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**Developing Graduate Entrepreneurs:
An Analysis of Entrepreneurship Education
Programmes in Ireland**

by

Patricia Fleming

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**Thesis submitted for the fulfilment of the
Degree of Doctor of Philosophy
University of Durham**



1999

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ABSTRACT

This study is an evaluation of entrepreneurship education programmes in Ireland and the influence of the discipline in developing graduate entrepreneurs. The investigation evolved from the belief that entrepreneurship initiatives and programmes introduced during higher level education stimulate entrepreneurship. The study addresses a key question in the entrepreneurship literature; “do undergraduate courses in entrepreneurship aid in graduate new venture creation?”. To examine this proposition a conceptual model which explores the influences of entrepreneurship education is developed and tested. In this model particular emphasis is placed on knowledge, skills and conceptual development during higher education and the impact of the process on the development of enterprising behaviour.

With little research conducted in the area previously, the selected starting point is an exploratory study which aims to aid in the identification and quantification of entrepreneurial activity encouraged as a result of entrepreneurship education. Through the use of both quantitative and qualitative research methods the conceptual model is applied to a sample of 619 Irish graduates of universities and institutions of higher education who, during their college career, were exposed to entrepreneurship concepts and practice through participating in the annual Irish Industrial Authority/Forbairt Student Enterprise Award Scheme. To test the set of hypotheses formulated, a questionnaire-based survey was conducted to focus on quantitative results and the case study method was used to gather qualitative data. The study includes phase-two of a longitudinal evaluation into graduate entrepreneurship that tracks the careers of a cohort of 419 graduates over an extended period.

The tentative evidence from the study suggests that a relationship exists between entrepreneurship education and new venture creation. Graduates who were exposed to entrepreneurship concepts and the practical experience of preparing a business plan during higher level education were found to enter business ownership at a noticeably higher rate than their national peers of similar age and level of education. The findings support the view that entrepreneurship concepts introduced at the undergraduate level have an affect on graduates’ subsequent career aspirations and career decisions. One of the most notable findings of this study is the very strong orientation among the graduates surveyed towards business ownership. For those who had started businesses this predisposition had already been acted upon and for those in employment it was considered a likely probability at some future date for a sizeable proportion of respondents. It appears that creating an awareness of the entrepreneurship process and developing and transferring knowledge about business formation during higher education can indeed aid graduate entrepreneurship.

ACKNOWLEDGEMENTS

I would like to take this opportunity to thank a number of people who have been of assistance to me in the completion of this study.

- ◆ First, to my supervisor, Professor David Kirby, for all his help and guidance over the past five years, I would like to say a sincere word of thanks.
- ◆ Secondly, to Dr. David McKeivitt, who contributed enormously by providing me with valuable feedback and more importantly with leave of absence to complete this thesis, may I say thank you.
- ◆ Thirdly, to John Ritchie whose thoughtful comments and valuable advice provided insights which helped me finalise this thesis.
- ◆ I would also like to thank Professor Barra O'Cinneide for his advice and assistance with the final draft and analysis.
- ◆ Thanks also to Kathleen Fitzgerald of Forbairt for providing the sample frame for the research, together with her continued support for the task in hand.
- ◆ Finally, a special thank you to Briga for her encouragement through difficult times and to Kim for the patience and effort required to produce the thesis presented here.

*Patricia Fleming
September 1999*

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DECLARATION

I affirm that this thesis is entirely my own work. The study includes phase-two of a longitudinal investigation into graduate entrepreneurship that tracks the careers of a graduate cohort over a ten year period. Phase-one of the research was completed in 1992.

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PART ONE

INTRODUCTION, LITERATURE REVIEW AND METHODOLOGY

Chapter One provides an introduction to the research topic and considers the importance of entrepreneurship education.

Chapter Two reviews the theories of the entrepreneur and entrepreneurship. The various schools of thought on the subject are examined. The role of education in relation to entrepreneurship is investigated.

Chapter Three outlines the institution and infrastructure of the field entrepreneurship. An overview of studies relating to graduate entrepreneurship is also provided.

Chapter Four reviews curriculum development in entrepreneurship. It suggests teaching approaches to improve delivery methods and considers the role of entrepreneurship educators. A discussion on educational evaluation is included.

Chapter Five discusses how the reviewed theories relate to the research framework developed. The aims, objectives and methodology of the study are also described.

