institutions and the TFU framework should be considered as a useful way of helping the newcomer to frame the integration of the two worlds.

Teaching Entrepreneurship Nationally

Having taught entrepreneurship for three years at postgraduate level, this writer believes, following research that the subject needs to be taught widely in Ireland.

It is clear that students benefit deeply from being taught entrepreneurship, not only as a business subject. Hamouda et al. (2009: 5) state: "It is now recognised that the benefits of entrepreneurship education are not limited to the creation of new business ventures and subsequent new jobs but will develop key competencies of students, develop their mindsets and in turn enable them to be more creative and self-confident in whatever they undertake. By developing an entrepreneurial capacity among students, the economic and social well-being of a nation will be enhanced at a time when it is needed the most."

At a time of deep economic uncertainty, the teaching of entrepreneurship in universities would therefore benefit society as a whole.

Currently entrepreneurship programmes are not available to students of all non-business disciplines across the third level sector in Ireland, and in light of this Portfolio, developing such offerings would have far-reaching benefits on many levels from overall economic stimulation by the creation of new businesses right through to individual personal growth and development.

Charney and Libecap (2000) suggest that on average, graduates of and entrepreneurship programme were three times more likely to be involved in the creation of a new business venture than were their non-entrepreneurship business school cohorts. Controlling for the personal characteristics of the graduates and various environmental factors, entrepreneurship education increased the probability of an individual being instrumentally involved in a new business venture by 25 percent over non-entrepreneurship graduates. More specifically, entrepreneurship students were 11 percent more likely than were non-entrepreneurship students to own their own businesses after graduation.

Surlemont et al (2008) suggest that it is questionable whether Business Schools are the best place to teach entrepreneurship, that innovative and viable business ideas are more likely to arise from technical, scientific and creative studies. So the challenge is to build inter-disciplinary approaches, making entrepreneurship education available to all students, creating teams for the development of business ideas, mixing students from economic and business studies with students from other faculties and with different backgrounds.

In light of these reports it is obvious that every graduate ought to get the opportunity to understand entrepreneurship in order to increase the outcomes for them as individuals and for the wider economy. The discipline should be introduced into every programme across universities through the creation of an independent Entrepreneurship Centre, which then would recruit and train teachers of the subject. Some of these teachers should be from an entrepreneurial background and should have experienced success in business, as is the case at the exemplars where this writer attended courses.

If we are to commercialise the expected patents and products from the government investment in science and technology[9], then graduates must be

[9]Interestingly, Drucker points out that technology ventures are the riskiest of all with the longest lead times. In light of the Irish government's current emphasis on

supported in doing this in a disciplined and entrepreneurial way, or rather given the opportunities through experience to be entrepreneurial and try on that mind-set, whether they sustain it or not. Furthermore, if we are to learn to cut costs and think strategically in the running of government departments then innovative and entrepreneurial modes of thinking and doing need to become part of the public service.

Entrepreneurship is an essential component of the future of Ireland and needs to be taught across all faculties in universities as well as secondary and primary schools. Entrepreneurship education, in this writer's view, needs to be aggressively rolled out to all sections of society, and young people

The use of subject-object separation in interrogating the life lived was important. Making the memoir an object of relevant data for the teaching of a module made it possible to separate subject from object in a personal sense. While identifying examples of subject-object process in the Memoir, such as the separating of the business from the self through the education process of an MBA, this writer, as teacher, was able to better explain the events as they occurred to the students in the module.

The Meaning Making of this practitioner developed throughout the teaching "experiment" in that the methods of teaching changed over time with the deeper understanding that the practice of teaching brought to bear on how to communicate the concepts of entrepreneurship effectively. The practice of being an entrepreneur is an entirely different one to the practice of being a teacher. The practice of entrepreneurship by its nature is largely tacit and intuitive, so the transformation from entrepreneur to teacher of entrepreneurship is fraught with difficulty and the theories and knowledge behind the practice take time to surface and require a great deal of reflection and subject/object analysis of what entrepreneurship actually is. Throughout

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science and technology this should be noted, as to spend vast amounts of taxpayer's money on what Drucker regards as the riskiest of all businesses - technology, is taking quite a chance.

the teaching period and the previous MBA these theories and understandings became more explicit as this writer sought to explain what was mostly a tacit and internal subject.

The transformation from practitioner to teacher was a deep learning experience and I believe a somewhat successful one, albeit probably not yet complete at this early stage. There was continuous development of this practitioner throughout the three years of this experiment. As time progressed, the teaching became more innovative in its delivery, as confidence was gained through experience. Power-point presentations became few and far between and several innovative experiments were introduced such as the use of feed websites in class for students to communicate through text on the room screen. Workshops replaced lectures and the whole relationship between teacher and students became business like, in the sense that workshops resembled business meetings and the teacher became more of a mentor in a master/apprentice role.
I believe that in the course of my business life, and in particular, during the transition from a businessman who regarded academic life with some disdain to someone who discovered theory through an MBA, and now a DBA, my meaning making systems were transformed. The education that took place was a combination of discovery of what I already knew, to whole new discoveries of ways of thinking about business. This has had a profound effect on my life, both in business and developmental terms, as well as the practical effects i.e. the selling of my businesses. My view of academic life became one of respect and enquiry and has continued to develop this entrepreneur. The process of examining theories, then implementing a module, then re-examining what was taught was very developmental, in that the meaning making systems of this practitioner continuously evolved over the three years of this experiment.

Finally, with regard to the main question as to how can a practitioner such as this writer become an effective teacher of entrepreneurship; the answer is a broad one. In order for a practitioner to become an effective teacher of

entrepreneurship he or she needs to examine theories in the field, economic, pedagogic and psychological. For this practitioner, the completion of an MBA towards the end of my business life was crucial in connecting the tacit knowledge of the practitioner with the theories understood in the business education field. The researching of economic theories, as well as the attending of exemplars in the field, such as Harvard and Babson, helped create a module, which was both research and theory based. Reviewing the life led, through Kegan's Theory of Adult Mental Development aided this writer to reflect realistically on the experiences gained throughout my entrepreneurial career, and using the Teaching for Understanding Framework to incorporate that knowledge gained, into effectively teaching a module on the subject.

With Ireland in a whole new phase of economic change and with the emphasis on entrepreneurship having been historically reliant on the property sector, which subsequently proved to be catastrophic, there is an urgent need to develop entrepreneurship throughout the education system. Universities must forge a path in this regard and entrepreneurship needs to become central to university activity, with modules being delivered across all faculties, and every student learning to think and act entrepreneurially.

Appendix A: Techniques of Writing an Autobiography

Because an autobiography is a story of one's own life, then the art of storytelling is the essential craft of an autobiography. Anthony De Mello said: "A lost coin is found by means of a penny candle; the deepest truth is found by means of a simple story" (Maguire 1998: 38).

Schon (1983) says that once a story has been told it can be held as datum and considered at leisure for its meanings and its relationships with other stories.

Schopenhauer (cited in Flesch 1949: 36) said: "The first rule for a good style is to have something to say; in fact, this in itself is almost enough."

Obviously, the subject matter will dictate the style. An exciting car chase through Italian streets or an imaginary space war will deliver high tempo prose, while a description of how the combustion engine works or how the motherboard of a computer is assembled may prove turgid and difficult.

British diplomat Harold Nicholson wrote: "The first essential is to know what one wishes to say; the second is to decide to whom one wishes to say it" (cited in Flesch 1949: 36).

The expected audience is a crucial consideration. Writing for a general audience, one would use non-technical descriptions and write from the heart rather than from the mind. However, in writing a business book, either for general readership or for business readers and students, the knowledge and experience of the writer will be what mostly will be of interest.

"Don't just do something, stand there!" (Maguire 1998: 55).

Learning to tap the subconscious is an important part of writing.

"Theoretical insights flourish best when the thinker is apparently wasting time" (Maguire 1998: 55).

Many writers describe moments of brilliant clarity and insight when least expected. It is almost that the lack of trying can often bring the breakthrough, although often after the hard work has been done, e.g. slogging through the facts. Bertrand Russell (cited in Flesch, 1949) said that he would work intensely on a difficult subject, and then allow it to "run underground". He would then return to the work deliberately at a later stage to find that the work had been done in his subconscious in the meantime.

Maguire (1998: 58) invites us to lose our way and "invite the soul to speak to you."

Restoryation

Maguire (1998) also recommends what he calls "restoryation", i.e. retelling the story, not exactly as it was but enlivened with our own creativity, while retaining the essential truth. "The artist lies in order to reach another kind of truth": Pablo Picasso (cited in Maguire 1998: 58).

It would, in any case be impossible to remember events with exact accuracy, as the passing of time will have blurred or even rationalised the memory. This is particularly true of an autobiography, where the belief in one's own abilities or the fantasy we often live by will colour the recollection. Maguire says that the recalling of memories is often a healing process where we rescue meaningful personal experiences again and again in order to give our current lives more vigorous meaning.

"Memory is a complicated thing, a relative to truth, but not its twin" (Barbara Kingsolver cited in Maguire 1998: 81).

Rainer (1998) suggests that because recollection is subjective, and the memories of something in the past will change with time, it is important to

strike a balance between a tragic view and a Pollyanna view. We retain memories as stories and they change every time we tell them.

To write an autobiography, the subject in question will, of course dictate the style. Writing a Professional Practise Memoir of an entrepreneur, and that entrepreneur being oneself, should be an interesting and exciting read.

Creating A Picture

Telling a story, which an autobiography is, is essentially recounting a series of visual images from the past. Maguire suggests actually sketching out the images before writing in order to make the story more visual and therefore more interesting to the reader or listener. "The childhood landscape is learned on foot, and a map is inscribed in the mind" (Snyder cited in Thomashow 1996: 10). This quote from Snyder is surely true for adults too and is certainly the way my own experience developed.

Maguire (1998: 164) also suggests enlivening the story with the following guidelines:

- Add dialogue
- Show, don't tell
- Appeal to all five senses
- Include ear-catching words and phrases
- Add interesting facts or allusions
- Build in repetition and catalogues
- Plan appropriate pacing and inflection
- Tell your story out loud to yourself

Writer's block

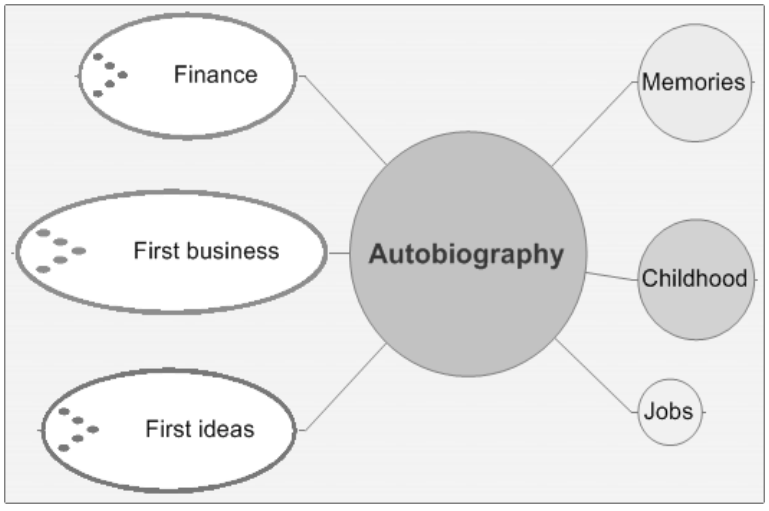
Lukeman (2000) suggests using a technique of comparison to break writers block or change the pace of a story. Take an object in your room and come up with ten comparisons, five similes and five metaphors.

This writer has a way of breaking writer's block: simply begun with a lamp in the corner of a room and simply do a written painting of it. It works every time. From that, the writing can flow to the house, the neighbourhood, the country, or in the case of an autobiography, oneself. It is a technique I have often used in my personal and creative life to get the writing flowing.

Clustering

Like a form of mind-mapping (Buzan 1991) clustering is a brainstorming technique suggested by Schneider and Killick (1998). A circle on a page with a word on it is connected to several others that come to mind when one sees the word (See Fig 2).

Fig.2: Clustering technique mind-map



Source: from Buzan (1991)

The mind-map in Figure 2 allowed me to break down the various elements of my Personal Development Memoir and then write about each element in

turn, often referring back to the mind-map to make sure everything that was there had been included.

Be Human though Factual

In *The Art Of Readable Writing*, Flesch (1949) quotes from TIME magazine and says: "The basis of good TIME writing is narrative, and the basis of good narrative is to tell events (1) in the order in which they occur; (2) in the form in which an observer might have seen them." While this applies to a specific audience i.e. Time magazine writers, it is a useful guide to writing a memoir.

The advantage of this way of writing is that the reader can imagine having actually been there, as the language is the one they would use themselves.

"There's nothing on earth that cannot be told through a hero-or heroine-who's trying to solve a problem in spite of a series of obstacles. It's the classic formula; and it's the only one you can rely on to interest the average reader" (Maguire 1998: 78).

There are more important things than literal truth. Often the details are difficult to recall, so that in the telling of a story the narrator uses his/her mind's eye.

When I was younger, I could remember anything, whether it happened or not (Mark Twain cited in Maguire 1998: 43).

The act of writing an autobiography, of telling one's own story, requires re-living the experiences of the past, while recounting the story of those experiences through the current person, who has a wiser view on what has happened. To release the inner storyteller, Maguire (1998) has exercises, which include relaxation and imaginings of walks in a wood into temples, which hold the secrets of the past. A curtain opens, and your own eyes open to reveal your own story.

This has implications for my memoir, in that I will recount those experiences from the past, that on reflection help me understand what my view of the world was from a personal and professional development point of view. Often, when memories are hazy, there will be a temptation to "invent the truth." This is particularly true of sensitive issues particularly of a personal or family type. Names of people involved may need to be withheld or altered.

"Everyone needs his memories. They keep the wolf of insignificance from the door" (Maguire 1998: 133).

Words

Bakhtin and Holquist (1981) say that the word in language is half someone else's. It becomes "one's own" only when the speaker populates it with his own intention, his own accent, when he appropriates the word, adapting it to his own semantic and expressive intention. Prior to this moment of appropriation, the word does not exist in a neutral and impersonal language (it is not, after all, out of a dictionary that a speaker gets his words!), but rather it exists in other people's mouths, in other people's contexts, serving other people's intentions: it is from there that one must take the word, and make it one's own.

So, words are not words! They are and ought to be descriptions of visual events, feelings, hopes, imaginings, and soul. Detachment through words is very possible and leads to a remoteness in the communication of writing that not only fails to communicate any real happenings but also serves only to bore the reader and ultimately fail to deliver any message. An autobiography is a dialogue with oneself, between oral and written words.

Bruner (cited in Dickerson 1989) poses an important question: "Does that mean our autobiographies are constructed, that they had better be viewed not as a record of what happened . . . but rather as a continuing interpretation and reinterpretation of our experience?" This can be connected with Kegan's (1994) view, dealt with in Essay One (1.2) that in order to develop from one

stage to another in adult mental development we should be reinterpreting the past differently.

"Autobiography demands an emotional authenticity and level of intimacy that many people have never before experienced" (Rainer 1998: 140). In order for this memoir to have depth and meaning honesty with the self is essential.

Keeping a Journal

Keeping a journal is a strong way of recording events and thoughts one does not want to lose. "This is a positive expression of living and it plays a part in the process of self-discovery through writing"(Schneider and Killick 1998: 156). While this journal facilitates reflection it cannot ensure it.

Humour

In *Your Life as a Story*, Rainer (1998: 290) describes the moment when a friend had discovered that she had stopped seeing her life as a tragedy, and discovered humour. "Turning one's life into memoir is inherently comic in the classic definition of comedy; it is redemptive". She goes on to say that humour allows the truth through in a way that serious writing doesn't. Every joke has a victim and in an autobiography, making oneself the victim creates an intimacy with the reader. Rainer recommends disclosing one's own absurdity, imperfections, foolishness or recklessness. The life of an entrepreneur is messy and ever changing. Throughout the memoir there are stories that are chaotic but also quite funny. In that regard, while maybe not academic, these did occur and express the kind of environment that the writer was in.

In a business autobiography, the tendency would naturally be to glorify the successes and conceal the disappointments or failures. Humour would permit these negatives to be expressed, an important part of the whole story of business success. It is important for those considering a business career to know that the successful practitioners have many if not most of the fears and

failings of "normal" people. It is important for the auto biographer to reveal these realities.

Theme

Theme is the concept, which runs through the autobiography. The problem with autobiography is knowing what to leave out. With a business biography, the theme is reduced naturally to that: the business life of the writer. Entrepreneurship is a wider theme and there are relevant issues beyond simply the business and it is the theme selected for this Research Portfolio.

"Notice where the writing has energy, where it feels alive." (Rainer 1998: 218). Rainer suggests seeking thematic conflict, having two ideas in related opposition. An example might be becoming other than one was told in school, or becoming other than one expected.

Similarly, Von Mises, in *Human Action* quoted C.F.Lock (1894) saying, "Acting man is eager to substitute a more satisfactory state of affairs for a less satisfactory. His mind imagines conditions, which suit him better, and his action aims at bringing about this desired state. The incentive that impels a man to act is always some uneasiness". Kegan (1994) also describes the difficulties we have as adults in leaving behind our big assumptions until we identify our sense of unease about doing so.

Abstract/Real

A good story, like life itself, varies from concrete facts in an individual's life to the abstract concepts of common experience, which people in general can identify with. To narrow a story to just the facts as seen by the individual without engaging the broader ideas of mankind will fail to engage the reader. Novelist E.M.Forster offered this illustration: "To say 'The king died, and then the queen died' is not a story. To say 'the king died, and then the queen died *of grief*-now *that* is a story"(Maguire 1998: 105).

Style

Noah Lukeman (1998) suggests that knowing what not to do is a good place to start. Too many adjectives, the use of clichés and poorly sounding text are some of the pitfalls. In particular, he refers to academic texts as off putting to publishers of non-academic texts and readers because: (1) they are overly argumentative – they approach a book as if it were a paper; (2) The prose is long and convoluted – the longest way of saying something; (3) The foremost concerns are accuracy and thoroughness rather than engaging the reader. However this Portfolio of Explorations must meet such academic standards as the audience includes examiners, but the Professional Practise Memoir can differ within the Portfolio.

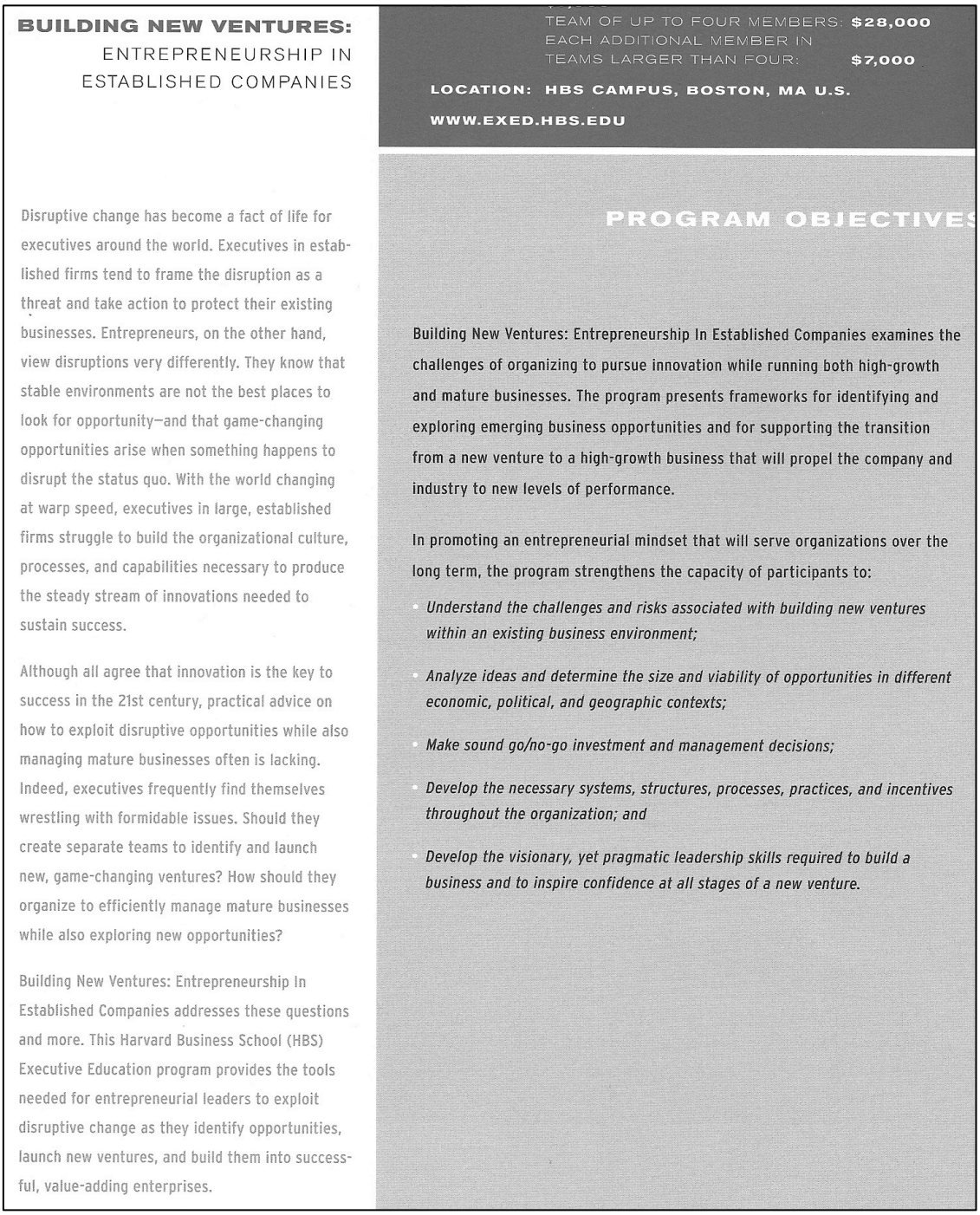
He recommends at times letting go of style altogether and simply telling the story in as straightforward a way as possible, as well as reading it out loud to hear what it sounds like. However, an academic book is just that, and if the intended audience is academic, then they will have little interest in a racy novel. The ideal academic book should combine both engaging reading and relevant information.

Talking is not writing

Writing the English language differs from speaking it. We punctuate our spoken word with a breath, whereas we do it on paper with a full stop or colon. The reader is reading, not listening, and many of the natural understandings that occur with face-to-face communication are missing. Rudolph Flesch (1996) advises writers not to ramble and to tighten up sentences with double predicates – making one sentence do the job of two. Instead of saying "The sun was shining. We all went outside," you might say: " we all went outside into the sunshine."

Appendix B: Details of the Exemplars

Harvard: Building New Ventures



BUILDING NEW VENTURES:
ENTREPRENEURSHIP IN
ESTABLISHED COMPANIES

TEAM OF UP TO FOUR MEMBERS: **$28,000**
EACH ADDITIONAL MEMBER IN
TEAMS LARGER THAN FOUR: **$7,000**

LOCATION: HBS CAMPUS, BOSTON, MA U.S.

WWW.EXED.HBS.EDU

Disruptive change has become a fact of life for executives around the world. Executives in established firms tend to frame the disruption as a threat and take action to protect their existing businesses. Entrepreneurs, on the other hand, view disruptions very differently. They know that stable environments are not the best places to look for opportunity—and that game-changing opportunities arise when something happens to disrupt the status quo. With the world changing at warp speed, executives in large, established firms struggle to build the organizational culture, processes, and capabilities necessary to produce the steady stream of innovations needed to sustain success.

Although all agree that innovation is the key to success in the 21st century, practical advice on how to exploit disruptive opportunities while also managing mature businesses often is lacking. Indeed, executives frequently find themselves wrestling with formidable issues. Should they create separate teams to identify and launch new, game-changing ventures? How should they organize to efficiently manage mature businesses while also exploring new opportunities?

Building New Ventures: Entrepreneurship In Established Companies addresses these questions and more. This Harvard Business School (HBS) Executive Education program provides the tools needed for entrepreneurial leaders to exploit disruptive change as they identify opportunities, launch new ventures, and build them into successful, value-adding enterprises.

PROGRAM OBJECTIVES

Building New Ventures: Entrepreneurship In Established Companies examines the challenges of organizing to pursue innovation while running both high-growth and mature businesses. The program presents frameworks for identifying and exploring emerging business opportunities and for supporting the transition from a new venture to a high-growth business that will propel the company and industry to new levels of performance.