Chapter One

An Introduction

AN INTRODUCTION

1.1 INTRODUCTION

Whilst considerable work has addressed the characteristics and motivations of entrepreneurs and their contribution to economic growth and development, research on the impact of entrepreneurship education on new venture creation has remained relatively neglected. The need for research into entrepreneurship education is well documented (Vesper, 1985; Sexton and Bowman-Upton, 1988; Rosa and McAlpine, 1991). Questions which arise are; can entrepreneurship be taught? How can potential entrepreneurs be identified? Why should anyone choose to undertake the financial, psychological, social and career risks which setting up and running one's own business entails? In particular, why should a graduate with a variety of career options open to him/her make this choice? These are the key issues addressed in this thesis. This study is an investigation into the field of entrepreneurship, with particular focus on education for entrepreneurship as an academic discipline. The overall aim of this thesis is to provide insights into the process of entrepreneurship, to improve knowledge of entrepreneurial intentions and behaviour and to build theories for subsequent testing.

1.2 BACKGROUND

In this study entrepreneurship education in Ireland has been selected for analysis and evaluation. With the fastest growing population in Western Europe, Ireland faces the task of creating an exceptional rate of growth in non-agricultural employment in the years ahead if unemployment is to be challenged and growth is to continue. The future economic well-being of Irish society depends largely on the international competitiveness of the economy. This competitiveness is closely related to the entrepreneurial and innovative abilities



of individuals, firms and institutions. Ireland, it can be argued, needs more entrepreneurs and the Irish economy needs more enterprise. Ireland is below the European average when it comes to numbers of business start-ups. To make a full contribution to economic development and job creation, Ireland needs more business start-ups, fewer business failures, and more enterprises growing to be medium and large-sized businesses (Task Force on Small Business, 1994).

A central question in the debate on economic growth is to what extent entrepreneurship education and training contributes towards stimulating entrepreneurship and economic development. A conducive environment which includes high market demand, favourable government policies, the availability of finance and a culture that values enterprise, are equally likely to affect entrepreneurial endeavour in an economy. In Ireland, various explanations have been put forward for the comparative failure of indigenous industry to develop adequately. Ireland, it is argued, suffers from a shortage of industrial and commercial entrepreneurs (Kennedy, 1995).

Rosa et al. (1996) state that there are two debates as to why economies are underdeveloped. The first debate is that people have not been socialised towards entrepreneurial attitudes, aptitudes and initiative. The second view is that the social environment is limiting the entrepreneurial drive of people. Considering the success of Irish emigrants abroad, the failure of indigenous industrial development would appear not to be due to personality characteristics or need for achievement. The inhibition to Irish economic development is more likely to result from the social environment that has emerged from the country's turbulent history. Hawkes (1982) suggests that some of these constraints are born from a colonial past and perpetuated in the authoritarian traditions of church and state and the erroneous equating of entrepreneurship with narrow

materialism. Over the past number of years several government and educational initiatives have been introduced in an attempt to reverse this lack of entrepreneurial spirit. This thesis examines efforts to stimulate entrepreneurship through the higher education system in Ireland.

1.2.1 Higher Education In Ireland

In Ireland the third level educational institution is the highest education echelon attainable under the Irish education system. Higher education promotes social well-being through preserving, widening and advancing the intellectual, cultural and artistic accomplishments of society. The education of students is fundamental to the role of the higher education system. The educational emphasis in Ireland, as in many ex-colonial countries, has been upon classical, legal and arts-orientated studies rather than towards technology and business skills. Traditionally the educational system has been oriented towards an employee, rather than an employer, culture. It has not promoted innovative thinking or individual initiative and is somewhat biased against the development of skilled individuals, essential to the emergence of indigenous enterprise. The trend, until recent years in the Irish higher educational sector, has been towards classical and professional studies with less emphasis upon commercial and technical skills. However this situation has been changing. Institutions of higher level education are now combining both academic learning and practical work experience. There has been a notable shift in the syllabus structure of traditional educational institutions towards applied science, engineering and business studies courses. Today higher education institutions, through research, develop new ideas, new knowledge and new applications of existing knowledge. The sector provides a vibrant research base, innovation, technical advancement, information and skilled individuals. Knowledge is the key to

innovation-led development and much of modern industry in Ireland is now 'knowledge based'.