In promoting an entrepreneurial mindset that will serve organizations over the long term, the program strengthens the capacity of participants to:

- *Understand the challenges and risks associated with building new ventures within an existing business environment;*
- *Analyze ideas and determine the size and viability of opportunities in different economic, political, and geographic contexts;*
- *Make sound go/no-go investment and management decisions;*
- *Develop the necessary systems, structures, processes, practices, and incentives throughout the organization; and*
- *Develop the visionary, yet pragmatic leadership skills required to build a business and to inspire confidence at all stages of a new venture.*

Source: Course Materials

Harvard Building New Ventures Timetable

Sunday, October 22	Monday, October 23	Tuesday, October 24	Wednesday, October 25	Thursday, October 26	Friday, October 27
11:00 - 4:00pm	Breakfast: 7:00 - 7:45am	Breakfast: 7:00 - 7:45am	Breakfast: 7:00 - 7:45am	Breakfast: 7:00 - 7:45am	Breakfast: 7:00 - 7:45am
Registration	Discussion Groups: 7:45 - 8:45am	Discussion Groups: 7:45 - 8:45am	Discussion Groups: 7:45 - 8:45am	Discussion Groups: 7:45 - 8:45am	Discussion Groups: 7:45 - 8:45am
	Session: 9:00 - 10:30am	Session: 9:00 - 10:30am	Session: 9:00 - 10:30am	Session: 9:00 - 10:30am	Session : 9:00 - 10:30am
	Jumpstarting Entrepreneurship in Established Firms Case: Medtronic *Professor Lynda Applegate*	Organizing for Innovation Case: IBM's Transformation *Professor Lynda Applegate*	Dealing with Disruption Case: Hewlett-Packard (A) *Professor Clay Christensen*	The Challenges of Dynamic Capabilities Case: USA TODAY *Professor Mike Tushman*	Building Businesses in a Networked Economy Case: Li & Fung *Professor Lynda Applegate*
	Break: 10:30 - 11:00am	Break: 10:30 - 11:00am	Break: 10:30 - 11:00am	Break: 10:30 - 11:00am	Break: 10:30 - 11:00am
	Session: 11:00 - 12:00pm	Session: 11:00 - 12:00pm	Session : 11:00 - 12:00pm	Session: 11:00 - 12:00pm	Session : 11:00 - 12:00pm
	The Innovation Process Interactive Lecture *Professor Lynda Applegate*	Organizing for Innovation Interactive Lecture *Professor Lynda Applegate*	Dealing with Disruption Interactive Lecture *Professor Clay Christensen*	Innovation Streams and Ambidextrous Designs Case: Compagnie Lyonnaise *Professor Mike Tushman*	Building Businesses in a Networked Economy Interactive Lecture *Professor Lynda Applegate*
	Lunch: 12:00 - 1:30pm	Lunch: 12:00 - 1:30pm	Lunch: 12:00 - 1:30pm	Lunch: 12:00 - 1:00pm	Working Lunch: 12:15 - 1:15pm
	Session: 1:30 - 5:30pm	Session: 1:30 - 3:00pm	Session : 1:30 - 3:00pm	Session: 1:00 - 2:30pm	Closing Comments & Course Wrap-Up
	Putting the Insights to Work *Professor Lynda Applegate*	Technology and Innovation Case: Lexar Media *Professor Mary Tripsas*	Marketing Strategy Case: Corona Beer (A) *Professor Rohit Deshpande*	Building Ambidexterous Organizations Interactive Lecture *Professor Mike Tushman*	
		Break: 3:00 - 3:30pm	Break: 3:00 - 3:30pm	Break: 2:30 - 3:00pm	
		Session: 3:30 - 4:30pm	Session: 3:30 - 4:30pm	3:00 - 5:30pm	
		Technology and Innovation Interactive Lecture *Professor Mary Tripsas*	Marketing Strategy Interactive Lecture *Professor Rohit Deshpande*	Putting the Insights to Work Exercise *Professor Lynda Applegate*	
4:30 - 6:00pm	5:30 - 6:30	4:30 - 5:30pm	4:30 - 5:30pm	5:30 - 6:30	
Wecome & Opening Lecture	Free Time and Individual Study	Work on Projects *Professor Lynda Applegate*	Work on Projects *Professor Lynda Applegate*	Free Time and Individual Study	
6:30 - 8:00pm	6:30 - 7:30pm	6:00 - 7:30pm	6:30 - 7:30pm	6:30 - 8:00pm	
Opening Reception & Dinner	Dinner	Reception & Dinner	Dinner	Closing Reception & Dinner	
8:00 - 10:30pm	7:30 - 10:30pm	7:30 - 10:30pm	7:30 - 10:30pm	8:00 - 10:00pm	
Free Time and Individual Study	Free Time and Individual Study	Free Time and Individual Study	Free Time and Individual Study	Free Time and Individual Study	

Source: Course Materials Building New Ventures.

Babson Symposium for Entrepreneurship Educators

May 29–June 1, 2007 • Babson College

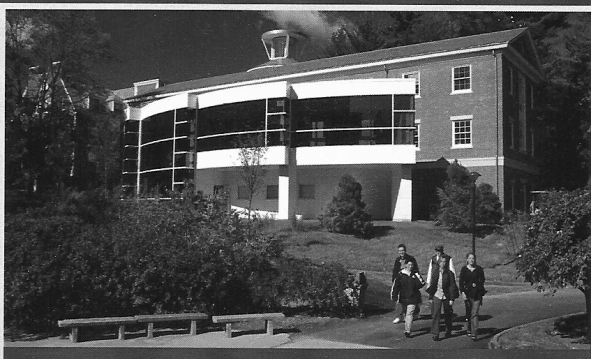
Price-Babson | SEE

SYMPOSIUM FOR ENTREPRENEURSHIP EDUCATORS

PROGRAM OVERVIEW

Entrepreneurship is the fastest-growing business discipline. As the recognized leader in entrepreneurship education, Babson College seeks to raise the quality of the content and the process of teaching entrepreneurship through its Price-Babson SEE Program. Our goal is to develop an ever-increasing international cadre of capable entrepreneurship educators who understand the importance of creating intellectual and practical connections between theory and practice in teaching. Thirteen-hundred academics and entrepreneurs from more than 400 academic institutions, government organizations, and foundations in 50 countries are alumni of Price-Babson and other SEE programs.

In an intensive four-day program, participants explore the entrepreneurial process, the "art and craft" of teaching and learning entrepreneurship. The program provides an introduction to case-method teaching and alternative teaching methodologies. Attendees are encouraged to identify, plan, and personalize their own entry (or reentry) strategy into academia, and to improve as teachers, learners, researchers, colleagues, and entrepreneurs. They identify and explore new content, programs, and materials, and are exposed to the realities of the cyberspace revolution. At the heart of the Price-Babson SEE Program is a belief that teaching effectiveness can be learned and must forever improve.



The Arthur M. Blank Center for Entrepreneurship

Team Guidelines

Each participating institution should send an academic member and an active entrepreneur, as a "team" to the symposium. In selecting your Price-Babson Fellow (the entrepreneur member of the team), please use these guidelines:

- The entrepreneur should be the owner or CEO of one or more significant businesses (highly successful businesses with a minimum of 15 employees).
- It is advisable for the entrepreneur to have taught one course, or at least to have been a guest lecturer, before attending Price-Babson SEE.
- The entrepreneur should expect to be involved in teaching and/or program development at your institution following Price-Babson SEE. Time commitment expectations should be clear and realistically explained prior to inviting the entrepreneur to attend the program.
- The academic team member should recognize that teaching effectiveness and educational value in entrepreneurship courses can be greatly enhanced by educators who bring significant entrepreneurial experience to the classroom.

Source: Course Materials SEE

Babson SEE:

Price-Babson SEE Faculty and Curriculum

Several outstanding Babson faculty will teach one or more sessions at Price-Babson SEE including:

Jeffry A. Timmons
Founder, Price-Babson Fellows Program
Franklin W. Olin Distinguished Professor of Entrepreneurship

Stephen Spinelli Jr.
Vice Provost for Entrepreneurship and Global Management
Alan Lewis Chair in Global Management

Heidi Neck
Assistant Professor of Entrepreneurship
Director, REFLECT Program

Leslie Charm
Lecturer in Entrepreneurship

Session Topics:

- The Quest for Master Teaching
- Mapping the Territory: The Entrepreneurial Process
- New Venture Creation
- Beyond New Venture Creation
- The Art and Craft of Case-Method Teaching
- The Educator's Toolbox
- Idea Lab
- Entrepreneurship Curriculum Design
- The Entrepreneurial Mind in Action

Our Venue

All SEE sessions will be held at the Babson Executive Conference Center on the Babson College campus. Single-occupancy accommodations and meals are provided in this independently managed, full-service executive conference center. Those with special needs can be accommodated.

2007 Program Dates and Cost

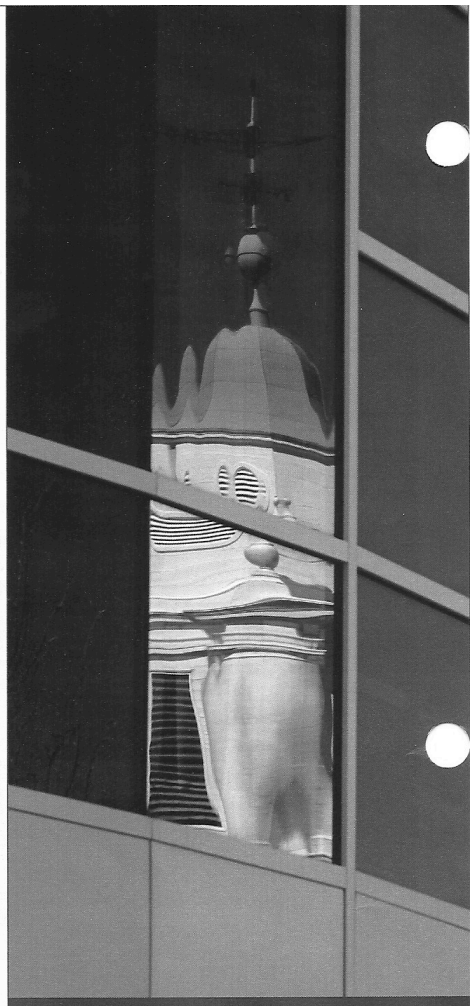
Starts: Tuesday, May 29, at 8 a.m.
Ends: Friday, June 1, at 1:30 p.m.

The Price-Babson SEE registration fee of $4,400 per two-person team includes:

- Pre-course reading materials
- Program notebook with participant bios, annotated agenda, case studies, and research materials
- Overnight accommodations (four nights starting Monday, single occupancy)
- Meals (starting Monday dinner, ending Friday lunch)
- Refreshment breaks and evening receptions

Transportation

Participants are responsible for transportation arrangements and costs to and from the Babson College campus in Wellesley, Massachusetts. Logan International Airport in Boston provides a convenient location for domestic and international flight arrivals and departures. Our staff can advise you on transportation logistics between the airport and Babson.



We look forward to welcoming you to the Price-Babson SEE Program!

Inquiries can be sent to:

Janet Strimaitis, Managing Director
Symposia for Entrepreneurship Educators
Arthur M. Blank Center for Entrepreneurship
Babson College
Babson Park, MA 02457-0310
781-239-5023 (phone); 781-239-4178 (fax)
jstrimaitis@babson.edu
www.babson.edu/eship/pricebabson

Source: Course Materials

Babson SEE Timetable:

Price-Babson Symposium for Entrepreneurship Educators (SEE-23)

Updated 5/15/07

May 29- June1, 2007

MONDAY – MAY 28	TUESDAY – MAY 29	WEDNESDAY – MAY 30	THURSDAY – MAY 31	FRIDAY – JUNE 1
All SEE-23 Sessions will be held in the Yukon Room unless otherwise noted	8:00 Day 1 Intro – Jeff Timmons 8:15 – 10:00 a.m. **The Quest for Master Teaching: The Issues, The Challenges, The Stakes and Program Overview** Jeff Timmons	8:15 Day 2 Intro – Jeff Timmons 8:30 – 10:00 a.m. **Idea Lab** Heidi Neck	8:15 Day 3 Intro – Jeff Timmons 8:30 – 10:15 a.m. **CASE STUDY:** **The Bank Documents Case - The Devil is in the Details** Les Charm	8:15 Day 4 Intro – Jeff Timmons 8:30 – 10:00 a.m. **Entrepreneurship Curriculum Design** Patti Greene
	MORNING BREAK - 10:00 a.m.	MORNING BREAK - 10:00 a.m.	MORNING BREAK - 10:15 a.m.	MORNING BREAK – 10:00 a.m.
	10:30 a.m. – 12:00 noon **Mapping the Entrepreneurship Territory** Steve Spinelli	10:30 a.m. – 12:00 noon **CASE STUDY:** **Jim Poss** Steve Spinelli	10:45 – 11:45 **Extending Entrepreneurship Education** NFTE – Steve Mariotti Olin College of Engineering – Mark Somerville	10:30 – 12:15 noon **The Entrepreneurial Mind in Action** Jeff Timmons
	12:15 p.m. LUNCHEON BUFFET Woodland Dining Room	12:15 p.m. LUNCHEON BUFFET Woodland Dining Room	12:15 p.m. LUNCHEON BUFFET Woodland Dining Room	12:15 p.m. LUNCHEON BUFFET Woodland Dining Room *Optional box lunch – please sign up*
	1:30 – 2:30 p.m. **Cultivating the Entrepreneurial Mindset and What Is A Case?** Jeff Timmons 2:30-3:00 p.m. – BREAK 3:00 – 5:00 p.m. **CASE STUDY:** **Kurt & John Bauer** Jeff Timmons 5:00 p.m. Wrap up – Jeff Timmons 5:15 p.m. – Move to photo location for Group Photo	1:30 – 3:00 p.m. **Multiple Opportunities for Eship Curricula** Foundations of Management & Entrepreneurship (Neck) Social Entrepreneurship (Caslin) Corporate Entrepreneurship (Kelley) Heidi Neck, facilitator 3:00-3:30 p.m. BREAK 3:30 – 5:00 p.m. **Challenges in the "Clashroom", Part 1** Heidi Neck 5:00 p.m. Wrap up – Jeff Timmons 5:15 – 5:45 p.m. Walking tour of Babson College & Olin College of Engineering	1:30 – 3:00 p.m. **Alternative Pedagogies** Zach Zacharakis 3:00-3:30 p.m. BREAK 3:30 – 5:00 p.m. **Challenges in the "Clashroom", Part 2** Jeff Timmons 5:00 p.m. Wrap up – Jeff Timmons	
6:00 p.m. – Welcome Reception 7:00 p.m. – DINNER BUFFET	6:00 p.m. – Reception 7:00 p.m. - DINNER BUFFET 8:00 p.m. – Study Groups	5:45 p.m. - Reception at AMBCE 7:00 p.m. - DINNER BUFFET 8:00 p.m. – Study Groups	6:00 p.m. – Reception 7:00 p.m. NEW ENGLAND CLAMBAKE St. Lawrence Room	

Source: Course Materials

M.I.T Entrepreneurship Development Programme 2009:

The MIT Entrepreneurship Development Program (EDP) is an intensive, one-week program teaching participants from around the world how to identify and evaluate opportunities for new technology ventures.

The Entrepreneurship Development Programme was held between the 25th and the 30th of January 2009.Participants must apply online for admittance into the program.

MIT E-Centre faculty members guide participants through the venture process, explore the differences between the venture creation processes in various countries, and explain how technical assistance from universities can be leveraged to help create new companies.

EDP targets aspiring entrepreneurs, business-minded technologists, corporate venture officials, and university and regional development leaders. During the program, these participants hone their customer focus and entrepreneurial skills, and learn how to create a more favourable climate for innovation and entrepreneurship within their organizations.

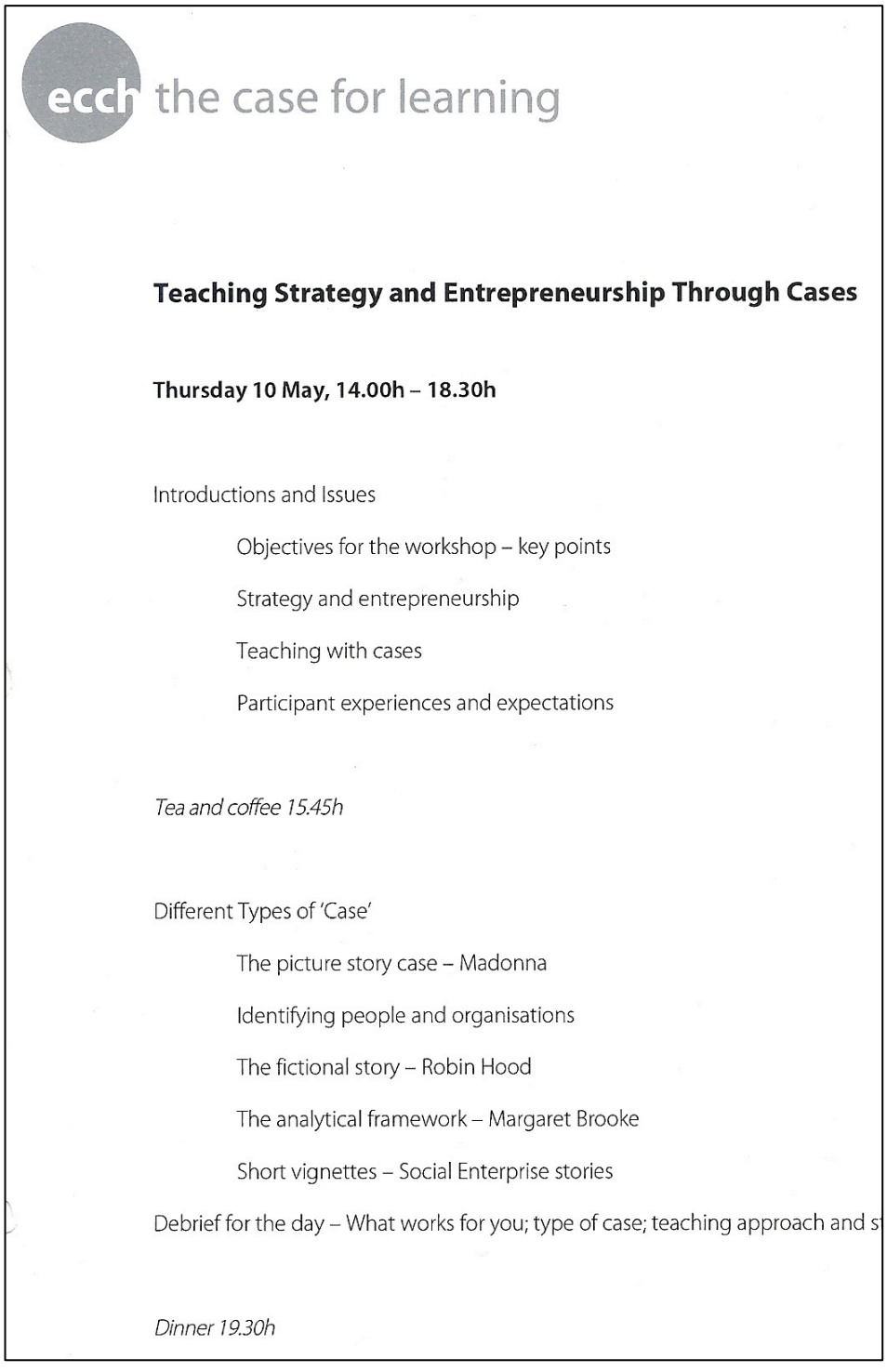
M.I.T. Entrepreneurship Development Programme Timetable

MIT Sloan Executive Education
Entrepreneurship Development Program 2009
25-30 January 2009

Sunday, 25 January	Monday, 26 January	Tuesday, 27 January	Wednesday, 28 January	Thursday, 29 January	Friday, 30 January
		Breakfast	Breakfast	Breakfast	Breakfast
	Breakfast	E52-6th Floor 07:00-08:00	E52-6th Floor 07:00-08:00	E52-6th Floor 07:00-08:00	E51-Third Floor 07:00-08:00
	Welcome by EDP Team	**Breakfast Meetings with Entrepreneurs & Start-Ups**	**Breakfast Meetings with Entrepreneurs & Start-Ups**	**Breakfast Meetings with Entrepreneurs & Start-Ups**	**Team Presentations & Feedback**: Four Tracks
	E51-Third Floor 8:30-09:30	Various Locations 07:30-09:30	Various Locations 07:30-09:30	Various Locations 07:30-09:30	K. Morse (Observing Judge)
	The Spirit of Entrepreneurship at MIT; The Importance of Sales & Quantifying the Value Proposition	Break 09:30-10:15	Break 09:30-10:15	Break 09:30-10:15	E51-376 B. Aulet, J. Shanberge
		Entrepreneurial Marketing: Basics & Framework; Application in the Real World	**Models for Going Global**	**Capturing Value Through Technology & Commercialization Strategy**	E51-057 C. Jarchow, L. Morse E51-372 F. Murray, J. Pacheco E51-345 C. Calarco, M. Grandinetti
	Ken Morse	Bill Aulet	Rick Locke	Fiona Murray	
	E51-345 09:30-11:45	E51-345 10:15-11:45	E51-345 10:15-11:45	Wong Auditorium 10:15-11:45	E51 08:00-11:30
	Lunch	Lunch Seminar:	Lunch Seminar:	Lunch	Lunch
	Coaching Sessions	**Entrepreneurial Marketing** (cont.)	**Your China Strategy**	**Coaching Sessions & Team Meetings**	**Final Team Presentations, Certificates & Letters**
		Bill Aulet	Janet Shanberge		
	E52-6th Floor 12:00-13:00	E52-6th Floor 12:00-13:00	E52-6th Floor 12:00-13:00	E52-6th Floor 12:00-13:30	
	Evaluating Market Attractiveness	**Organizational Models for Fast Growth Enterprises**	**IP Strategies to Achieve Sustainable Competitive Advantage**	**Examples of Great Pitches**	
	Duncan Simester	Diane Burton	Steve Brown	Ken Morse	
	E51-345 13:15-14:15	E51-345 13:15-14:15	Wong Auditorium 13:15-14:15	Wong Auditorium 13:30-14:15	E52-6th Floor 12:00-14:15
	Break 14:15-14:30	Break 14:15-14:30	Break 14:15-14:30	Break 14:15-14:30	Return to E51 (Wong Auritorium)
	Starting & Building a Successful High-Tech Venture	***Starting & Building a Succesful High-Tech Venture***	***Starting & Building a Succesful High-Tech Venture***	***Starting & Building a Succesful High-Tech Venture***	***Starting & Building a Succesful High-Tech Venture***
	Finding the Inspiration to Start & Build a High-Tech Venture	**Critical Success Factors for Early-Stage Ventures**	**New Enterprise Strategic & Product Marketing & IP Considerations for New Enterprises**	**Financing & Governing the New Enterprise**	**Selling Your Products & Solutions**
		Michael Grandinetti Laura Barker Morse	Michael Grandinetti	Michael Grandinetti	
	Michael Grandinetti	(Entrepreneurship Ventures)	Timothy Oyer (Wolf Greenfield)	Mark Macenka (Goodwin Procter)	
	Allan Will (Split Rock)	Craig Driscoll (Highland Capital)	Patrick Walier (Wolf Greenfield)	Paul Maeder (Highland Capital)	Ken Morse
	Marina Hatsopoulos (Z Corp)	Alan Crane (Cerulean Pharma Inc.)	Wong Auditorium 14:30-17:00	David Berry (Flagship Ventures)	Michael Grandinetti
Registration & Reception	Wong Auditorium 14:30-17:00	Wong Auditorium 14:30-17:00	Break 17:00-17:30	Wong Auditorium 14:30-17:00	Wong Auditorium 14:30-17:00
E51 1st Floor 16:00 - 19:00	Break 17:00-17:30	Break 17:00-17:30	**Global Sales Strategies for Start-Ups: The Cases of Spotfire & Meridio**	Break 17:00-17:30	END
Program Orientation & Team Formation	**Winning Business Plans; Networking Tips, & What Makes a Good Elevator Pitch**	**The Importance of Social Capital: The Example of Paul Revere**	Ken Morse	**Team Presentation Preparation Work, Coaching Sessions & Dinner**	
	Bill Aulet	Diane Burton			
E51 1st Floor 16:00 - 19:00	Ken Morse	E51-345	Wong Auditorium 17:30-19:00		
	E51-345 17:30-19:30	**MIT Networking Reception, Hosted by: MIT E-Center Team & MIT Sloan Executive Education**	**Reception & Dinner, Hosted by: Ken Morse & MIT E-Center Team**		
	Team Formation, Coaching Sessions, Some Rest...	E52-6th Floor 19:00-21:00	Harvard Club 19:30-22:00	E51 17:30-21:00	*Schedule subject to change.*
		Coaching Sessions	**Coaching Sessions**	**Coaching Sessions**	v24