Given the multiple purposes of higher education, the system is diverse in nature and has two distinctive sectors, university and extra-university, each with distinctive aims and objectives within a shared philosophy of education. Increasingly the importance of higher education is growing in significance. This is particularly due to the prominent rise in enrolment figures. Numbers have grown from 18,500 in 1965 to over 100,000 in 1995. These rapidly growing numbers reflect demographic trends, increasing retention rates at second level education and increasing transfer rates into third level education. In 1980 approximately 20 per cent of the age cohort advanced to third level education. This has increased to over 40 per cent in 1995, about half of whom take degree programmes (White Paper on Education, 1995). This growth in numbers has been accompanied by a significant increase in the range and diversity of programmes in all institutions. The past twenty years have seen a major transformation in the structure of the third-level sector. This includes the development and expansion of the new universities in Limerick and Dublin and the Institutes of Technology (formerly Regional Technical Colleges). This growth has been accompanied by a wide range of innovative developments in the arts and social sciences. Irish higher education institutions are making a vital contribution to the Irish economy. They are now recognised as fundamental players in aiding to overcome the lack of industrial tradition.

Over the past number of years programmes and courses in entrepreneurship have been introduced as part of the curriculum in many Irish universities and colleges. Ambrose (1986) suggests that higher education institutions give the process of entrepreneurship respectability and opens the concept to many who would not consider it a career alternative. Although entrepreneurship has now

become well established in the education system in Ireland, to date little or no research has been conducted on the outcomes of entrepreneurship education. This thesis attempts to address this situation by putting forward a theory of entrepreneurship education and its resulting impact on a graduate population.

1.3 THE RESEARCH QUESTION AND RESEARCH OBJECTIVES

At the core of this thesis is an exploratory longitudinal research study that seeks to determine whether education is a vital ingredient in the process of entrepreneurship and the development of an entrepreneurial base within an economy. The key question this thesis addresses is; “Do undergraduate courses in entrepreneurship aid in graduate new venture creation?”

According to Gartner et al. (1994), to understand fully some issues regarding the process of entrepreneurship requires starting with an examination of the potential entrepreneur. These researchers argue that as entrepreneurship occurs over time, longitudinal research is critical. An implication of considering time in entrepreneurial research is that it enables the researcher to measure the causal sequence of relationships among variables. Gartner et al. (1994) further contend that many entrepreneurial studies have generated models of the relationship of certain entrepreneurial attitudes and behaviour after the outcome has occurred. Longitudinal studies are important because they can measure variables before events occur. Outcomes are likely to change attitudes. Kruegar and Brazeal (1994) argue that when researchers focus on processes underlying an activity, too often they look backward through the lens of existing entrepreneurs. In other words after the business has started.

A review of the literature on entrepreneurship indicates that few studies track graduate career paths and, in particular, the career paths of graduates who

- To provide more precise knowledge and understanding of entrepreneurship with particular emphasis on the factors that contribute toward, and militate against, graduate entrepreneurship.
- To obtain a profile of the graduate entrepreneur.

In order to achieve these three objectives the research is divided into three different stages. Each stage has its own purpose and method. The first stage reviews the literature on the topic for the purpose of understanding the existing theory of entrepreneurship and entrepreneurship education. This review facilitates hypotheses formulation and questionnaire design. The objective of the second stage, a descriptive mail survey of the graduate population, is to gather quantitative data to test the conceptual model developed. In addition to the positivistic research method, the third stage, the naturalistic approach, focuses on in-depth interviews and case study analysis of individual graduate entrepreneurs for the purpose of supporting or refuting the theory proposed.

At the University of Limerick campus, the entrepreneurship faculty have been experimenting for several years in an attempt to find the best course structure and teaching/learning methodology for encouraging students to think enterprisingly and to examine the option of self-employment as a viable career alternative. This thesis seeks to evaluate the outcomes of entrepreneurship teaching initiatives, not only on graduates of the University of Limerick, but on a national scale. Entrepreneurship programmes began to be introduced in higher level institutions in Ireland during the early 1980s, and are now firmly part of the curriculum in many universities and colleges. This study is an evaluation of the outcomes of entrepreneurship curricula in Ireland. It is an assessment of the productivity of these initiatives in terms of entrepreneurial skills development and graduate business start-ups. The study evaluates the outcomes of the annual IDA/Forbairt Student Enterprise Award Programme which commenced in

1984 and in which some twenty Irish institutions of higher education participate. It also evaluates the impact of multiple versus single courses in entrepreneurship in higher level educational institutions.