Source: Course Materials

Cranfield: Teaching Strategy and Entrepreneurship Through Cases



ecch the case for learning

Teaching Strategy and Entrepreneurship Through Cases

Thursday 10 May, 14.00h – 18.30h

Introductions and Issues

- Objectives for the workshop – key points
- Strategy and entrepreneurship
- Teaching with cases
- Participant experiences and expectations

Tea and coffee 15.45h

Different Types of 'Case'

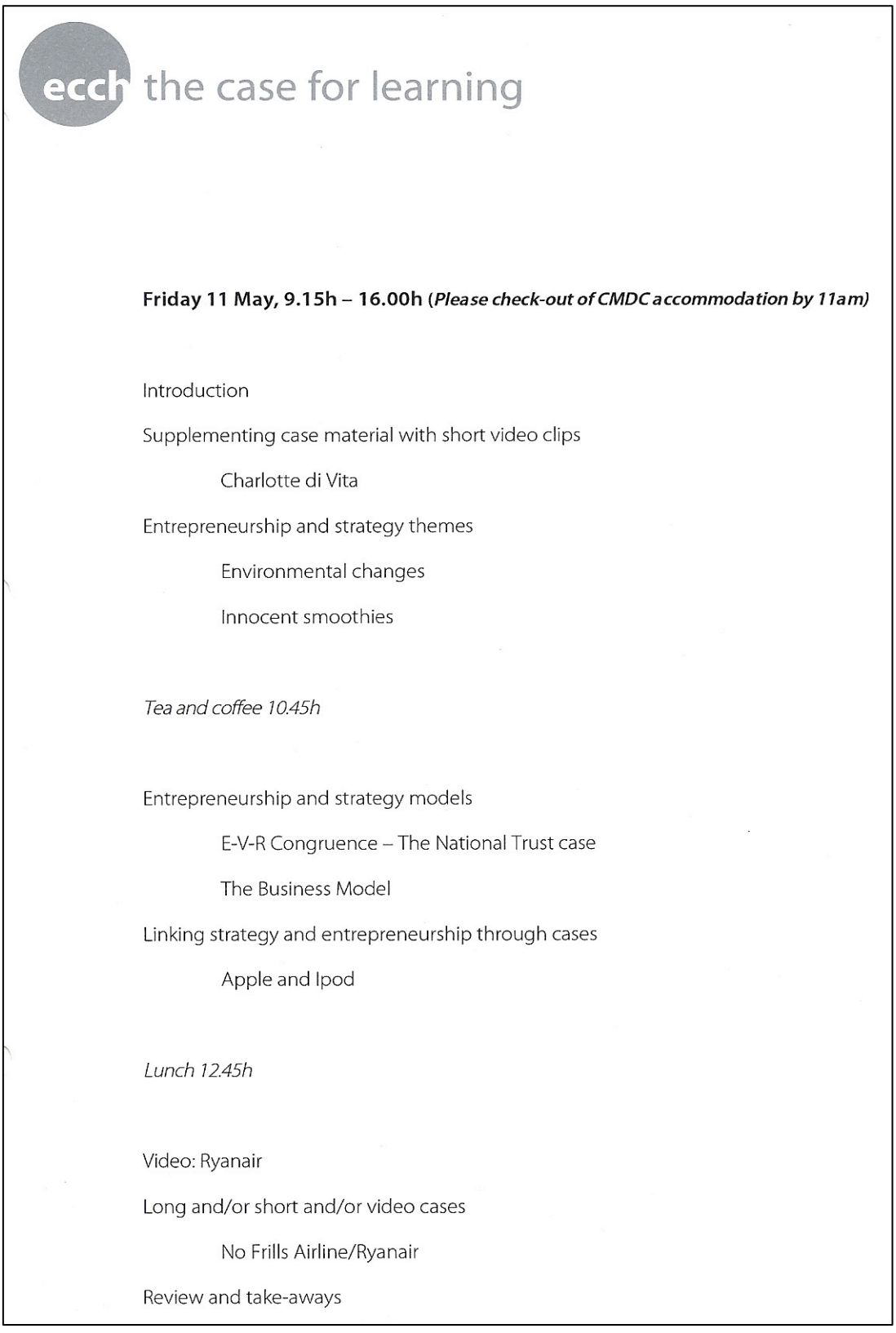
- The picture story case – Madonna
- Identifying people and organisations
- The fictional story – Robin Hood
- The analytical framework – Margaret Brooke
- Short vignettes – Social Enterprise stories

Debrief for the day – What works for you; type of case; teaching approach and s

Dinner 19.30h

Source: Course Materials

Cranfield: Course Timetable



ecch the case for learning

Friday 11 May, 9.15h – 16.00h ***(Please check-out of CMDC accommodation by 11am)***

Introduction

Supplementing case material with short video clips

Charlotte di Vita

Entrepreneurship and strategy themes

Environmental changes

Innocent smoothies

Tea and coffee 10.45h

Entrepreneurship and strategy models

E-V-R Congruence – The National Trust case

The Business Model

Linking strategy and entrepreneurship through cases

Apple and Ipod

Lunch 12.45h

Video: Ryanair

Long and/or short and/or video cases

No Frills Airline/Ryanair

Review and take-aways

Source: Course Materials

Appendix C: Module Outline

Department of Economics

National University of Ireland, Cork

Business Practice Economics
Foundation Stage

EC5016: Innovation in the Market Economy

Hand-out # 1

Academic Year: 2006/7 **Date:** 22/09/06

Programme: Business Practice Economics.
Foundation Stage: Postgraduate Diploma in Economics of Business Practice.

Lecturer: Mr Owen O'Brien

Telephone: (086) 2560951 **E-mail:** o.obrien@eircom.net

Lecture Times: EC1.24, Workshops of half to one day, generally Wednesday or Thursday but also when informed

Office Hours: Monday 2.00 to 4.00 Sheraton Court or by appointment

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Module Aims

This module will introduce students to the actuality of business in the world economy and how business really works. It is run by a successful entrepreneur (with an MBA from UCC) with 25 years of successful business practice in Ireland and the UK. As well as explaining how he himself "made it" he will describe the

processes involved in getting a product to market and the essential lessons students need to learn in order to understand how business shapes the economic world. Students will adopt a "master apprentice" role, the students as business apprentices and the "master" is your active mentor throughout the running of the business.

Practical examples will be given in how products are positioned in the market place, profit and margins, distribution networks, marketing, strategy, as well as linking this to established and current economic and business theory.

Students will set up, run and finish a business during the year of the course.

Learning Outcomes

On successful completion of this module, students should be able to:

- Outline the importance of entrepreneurship and innovation for the creation of business value
- Recognise the factors which contribute to entrepreneurship and innovation
- Use practical tools to assess innovation goals and outcomes
- Describe the importance and function of business in the world economy
- Partake in the real business world

Module Outline

Topic 1: The Market Economy

How business works, what it delivers to the economy.

Topic 2: Start your own business

Students are formed into groups and start and run a business. The lemonade stand example is used. Limits of a Business Plan: what is key are: cash, people, opportunity, knowledge, and contacts.

Topic 3: Shock of the Old, History of OBM

Value chain example of OBM. Old products dominate. Innovation comes in small steps improving old things. Examples. Discussion on Business ideas

Topic 4: Finance

Meet the banker. Profit and cash flow, presenting a business plan to the bank. Who you borrow from is key. Bootstrapping.

Topic 5: Entrepreneurs

Examples of Entrepreneurs. Meeting with entrepreneur.

What is entrepreneurship?

Topic 5: Franchising

Franchising expert explains how Franchises work

Topic 6: Marketing

How to sell. Channels to market. How I did it.

Topic 7: Reports

Business Reports and Profit and Cash flow analysis. Accounting versus free cash.

Students will learn:

- That entrepreneurship is possible for anyone, anywhere.
- How entrepreneurs think, that it is a discipline according to Drucker
- How business works in the market economy.
- How to take risks without losing everything
- How to plan a business
- That most things are ocurring in normal everyday products, and not necessarily in electronics or science
- The joys and pitfalls.
- The experience of setting up a business
- The current and past thinking on the subject
- How others have made it and what it did for them

The Use of Sharepoint

Sharepoint will be used for the distribution of class materials, assignments, and continuous assessment results and for the issuing announcements, as appropriate. Please ensure that you access Sharepoint on a daily basis.

Relevant Reading

Readings/hand-outs will be distributed (or will be available in the library) during the course of the year. These are an essential part of the course. You are responsible for the completion of all work associated with the course including assigned readings, lectures, question sheets and handouts. If you miss any handout, they can be obtained from the relevant lecturer only during the office hours indicated in the heading – extra copies will not be available in the following lectures. The course-book is "Innovation and Entrepreneurship" by P.F Drucker (1985).

Course Assessment

This 10 credit course will be marked by continuous assessment, 200 Marks. 25% will be allocated to class participation, that is the extent to which students participate in class discussions and activities. 50% will be for the running of the business and the business report and presentation 25% will be for an individual assignment linking the theory in the Drucker coursebook to your experience of running a business There is no end of year exam.

Note 1:

Where work is submitted up to and including 7 days late, 10% of the total marks available shall be deducted from the mark achieved. Where work is submitted up to and including 14 days late, 20% of the total marks available shall be deducted from the mark achieved. Work submitted 15 days late or more shall be assigned a mark of zero.

Note 2:
Assignments are to be handed into Breffney McCarthy, Programme Administrator. A student who does not submit coursework on time must provide a written reason to the Student Services Office (Breffney McCarthy, unless she is unavailable) in the Department of Economics. If the Department of Economics is convinced that the student's failure to comply with assessment is due to circumstances beyond their control, then arrangements will be made to enable the student to make up the work. Please refer to the Department of Economics exams website here:

http://www.ucc.ie/en/economics/resources/exams/

General Information

Students read for a degree. The teaching, and other, support provided by the Department of Economics and the University are designed to aid students in achieving this goal. Therefore, the ultimate responsibility for fulfilling the reading requirement lies with the student.

The Department of Economics aims to provide the highest quality student support and welcomes any suggestions that will help us improve the service we provide. Where a student believes that the support offered by the Department or the University do not meet his/her expectations there are a number of ways in which the matter can be raised. There are the course lecturers, class representatives, class advisors, the Student Services Office, Departmental and Faculty Staff-Student Committees, the Examinations Appeals Committee and the Student's Union.

Students are responsible for all material in readings, lectures and handouts. Missed handouts may be collected from the lecturer during office hours. Students should obtain missed lecture notes from a student colleague.

Economics Society

This very active society caters for students of the Department of Economics. Throughout the year the society will be organising events of various natures - academic, sporting and, of course, social. There is a member of the society's committee in most Economics classes. Each class will be kept informed of the society's activities by the Class Representatives who will be elected in the next few weeks. This is a student society and it is up to students to make it successful. So get involved and keep informed of upcoming events.

Freedom of Information:

The University is subject to the Freedom of Information Act. It is Department policy to make all information accessible under FOI available to students without requiring recourse to FOI procedures. Contact the Student Services Office or the Department Manager at the Department of Economics, Aras na Laoi, if you need assistance in accessing relevant information. The University also has an FOI Unit at 5 Elderwood on College Road, contacts for which are available on the UCC website.

Appendix D: Student Feedback Summary Forms: Years 1, 2 and 3

Feedback Year One:

Student feedback summary 07/08
Also individual forms. 1st Sem.

DEPARTMENT OF ECONOMICS, UCC

SUMMARY OF COURSE EVALUATION QUESTIONNAIRE

This questionnaire is completely anonymous.

Module Code (e.g. EC1101) EC5016 **Lecturer:** OWEN O'BRIEN

Programme (e.g. BA, BComm): PG Biz Diploma

1. What is your overall impression of this economics module (indicate the percentage for each category)?

(a) Excellent 60%
(b) Above Average 40%
(c) Average
(d) Below Average
(e) Poor

2. What percentage of this module's lectures did you attend? 90%

3. What are the two best aspects of this economics module?

1. Practical, Interesting, Hands on
2. Setting up business; Guest lectures

4. What are the two worst aspects of this economics module?

1. Storage facilities for business all good
2. More marks should go for business

5. Have you any suggestions for the development and improvement of this module?

Better module timing to allow more trading time for businesses; Market stalls should be permanent; More theory, More group class discussion;

THANK YOU FOR YOUR COOPERATION!