1.4 THE EDUCATION SYSTEM

In order to put in context the central topic of this thesis, entrepreneurship education, a review of the role of the education system and its influence on economic development and society in general is now discussed. The education system is one of an economy's core driving forces. It generates the future political, economical and cultural leaders needed to shape industry and society. Commentators from different backgrounds and disciplines are united in one belief that the educational system is the cornerstone of a society and hence, the means by which a society progresses. Rosa et al. (1996) point out that primitive tribes have long held on to their vulnerable existence through the informal education of their ancestors. The same authors argue that as an economy modernises, it loses the intrinsic ability to pass on information informally. Hence, modern economies replace the informal educational systems of exchanging information one-to-one, father to son, with present day formal structures. These formal structures take the form of primary, secondary and higher level institutions. Rosa et al. (1996) contend that the future importance of formal education systems will continue to increase as the ability to communicate informally wanes.

The Irish White Paper on Educational Development (1980) states that the education system's fundamental purpose is to conserve traditional values and prepare students for the future. However, the objectives of an educational system vary as a society and economy changes. Therefore the conservatory and preparatory purpose of an educational system may be its ideological goals,

whereas its objectives vary in accordance with the changing needs of society. Dewey (1916) recognised that an abstract idea like education cannot in itself have any specific aims or objectives, rather it is the interest groups involved in education such as students, parents, teachers and institution heads which give it its aims and objectives. Leibenstein (1968) argued that the objective of the education system is to act as an instrument through which people are produced who transform society. This, he claimed, is not only by the skills which the education system imparts, but also by the attitudes about the desirability of certain activities. These attitudes are more important in fostering economic development than are the specific skills created directly by the education process.

The objectives of the education system vary depending on differing educational processes. For example, Curle (1970) distinguished between short-term and long-term educational processes. The extent and nature of the former would be dictated by the economic expediency of achieving higher production in various sectors of the economy. It includes the whole scope of vocational, technical and professional training delivered by a wide range of institutions. Long-term education would be carried out in schools, colleges and universities in which considerably more would be learned than a trade or specialised profession. The broadly educated products of these institutions would become increasingly important in directing the course of social and economic change brought about by the growth in production. Curle (1970) contended that the objective of the vocational educational process is to be a direct hands-on mechanism by which an economy produces more and grows. The objective of the conventional school, college or university educational process is to produce people capable of directing economic growth brought about by the vocational system. As a result, economies are advanced to the benefit of all.

1.4.1 The Education System and Entrepreneurship

A review of the literature indicates that the educational system has been criticised continually for its inflexibility and over-academic bias which develops a sense of dependency and lack of promotion of self-reliance (Conniffe and Kennedy, 1984). However, it is also recognised that the educational system is a change agent in that it provides the tools whereby the knowledge, skill and attitude base of a society is transformed (Murray, 1986). Therefore, it can be argued that, in order to stimulate a change philosophy that will foster growth throughout an economy, the educational system may be used as a mechanism to instil entrepreneurial beliefs into a country's young people. Carr (1997) argues that education is a medium by which the underlying knowledge environment is altered to meet the needs of modern society. He urges that the role of education is vital to increase the number of people entering business ownership thereby meeting the need for employment and wealth creation.

Views on the role of the education system in relation to the creation of entrepreneurs have been argued in the literature. For example, Collins, Moore and Unwalla (1964) in their study of successful entrepreneurs found that formal education had little impact on many of the cases they studied. Entrepreneurs had dropped out of the education system for a variety of reasons. Economic factors, restlessness, dislike of adult figures and a move from "an educational situation that was pointless into a work situation that had meaning" were reasons stated. These researchers argue that

"Business colleges and university colleges of business offer no work really applicable to the sort of training entrepreneurs need".

Collins, Moore, Unwalla (1964) pg. 101

The art of entrepreneurship is learned in what these researchers termed “the school for entrepreneurs”. This school consists of drifting, basic dealing and protégé-sponsor relationships and is not found in formal education. It is contended here that this view is no longer valid. In today’s modern economies the role of education as a contributing factor to new business creation has become extremely important. It can be argued that aspiring and potential entrepreneurs require a sound educational base in all aspects of business, management, marketing, operations and finance, to be successful in the competitive and technological environment of the business world. A key issue in this thesis is to demonstrate that by educating for entrepreneurship, the entrepreneur who experienced informal methods of education as purported by Collins, Moore and Unwalla (1964) is complemented by, and has in many instances been replaced by the college / university educated graduate entrepreneur.

For the potential graduate entrepreneur it would appear that the education system has a threefold purpose. First, to create an awareness of the need for entrepreneurial activity - how enterprising activity may be generated and how feasible it is to enter entrepreneurship. Secondly, to transfer knowledge about the process of entrepreneurship by communicating state-of-the-art information about the venture creation and venture renewal process. Thirdly, to prepare for the role of entrepreneur or of an entrepreneurial agent (in the early years after graduation) in an established organisation by developing the skills necessary for entrepreneurship (Murray, 1982). To facilitate the process Guskin (1994) emphasises the need to create learning environments focused directly on activities that enhance student learning.