Page 1 of 1

Source: In class student feedback

Feedback Year Two:

SUMMARY Yr. 2 ~~semester~~

DEPARTMENT OF ECONOMICS, UCC

COURSE EVALUATION QUESTIONNAIRE

This questionnaire is completely anonymous.

Module Code (e.g. EC1101) EC5016 **Lecturer:** Owen O'Brien

Programme (e.g. BA, BComm): PG Dip in Business Economics

1. What is your overall impression of this economics module?

(a) Excellent — 76%
(b) Above Average — 18%
(c) Average — 6%
(d) Below Average
(e) Poor

2. What percentage of this module's lectures did you attend? 80%

3. What are the two best aspects of this economics module?

1. SETTING UP A BUSINESS
2. APPLYING THEORY TO REAL PRACTISE

4. What are the two worst aspects of this economics module?

1. LACK OF STORAGE SPACE FOR BUSINESS
2. TIME NEEDED TO RUN BUSINESSES

5. Have you any suggestions for the development and improvement of this module?

MORE MARKS FOR THIS MODULE (20 credits?)
2 DAYS FOR TRADING
HAVE SET BUSINESS HOURS
WORK EXPERIENCE

THANK YOU FOR YOUR COOPERATION!

Page 1 of 1

Source: In class student feedback

Feedback Year Three:

O'Brien SUMMARY EC 6116 (Mar 20

DEPARTMENT OF ECONOMICS, UCC

COURSE EVALUATION QUESTIONNAIRE

This questionnaire is completely anonymous.

Module Code (e.g. EC1104) EC6116 **Lecturer:** OWEN O'BRIEN

Programme (e.g. BA, BComm): PG Dip in Bus. Practice

1. What is your overall impression of this economics module?

(a) Excellent — 100%
(b) Above Average
(c) Average
(d) Below Average
(e) Poor

2. What percentage of this module's lectures did you attend? 95-%

3. What are the two best aspects of this economics module?

1. INSPIRATIONAL + INNOVATIVE
2. PRACTICAL - ENTHUSIASM OF LECTURER

4. What are the two worst aspects of this economics module?

1. More Entrepreneurs
2. More workshops / Recharge

5. Have you any suggestions for the development and improvement of this module?

Some Business Law
Business Plan. Advice
More Sharepoint

THANK YOU FOR YOUR COOPERATION!

Page 1 of 1

Source: In Class Student Feedback

Appendix E: Graduate Survey Responses[10]

Survey One: Understanding Goals

1. Students should be able to understand how business works both at a micro and macro level and they should be thinking and acting entrepreneurially in their lives and careers. Do you believe you got this understanding and has it influenced your life?

1. I certainly feel I have a got an understanding of how businesses work and how to act entrepreneurially. While this may not have influenced my life to date, I am sure this will stand to me in my future career.

2. My understanding of business at both a micro and macro level vastly improved. At a micro level, running our company gave me significant insight into the challenges faced by small businesses.

3. I think I certainly have this understanding of business from the module. It helps me to push myself in my current job to hunt for a successful career.

4. Yes. I have got a greater knowledge at a micro and macro level and more importantly interest in business. I studied Commerce for four years but never really had a real knowledge of entrepreneurship.

5. This module gave me a great insight into what's involved in starting and running a business. It also gave me more confidence to take the plunge and start a business. It has influenced my life as it compounded my view of what entrepreneurship is about and now that I have started on that path I never want to do anything else!

6. Yes, Owen brought a lot of good examples from his personal business practice and methodical material was very useful.

8. Yes I do. I am definitely acting entrepreneurially. I am working in business at the moment and I am looking at lots of different types of business opportunities. The course helped me be open-minded and not negative. I look at things differently.

[10]These are edited responses. The raw data is available from the author on request.

10. I try to find opportunities to start some form of business on a regular basis. This usually happens when I try to find solutions for common problems in life and see if a viable business can come out of this.

2. Business provides a service to society and is ever-changing and within that change lies opportunity. Do you believe you understand this and do you see it more clearly than before the module?

1. In the module we saw examples of successful companies that were started in times of recession.

2. The module most definitely opened my eyes to the opportunities that exist for entrepreneurship during change. I learned how to look for opportunity in everyday things/processes and understand how the needs of businesses evolve.

3. I do understand this better and this course has helped me to understand this better with business and society being inter-related.

4. I now view things with a more opportunistic mind set and I feel that I have become more observant to business opportunities as a result.

5. Yes it really opened my eyes on how to look for and spot opportunities all around me. There are always opportunities, especially in a recession.

6. I always believed that there are opportunities in demanding market but I was inspired to look for it.

7. Yes, I certainly do.

8. I do. Business interacts with people and it is a service that knows no bounds really. Opportunity is endless

9. Yes, a business should re-evaluate its mission and goals a few times a year

10. I definitely see it more clearly after doing the module. The module has helped me to look innovatively at situations (e.g. I am very interested in companies that are expanding in these recessionary times and what reasons are leading to their success).

3. That entrepreneurship is a discipline, that it can be practiced and that it is a way of observing and looking at the world. Did you understand this and has it impacted your thinking and actions?

1. I always believed that any new innovation would require some new major technological advance or some new science discovery. After this module, I

now realise that opportunities are all around us, and can be created by anyone who has the vision and determination to succeed.

2. The required reading of Drucker's Innovation & Entrepreneurship hammered home this point for me.

3. Before, I thought that entrepreneurship was just a label given to people who have been successful in setting up their own businesses. However, the course has helped me to expand my previous understanding and I now think that entrepreneurship is a process, which is both theoretical and practical in nature

4. Yes, I now find myself reading business books and business papers. As a result I feel I am now more business/entrepreneurial minded.

5. Yes this definitely influenced my thinking and actions. The module really demystified the whole area of entrepreneurship and gave me confidence to go do it. It gave me a sense of reassurance that there is method behind the madness!

6. It proved again that if you want to succeed in life you have to look for opportunities and keep your eyes open.

7. Yes, my thinking changed a lot. Also my view of the world has changed.

8. Yes it is a process and there are steps you can take to value an idea or see is it workable. You just need to see a gap or unfulfilled need in society.

9. People are not born entrepreneurs; they become entrepreneurial through hard work and with the help of others.

10. I believe I understand this. What this means to me is that thinking entrepreneurially would help me to take a calculated risk particularly with regards to a business venture. It does not mean you are a gambler.

4. That entrepreneurship can be learned, that it can be practiced in big and small companies, that it is about selling, pricing, relationships, perseverance, ideation, observation, decision-making, teamwork, bootstrapping and risk management. Do you believe you learned to be entrepreneurial and learned these lessons from creating a business on campus?

1. I feel I learned more in setting up my own business on campus than I would have learned from three years looking at a book. The practical

experience gained has benefited me, and now have a much greater understanding of the work and dedication required to succeed when starting a new business.

2. Again, Drucker's book was an excellent guide. But I believe one can only learn so much from reading theory. Running our business helped me realise this, even if a lot of that realisation came in hindsight.

3. All of the above factors, I think that I have taken the following in to my current daily life: perseverance; decision-making and teamwork. Before, I had never worked in a team before, and my partaking in this module, I now know how to act as an integral part of a team and how to make a team a success.

4. Yes I learned to be entrepreneurial and I learned the amount of work that can go into even a small-scale business. I learned first hand how difficult it can be but also how rewarding.

5. Its not easy to put the theory into practice but actually DOING IT really shows you the complexities involved in getting it off the ground. Made a lot of mistakes but learnt a load! It was more valuable than the classroom as you put you plans into action and experience it.

6. I learned valuable lesson about creating new business, bringing new ideas. The campus business showed how important is to find the right people to work with, what problems emerged and the responsibilities of everybody's input.

7. Yes, open business on campus gave me lessons that I never know in lectures.

8. Yes. Setting up a business was a brilliant experience and one that should be included in all business courses. It is great going through all the steps from idea to that actuality and then maintenance.

9. Gathering information so as to reduce the risk of failure is one of the most important aspects of setting up a business.

10. To an extent. The business on campus was a great idea in theory but not in practice to me. I believe exposure or experience to a larger scale set up i.e. a start up business that boasts entrepreneurship would have been more inspiring to me.

5. Did presentations to professional banking and business experts of both business plans and results of running businesses made you more professional in a business ready sense?

1. This has certainly helped me in my current job, and as a result is a lot more comfortable doing presentations.

2. Yes, the pressure of preparing these presentations and defending your position is akin to anything I've experienced in my professional career so far.

3. The presentations were DEFINITELY one of the best aspects of the course. They helped me to become more confident with professional public speaking and they taught me how to present some difficult topics in an effective manner.

4. The positive feedback has really given me confidence particularly the feedback on the Business Plan. Also the opportunity to present in front of professionals in a controlled environment was really beneficial. I am more confident as a result.

5. The presentations did help make me more professional as you learn about how to present in front of people and how to get the key points across.

6. It was valuable experience

7. I am not sure, that presentation is just a normal presentation.

8. Yes. It was good having to explain your decisions and having to answer questions to a bank that you would be answering questions to if you were really borrowing big sums of money or accounting for losses. It forced you to be honest and pick through things as well.

10. The experience was good. However if you were not happy with the way the business progressed throughout the course then it can be discouraging to present with a lack of pride in the business.

6. Do you think that having a lecturer who had real business experience made a difference and if so what impact had it on your thinking?

1. The greatest trait in my lecturer was his enthusiasm and I felt this certainly rubbed off on me. It was he who made me realise that opportunities are all around us and we just need to grasp them. Having done this all before himself, it was clear that he knew what he was talking about, and he had

experienced the highs and lows of setting up a business, that he was able to tell us about to back up his argument.

2. Most certainly... I believe there is no substitute for experience. At the same time having grounding in theory is of course beneficial. I suppose it could be said that it's better to learn from people who have already made the mistakes.

3. The lecturer definitely made the course a reality. If we had a lecturer who hadn't had business experience, I think it would have lessened the credibility of the module.

4. Yes. I thought the lecturer brought a sense of motivation to the classroom. It's one of the first times in college that I can recall looking forward to a class and feeling positive and motivated afterwards. The fact that the lecturer had put theory to practice and been successful was also a motivating factor.

5. Absolutely without a shadow of a doubt. The theory and lecturing is one thing but you can only take what they say with a pinch of salt because they've never actually gone out and done it! When you have a person who has the experience it makes all the difference and really helps you believe what is being said. It makes you believe that you can apply the theory and be successful. That’s huge in getting you to believe in your idea and get you started.

6. Yes. The person from real business has better understanding of reality in the market, can give more clear directions how to start, how to run business, how to solve various problems. Theory and practice isn’t the same, the best mix is then person has both and can use knowledge to improve business.

7. Yes, as their view of business is not coming from books, they are from the real world, with more uncertainty and risk I would never aware.

8. Yes. It created positivity in the first place and it was reassuring. I think I felt like of course we can do this. Also not just hearing theory was great. It was good to just talk about business ideas and things that happen in business. Having guest speakers also added to this. Its informing to hear how people got started and what they learned.

9. Yes, one thing that stuck in my mind as regards to selling/promoting a potential product- it is not about your own perception, it is ultimately about market perception.
10. Without a doubt. Irish society is as backward as possible when it comes to entrepreneurship and support to start a business. It definitely helps to have a successful businessperson to inspire you and to be an example of someone who proved these people wrong.

7. Did studying Drucker's *Innovation and Entrepreneurship* connect with your business experience both on campus and subsequently and if so, in what way?

1. Everything we came across while starting up our business, in terms of identifying opportunities and Drucker discussed all the challenges we faced in his book. For me it is the ideal book to compliment the first hand experience I got from starting the business.
2. Definitely, it made me think in a new mind-set, view everything as an opportunity. I think it should be read maybe once a year to refresh the ideas it contains.
3. I think Drucker did help to help me to understand business that bit more. Perhaps Drucker's Theory of Business was perhaps the most relevant factor for me.
4. Drucker's theories are still very relevant and connect with modern businesses. One of the main things learned from Drucker is that a business would not exist without a customer and how you create and keep customers is central to success.
5. Yes its great for helping you with strategy, understanding the market and understanding how business works in general. Its clear, simple and to the point - exactly what an entrepreneur needs. This allows you to put it into action more easily.
6. I found that Drucker's book was interesting not only "dry" theory I found many good examples.
7. Yes, many lessons I learned from open business on campus can link to this book.