In summary, there are multiple objectives of the education system. It can safeguard current society values and shape evolving ones. It prepares people

for the future, broadens an individual's horizons and provides a tool for decision-making and career path choice.

1.5 THE IMPORTANCE OF ENTREPRENEURSHIP EDUCATION

Enterprise is a powerful concept in modern society. The dictionary defines enterprise as “an undertaking or venture, especially a bold or difficult one”. Bold ventures have entered schools, higher education and post graduate programmes and most aspects of economic development in modern economies. According to Whyte (1988), the notion of entrepreneurship education encompasses a range of meanings, from approaches to developing enterprising capabilities, through educational initiatives for experiencing and learning about business, to training activity for establishing and developing new business ventures. The enterprising abilities of people are a natural resource which is any economy's most important asset. Generating ideas, doing something with them and seeing them through to a conclusion is important as learning experiences on which further activity can be based. Whyte (1988) suggests that in terms of economic development, enterprise can bind together the needs of the world of education and those of the workplace. The education system equips the learner with the skills needed to become an accomplished individual and industry needs innovative people who can take on responsibility at every level. In particular, young entrepreneurs are the creative energy of society. It is they who create new enterprises and re-infuse the economic system (Higgins, 1986).

There is evidence of a positive relationship between entrepreneurship education and the number of venture start-ups. Research undertaken by Webb et al. (1982) at Babson College in the United States, demonstrates that students who participated in such programmes are more likely to start their own business.

They used an experimental design with control groups. Those who took an entrepreneurship programme (21 per cent) had started a business as full-time employment compared with 14 per cent of the control group members who did not take such a programme. Furthermore, a further 12 per cent of programme participants were 'moonlighting' in a business compared with 2.5 per cent of the control groups. All participants in both the experimental and the control groups majored in business so their educational backgrounds were similar except for the participation in the entrepreneurship programme. A further finding was that 49 per cent of those who took the programme did so with the intention of starting their own business. Of those who took the programme intending to become entrepreneurs, 46 per cent started their own business. The study revealed that the average age category for starting ventures was 33-35, which is within a decade, approximately, of completing full-time university/college education.

There are a number of reasons why research into entrepreneurship education and graduate entrepreneurship is important. Murray and White (1986) report that foremost is the depressed state of the world economy in the past decade. Due to constraints within the labour market, talented young people are proceeding to higher education. From that group the future leaders of business and industry will emerge. It is important that young people are exposed to the suggestion that they themselves consider being the generators of new businesses in the future and be given some understanding of what that involves during their period of education. Bygrave (1994) makes the point that business education without entrepreneurship is as incomplete as medical training without obstetrics. Without the conception, birth and growth of new enterprises, there would be no business.

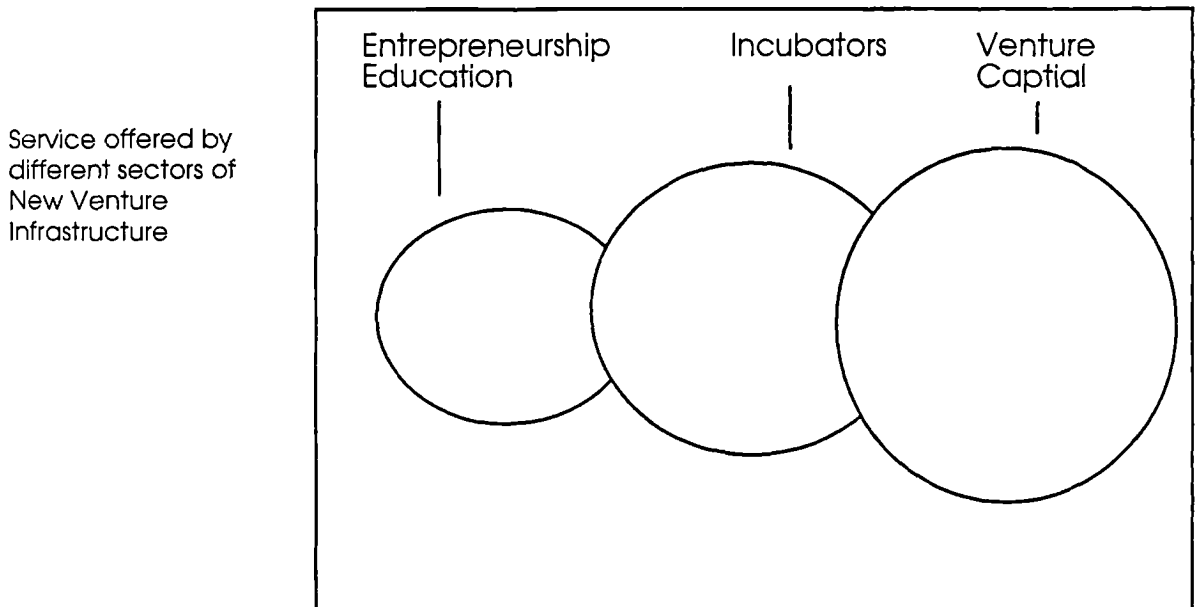
An example of the importance of entrepreneurship education was highlighted when in the UK the Enterprise in Higher Education (EHE) initiative was launched