8. Yes. It was a good mix of theory and practicality. It helped explain a lot of reasons behind business decisions

9. It's an excellent guide for business ventures

10. Drucker is an extremely intelligent innovation, entrepreneurship and management author. He inspired me to look at life from an opportunistic point of view. His book helped me to relate to the highs and lows of business.

8. Do you believe you now know how to start and run a business?

1. I don't think I would fully have the capability to start a business myself yet. I think the lecture has certainly stood to me, but will first need to get more work experience before thinking of setting up my own business.

2. I believe I could start a business and bring it to a point but as for successfully growing and running it, I'm unsure.

3. Yes, I believe I would know how to start a new business now and the theory of the course would help with this start-up.

4. I feel that I have the broad skill range to run and start a business, but the actual courage is another factor. Financially it is not viable but I do think of the prospect of one day running a business.

5. Yes I know enough to start and run a business but you need to keep learning. Its not all you need to know but it is a great foundation and has definitely helped me in my business. You have to keep learning and finding new and better ways of doing things in order to succeed.

6. No. I still don't feel confident to start on my own.

7. Not really, open business on the campus is much easier then the real world

8. Yes and I will

9. Yes, I still have all the readings, notes and books, and would use them as guidelines/advice

10. Yes. More importantly I feel I have a better understanding about whether a business will be viable and profitable as opposed to the set up of it.

9. What are you doing in your professional life now and do you have opportunities to be entrepreneurial in the way that you learned on the module.

1. I am currently working in Ernst & Young and studying to become a chartered accountant. In time if feasible, I would like to think I could start my own firm, and I now have far greater awareness of the work that will be required to make this successful, after s this module.

2. I've joined the consultancy/accounting profession. Being a consultant I believe it is necessary to approach the various on the job problems with an entrepreneurial outlook.

3. I am now working in a large multinational IT company with much room for promotion. I believe that this course has given me the skills and more importantly, the confidence to push for a successful career.

4. I am currently finishing a master's thesis with no opportunity to be entrepreneurial as of yet.

5. I am currently running my own online business for buying and selling horses called ParadeRing.ie. This module helped me see how my customers were finding it very tough and expensive to sell horses in the current market. I help reduce their costs and help generate more sales for them. Everyday I have opportunities to be entrepreneurial and am constantly trying to find new and better ways to improve my business.

6. I am Financial Analyst and it suits to me. I don't think that I am entrepreneurial person, but I can quickly generate ideas, to bring them in financial prospect I just need right team to start my own business.

7. I am doing my thesis and consider to do a PHD, I don't think I have the opportunities to be entrepreneurial as that is not what I want, unless not this 3 years.

8. I am currently working in my family business in the Netherlands. Its a bar and nightclub business. I am looking at expanding this and doing something on my own in Ireland or in the Netherlands.

9. I am still studying, but should the opportunity arise to work for myself someday, I have no doubt that what I learned from this module would kick in.

10. I hope to set up my own business in no later that five years.

10. Are there any other comments you would like to make?

1. No

2. Idea: possibility of cross course/department integration when running campus businesses.

3. Great module, great experience and great lecturer.

4. I thought the course was highly enjoyable and informative and put "tripped down" insight to the fundamentals of business to complement the years of theory studied.

5. This module gives you great real life experience in a safe environment. You can take the skills and learnings and apply them in the real world. There should have been more hours added to the week for this module and there should be more guidance on every step of the way in creating the business on campus. Accountability is a great way to keep people doing their tasks and keeping motivated. I did gain a lot of valuable experience and was a great stepping-stone.

6. Probably I said everything already. I would like to Thank to Owen for fabulous tuition.

7. I love your lectures. My vision is now broader than before.

8. I really enjoyed the course. Wished I could have done something like that for 3 years as an under graduate.

9. This particular module put to bed some misconceptions and myths that I had about entrepreneurship, and gave me a clearer understanding of what's involved: research, commitment, hard work, networking, and ordinary people.

10. I think it is important to stress the difference that had been mentioned in class about the difference between the American and Irish outlook on business start-ups, and the fact that Irish society is so defeatist to innovative ideas. Especially given the present economic circumstances. I would not set up a business in Ireland unless it was technology based.

Survey 2

1. What Worked? -What was right?

1. The practical nature of the module. While lots of modules in college involve just reading from a book, this was proactive and I felt really involved in the lecture.

2. The teaching regarding your own entrepreneurial experiences supplemented with theory, running own businesses.

3. Positive feeling in the class, class participation, guest speakers, trading.

4. The content of the module, your advice and experiences, the additional material, the whole process of setting up a business on campus.

5. I think the Lecturer made the course. He was enthusiastic, friendly, down-to-earth and knowledgeable. I t was so refreshing to have a lecturer who was practically focused and was always in great form. He was nothing but positive during our presentations and that was not forgotten. The subject material was different from the others and its practical nature made it easy to engage with.

6. The theory worked.

2. How did it Work -What made it Right?

1. The lecturers enthusiasm rubbed off on all the class and made it interesting

2. The right selection of required reading; Innovation & Entrepreneurship.

3. It was a learning environment with a positive environment that encouraged participation. The guest speakers and lecturer had real business experience and shared this knowledge.

4. The sheer enthusiasm of your lectures, you'd feel like you could do anything after them. Made it sound very simple which is needed at the start especially. The material was clear and concise and was practical. All of the advice and material was trusted because you had gone out and done it unlike most lecturers.

5. The willingness for all of our team to work hard together. The business set-up was definitely the aspect that made it the most interesting.

6. The knowledge and experience behind the theory

3. What is the ideal? What would it look like if it was perfect?

1. All companies making money.

2. Include contact with other local entrepreneurs who are successful/have 'made it'.

3. It was very good I don't know how to make a class perfect

4. More hours in the week. A bit more structured in the approach for setting up the business. More mentorship for each business group. Should have group meeting with the staff or check-up to see each part was being done as you went along e.g. account with Marie, strategy with Robbie.

5. I think the module was very 'user-friendly'. I think an exam should perhaps be added to the course??? Make the module more academic focused.

6. Not sure

4. What was not quite right? -How could it be tweaked in the future?

1. Maybe if some of the groups were in direct competition with each other. We would get a greater appreciation of the competition that exists when you go out into the market

2. More requirements for running company, i.e. to have to trade a specific number of days, to be set up by a particular date.

3. The lack of capital students really does have an impact on the business that they run. It is also very hard to balance class work and trading. Even though team environment is important, not a lot of individual marks

4. Could give more help in applying the theory for the business. Have more scheduled classes for work on business. Break up into stages more so parts done by certain date. Keep track of group activities with weekly meeting and set goals and objectives.

5. I thought the course last structure at times. Even though the course was always enjoyable, I felt that the course sometimes fell away from the academic purpose.

6. More real time/real life.

5. What "resources" would be needed to make it right?

1. Perhaps if we had better facilities i.e. indoors, in order to set up our business rather than on the stalls. This is especially relevant for groups who are cooking or selling food, e.g. for H&S reasons.

2. Deadlines incorporated into module for such requirements outlined above.

3. As above

4. More staff hours. Interesting to back ideas with small bank loan or have you is an angel investor to help make businesses better. More talks.

5. None needed

6. Work placement for students

6. Any Additional Remarks?

1. Great module has potential to be even better with a bit more involvement from all staff in setting up the business. More monitoring and mentoring with the business. It should count for more marks so more effort put into it by all class members. More hours of your lectures, should be one a day!

2. Great content + Great lecturer = Successful Module

3. Congratulations to Owen for his great work!!!

Appendix F: European Entrepreneurship in Higher Education Report

Findings and recommendations of Entrepreneurship in higher education, especially within non-business studies, Final Report of the Expert Group (2008).

• In general, there is in Europe a **shortage of entrepreneurship studies within non- business institutions and disciplines**: entrepreneurship is not yet sufficiently integrated into different subjects of the curriculum.

• Available data from some European countries show **that the majority of entrepreneurship courses are offered in business and economics studies.**

• Coverage of entrepreneurship in non-business studies is particularly weak in some of the Member States from central and Eastern Europe that joined the EU in and after 2004.

• While the demand for learning about entrepreneurship is increasing, there is a **shortage of human resources and funding** for this type of education, making it impossible to meet this demand fully.

• There are currently **too few professors** of entrepreneurship. There is a need to graduate enough PhD students in entrepreneurship who can become teachers.

• There is **very little in terms of incentives** to motivate and reward teachers for getting involved in entrepreneurial teaching and activities with students. It is currently difficult to build a career in entrepreneurship, as research remains the main criterion for promotion.

• Increased funding from the government can enforce **changes within universities**. Policy level changes to funding would have an immediate effect on institutional behaviour and the internal allocation of resources.

• The development and delivery of entrepreneurship is significantly affected by the **internal organisational structure** of the institution. However, in general terms even current structures can accommodate

entrepreneurship education. The main problem is a lack of commitment on the part of decision makers within the institutions.

- **Faculties and departments are working quite separately**, with too many obstacles for students who want to move and for teachers interested in establishing cross disciplinary

65courses. A rigid curriculum structure is often an impediment to an inter-disciplinary approach.

- Although a wide range of methodologies exist — supplementing lectures as the most basic tool of teaching — there seems to be a **gap between the methods applied and those that are seen as the most effective** and appropriate.
- The use of experience-based teaching methods is crucial to developing entrepreneurial skills and abilities. **Traditional educational methods** (lectures) **do not correlate well with instilling entrepreneurial traits and attributes.**
- Methods seen as the most effective are based on "**group and team techniques for creating new business ideas**", the use of "**case studies"** and "**business planning workshops".**
- Crossing boundaries between disciplines, and **multi-disciplinary collaboration,** are essential elements in building entrepreneurial abilities.
- There is a need for greater **flexibility** in course design. Work placements, alternation between full- and part-time studies, the organisation of intensive courses and the accreditation of informal and non-formal learning all have a role to play.
- A challenge lies in **integrating start-up activities** into degree studies, as they are currently mostly outside the curriculum and sporadic in nature. Business incubators exist in many cases outside university, for all starters. It is advisable but not essential for them to be embedded within universities: what is important is that students are linked and directed to them.
- If the business idea and/or innovation are developed inside the university, there will be basic problems as to **intellectual property rights** and to teachers' role as civil servants (in some countries the law prevents

teachers and researchers from working as entrepreneurs and exploiting innovations developed in the course of their work).

• The degree of **mobility of teachers and researchers** between higher education institutions and business is in general very low, and this practice is not encouraged. There are in many cases few or no incentives, or even disincentives. For instance, lecturers may be banned from taking part in external commercial activities.

• Although **entrepreneurs and business practitioners are in general involved in the teaching**, there are few examples of entrepreneurial practitioners engaged in the full curricula experience. Most frequently, they are only engaged in short presentations to students (e.g. as testimonials or guest lecturer) or as judges in competitions.

• European higher education institutions are not sufficiently involved and effective in **working with alumni,** who can bring back knowledge and also funds.

66

FINAL RECOMMENDATIONS FOR ACTION

Public authorities (framework conditions)

1) **Establish a task force** or steering group (including the Ministry of Education and other departments: Economy; Employment; Science and Research) to determine how entrepreneurship can be integrated into the education system across primary, secondary, and higher education. The task force would also get the viewpoints from representatives of other relevant organisations. This should lead Member States to develop a coherent national strategy for entrepreneurship education, clearly linked to an agreed framework of desired outcomes.

2) Adopt **legislation** supporting relations between private business and universities, including allowing professors to work part-time with business. A joint inter-ministerial programme with a **financial budget** should accompany the above legislation and support institutions in developing action-learning programmes that also result in new venture creation.

3) Help develop an **accreditation system** to validate informal learning and practical activities that favour entrepreneurship development: students should receive credits for their regular and successful work.

4) Establish **awards for entrepreneurial universities**, teachers and students. Promote positive examples of academic spin-offs.

5) **Create Regional Centres** responsible for coordinating, organising and promoting entrepreneurship action (e.g. "*Entrepreneurship Houses*" in France). These centres could build up a critical mass of activities at a local level, encourage the sharing of best practice and tools, and provide support for networking among educators, entrepreneurs and students. Action would include training teachers, and mobilising entrepreneurs to operate in the classroom.

Activities at the level of institutions

6) Institutions should have a **strategy and action plan** for teaching and research in entrepreneurship — embedding practice-based activities — and for new venture creation and spin-offs.

7) Institutions should embed entrepreneurship in all faculties. One effective way of doing so will be to establish an **entrepreneurship education department** responsible for disseminating entrepreneurship throughout the institution. The Business School, where there is one, should play this role. Non-business higher education establishments should create a specialised administrative unit for dealing with all activities related to entrepreneurship (**Centre for Entrepreneurship**). Centres for Entrepreneurship should be entrepreneurial hubs within the institution, whose function is to spread the teaching of entrepreneurship across all other departments.

8) An **introduction to entrepreneurship** and self-employment should be offered — as part of career guidance — to all undergraduate students during their 1st year. In addition, all students should be given the opportunity to attend seminars and lectures in the subject. Therefore, as a minimum requirement, all higher education institutions should provide **at least one entrepreneurship course**, and enforce structures that allow students to choose.

9) Institutions should have **incentive systems** for motivating and rewarding faculty staff in supporting students interested in entrepreneurship and new business start-ups, and should **acknowledge** the academic value of research and activities in the entrepreneurial field.

10) Develop clear **institutional rules about intellectual property.** Provide templates for use as a reference, and give examples. Comparative information on IPR rules applied by different institutions should be available for teachers, researchers and students. Good practice should be disseminated.

11) **Encourage the spontaneous initiative of students**. Existing students' organisations aimed at developing entrepreneurial projects and activities, and of building contacts with the business world, should be given the best conditions to operate and should be supported. Where relevant, Enterprise Clubs — supported by the faculty but operated by the students themselves — could be set up. Create frameworks and support for students to organise their own activities.

12) **Award academic credits** for activities within student associations, and more generally for practical work on enterprise projects outside the established courses, including the development of business plans.

Appendix G: Results of Desk Survey on Teachers of Entrepreneurship

6/1/2011

- On Fri, Dec 17, 2010 at 8:40 AM, Owen O'Brien <obo@eircom.net> wrote:

Hello (name)

I hope all is well with you. You may remember that I met you at the Babson College SEE in June 2007.

I have been doing a DBA (on The Teaching of Entrepreneurship at University Level) for four years now and am teaching entrepreneurship to postgraduates at University College Cork, Ireland. I was a practicing entrepreneur for 20 years before selling my businesses in 2007.

In my Portfolio or thesis, I make the point that entrepreneurship should be taught by practitioners who have actually gone out and done it in the real world.

Can I ask you, as part of a small desk survey, to give me, briefly, your views on this and in particular, what kinds of practitioner you would choose to teach the subject, bearing in mind that not all practitioners are capable of communicating their knowledge effectively and that not all practitioners are necessarily suitable to influence the minds of young adults at a university?

Any information on the way you develop programmes in entrepreneurship at Duquesne would always be welcome.

Many thanks, and do call in if ever in Ireland.

Best Regards

Owen O'Brien MBA
Lecturer
University College Cork
www.ucc.ie <http://www.ucc.ie>

Owen:

How delightful to hear from you! (Frankly, I'm somewhat amazed that you even remembered me.)

I'm flattered that you seek my advice and opinions:

- First, I completely agree with you that former or current practitioners of the "art" should only teach entrepreneur-related education. This is written.
- I say this because there is just so much going on that I cannot see how someone who has not directly experienced the sheer terror and "uber-

highs" could ever hope to express those emotions in a classroom. Much less explain how to deal with them.

- Insofar as what *type* of practitioner should be teaching entrepreneurism, I further agree with you. Just because you have done it, does not mean that you are capable of teaching it.
- So, it is my belief that one must strive to find real practitioners with, at a minimum, these experiences:
    - They should have failed somewhere along the way. Preferably spectacularly.
    -
    - They should be entertainers -- as you know I host a talk radio show (have since 1999) and the advice I was given right upfront was to make sure that I had an equal mix of knowledge dissemination combined with entertainment of the listener. You know as well as I do that students respond very well to unstructured lectures and occasional silliness.
    - Finally, the practitioner in question should strive to put students in environments where they can actually become personally involved in a start-up's activities. I believe they call this "participative learning."

I hope this helps, Owen. The only other thing I can say in response to your note is that we do everything from allowing our students to listen in on real-world conference calls (when possible) to actually having them get involved with our own employees in terms of solving day-to-day problems. (I am fortunate in that I own a number of businesses even as I teach, and so I can make these businesses available to the students from time to time.)

I'm anxious to read your thesis. Here at Duquesne, we have one woman who has a Ph.D. in entrepreneurism, and, for whatever reason, she is routinely rated poorly by the kinds. I co-taught a class with her two years ago and I can understand why they do this. She just doesn't seem to "get" the entrepreneurial mind-set.

Best regards

Ron

■

Ron Morris
Director
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27/12/2010
Hi Owen,

Good to hear from you. Of course I remember you well from EDP 2009.

In the future, please use this EV e-mail address. It is faster: goes to my hand held.

Let's segment the market:

1. The first segment would be for people who have taken the plunge, left their good jobs, and decided to start their own firm already:

The number one reason to have practitioners teach these practicing entrepreneurs who are CEOs of start-ups, probably mid-career (maybe 4-8+ years after university) is that folks in the trenches really only respect and listen to veterans who have done it themselves.
Professors with little or no real world experience simply would not be effective with this segment.

2. MBAs and other grad students need a blend of theory-based and practical training. The nuts and bolts, nitty gritty part of their education can only come from someone who has done it before, who knows what will work, and what won't, and says so clearly.
The experienced-based teaching makes the MBA more realistic, and hopefully less egoistic.

In my view, the best practitioner teachers are old enough, have been successful enough in a few ventures, and had a failure or two, so that they have their egos sufficiently in check that they do not need to win every argument. These leavened practitioners will be the best, most effective communicators.

Owen, I am retried from running the MIT Entrepreneurship Centre now, and I concentrate on teaching start-up CEOs in Europe. Ireland needs entrepreneurs the most, since neither the public sector nor the large corporates in the emerald Isle will be creating any new jobs in the next few years.

Good luck, and Godspeed in 2011.

Cheers,
Ken MORSE

PS: for fun, try this: www.entrepreneurship-norway.com

Owen, let me take a shot at answering your question. I do not think that I am being self-serving but I think people who teach entrepreneurship should have actual entrepreneurial experience. Like you, I started and ran my own Information Technology consulting business for 20 years and closed the business in 2007. I was also involved in three other "for profit" start-ups as well as two "not for profit" start-ups. Unfortunately, some of the "for-profits" did qualify as non-profits. If my background was all academic I do not think I would be as effective in the classroom. The University of Rochester, at the undergraduate level, is a liberal arts/research university. I think the popularity of our entrepreneurship course is that they are conducted in a way so different than what the students experience in their other courses. They are hands on.

Prior to starting my own business I worked for a number of small and large businesses. I had an opportunity to do a great deal of sales and marketing training prior to teaching at the University. In addition, in my first two years at the UR, I taught a special program for junior high and high school students: the Young Entrepreneurs Academy. This gave me an opportunity to get additional teaching experience prior to teaching at the University level.

I am also in the unusual position of teaching at a University with only a BA in Sociology. I think my life experiences are more valuable for this course than an extensive academic background.

To date, we have three entrepreneurship courses at the undergraduate level:

ENT 223 - Planning & Growing a Business Venture (I teach this class in the Fall semester). "Entrepreneurship 101"

ENT 225 - Technical Entrepreneurship. Don Golini teaches this course. He has Master's degree in Optics and recently sold a company that he founded based on technology developed at the UR. This course is for engineering, scientific or computer science majors

ENT 227 - Entrepreneurship in the Not-for-Profit Environment. This is a new course that I have developed and will teach in the upcoming spring semester. It is over subscribed with in five hours of the start of registration. We think there is a high level of interested in this course among the under grads.

I hope this answers your questions. If I can clarify anything let me know.

I have been to Ireland twice and I am looking forward to returning in the future, on one of our trips we took the train from Cork to Dublin. A great ride.

Have a great Holiday.

Regards

Bob

Robert Tobin,

Entrepreneur in Residence, University of Rochester, USA.

Owen:
Good to hear from you.

Absolutely concur with your thesis, and it is exactly the method we use at KU to create, staff and execute our curricula and programs in entrepreneurship.

Possibly more than other business disciplines, teaching by practitioners is appropriate due to the interdisciplinary nature of entrepreneurship which suggests that it is the practice of multiple disciplines and not the application of a silo approach which controls successful entrepreneurial activities; each new venture is different and therefore the learning from each is different so the academic guidelines for successful ventures have somewhat limited utility; and students respond much more actively to someone who has 'been there and done that'.

We are committed to this approach the evidence of which is that each entrepreneurship course is itself experiential learning based for both teaching as well as evaluation.

When I began the entrepreneurship program here at KU about five years ago, I used some academic literature to help convince my colleagues that this approach was appropriate. There is a lot of information available on the subject but one of the best pieces was an article (possibly the NY Times) in which the then Dean of the Yale School of Management proposed that there be two learning tracks at higher education: academic and experiential because the combination of the two maximizes the learning potential.

This may be too brief but being in the midst of finals I wanted to get something positively reinforcing to you quickly. If you'd like to discuss further, don't hesitate to call/write.

Regards,
Wally

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Appendix H: Observations of Outside Business Observers

Throughout the three years of the programme the outside business advisor Ms. Anne Nagle MBA interviewed the students separately, attended presentations and chaired programme teaching team meetings. These are her observations over that time:

"In answer to your request, my years as External Programme Director ran parallel to the inclusion of the module you taught – so I won't be able to give you any commentary that shows a contrast between the outcome for (or any observations on) students prior to the introduction of this module and observations since its inclusion in the programme. I can only give some general observations on the impact of that module on the programme overall and student development.

I think one of the most important roles the module plays is that it gives students the opportunity to experiment with being a business owner. Some of the students would never have considered this as a career. This module gives them the opportunity to experiment in a safe environment. It is evident from the plenary forum/end of year presentation on this module that for some this has been a door opener in terms of them thinking of their future career. We may not see this play out immediately for some students - it may not be reflected in what they do immediately after the programme but could play a role for some as they establish themselves in the working world over the next few years. It would be interesting to track their career progress over a number of years to get some data in this area.

Secondly, and importantly from an adult development perspective, trading as a team pushes students into an environment where they have to start considering others' perspective. Stage 2 Development (Teenage) is an "I" stage and the journey to Stage 3 (Socialised mind) involves being able to take in others perspectives. Loosely we develop through challenges and stepping outside of our comfort zone – and for some that is exactly what this module creates for them – a zone of discomfort. Some students have taken on the

challenge and others hide behind the team. For those that embrace the challenge it has to contribute to their development. This is facilitated by a combination of the challenge presented in this module and the requirement for reflection set out in the Reflective Journaling module.

Finally, the students get data on entrepreneurship through its practice. Many students enter the programme with views on business that are not anchored on data – we have all listened to sweeping statements from students on various business-related topics as they start out on the programme. Many students change their views (or more precisely, form deeper views) on entrepreneurship and business people as they exit the programme as a result of their engagement in the practice of business along with being exposed to practitioners and businesses in the Fieldwork module".

Transcripts of emails received from Banking Experts

Mr Gerry Ryan, Manager, Bank of Ireland UCC Cork:

8/2/2011

Owen

Based on the group presentation of business plans my initial impression was often that of a loose group in the forming stage trying to apply a set of recently acquired academic business principles to an idea for a profitable enterprise. Individuals were often hesitant and unsure, unable to place the academic principles in practical framework, clearly displaying their lack of business experience.

At the results presentation some five months later the transformation was often remarkable. Having run a real business they now had a much greater understanding of the principles and how they are applied. Confidence levels had increased; sometimes a new leader had emerged, deals had been done, mistakes made, problems solved, plans changed and compromises reached, just like a real business. Some groups succeeded in reaching pre set financial goals, others didn't. The best learning was often with the latter.

Regards

Gerry Ryan

Mr Frank Bowdren, Senior Business Manager, Bank of Ireland, Cork:
1/2/2011

Owen

First observation is that level of presentation has improved over the years. This comes from experience of the lecturers/ mentors and also the students talking to previous participants. In addition, the students are understandably nervous on the first presentation, as few of them would have made such a presentation before. Their projections and business plans are optimistic (Normal with most business plans). No real idea of the pitfalls ahead of them.

On the second presentation and after they have actually run the businesses for some months, the second presentation is better as they have a realism about them and the students are more appreciative of the difficulties of running a business, even in a closed environment of UCC campus.
The would come across as more mature at second meeting, Also more aware of the practical difficulties of running a business and dealing with real customers, suppliers, deadlines etc.

Frank Bowdren
Senior Business Manager

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