in 1987 by the Secretary of State for Employment. The initiative, designed to encourage the development of qualities of enterprise among those seeking higher education qualifications, is run by the Employment Department Training Agency. Implementation of this Government initiative began in 1988. Successful bidders receive funding for five years which resulted in many Higher Education Institutions (HEIs) operating EHE contracts. The aim of the EHE programme is to provide undergraduate students with the opportunity to develop his or her enterprise competencies as an integral part of their academic programme. The EHE emphasises the development in the undergraduate population a wide range of personal transferable skills from which students can leave the higher education system equipped with the confidence and ability to take on the challenges of the world of work and to make an effective contribution to the social and community environment.

Researchers have argued that entrepreneurship education can have some unusual benefits not typically found in other forms of higher education. McMullan (1985) reports that there are substantial pay-offs, both in the long term and short term. Not only is there a value created by providing future leaders of business and industry, but there are also the jobs that graduate entrepreneurs create as well as student contributions to the small business sector in terms of consultancy and advisory programmes. Perhaps the most significant benefit is that entrepreneurship education is becoming a component of new economic strategies for fostering job creation. McMullan and Long (1987) argue that as part of this new strategy for job creation, entrepreneurship education is an integral component in an economy's venture support system along with incubators, innovation centres, science and technology parks and venture capital operations. Since new venture global success is foremost a function of entrepreneurial knowledge and know-how, entrepreneurship

education is probably the most important of these economic development mechanisms.

Figure 1.1: Essentials to New Enterprise Creation



Source: Adapted from McMullan and Long (1987)

McMullan and Long (1987) state that there are three essentials to new enterprise creation in today's ever changing technological environment, entrepreneurship education, combined incubator units, and the availability of venture capital (see Figure 1.1.). Entrepreneurship education prepares the entrepreneur and the venture for launch. The incubators or start-up units provide facilities for new companies getting production and distribution underway, and venture capital supplies the finance necessary to grow high potential expansion opportunities. These components complement each other. The education system should feed the incubators, which in turn feed the venture capitalists. Alternatively, the availability of venture capital attracts people to incubators and, in turn, potential entrepreneurs to the education programmes (McMullan and Long, 1987).

Another point to note is that education in entrepreneurship covers the entire scope of business administration, marketing, finance, operations and management. With the continued fragmentation of business education into narrow specialisations, the field of entrepreneurship which takes a broad, integrative and rational approach to business will become increasingly in demand with those who aspire to be managers and top executives, as well as entrepreneurs.

In a survey commissioned by the American Association of Collegiate Schools of Business, Porter and McKibbin (1988) report that entrepreneurship stands as part of the new frontier of business education in the 1990s. They put forward three important ideas in relation to academic entrepreneurship.

- They predict entrepreneurship as one of the driving forces of the twenty-first-century economy.
- They identify cross-functional integration, which is central to entrepreneurship, as an important part of future business education.
- They stress the need for faculty who understand their speciality and the larger system of business.

The report identifies that currently in U.S. business schools there is a lack of an international focus, too narrow concentration on specialisation, lack of integration of disciplines, lack of active participation in the economic development process and too little emphasis on entrepreneurship in the curriculum. They concluded by stating:

"Since we seem to be in an era of the downsizing of large corporations and a corresponding increase in emphasis on "intrapreneuring" within

them and on starting new firms and related entrepreneurial activities, this would appear to be an area that will be given more attention in the typical business school curriculum in the future than it has in the past. To allocate it more emphasis in the curriculum will, as with other expanding areas, require consideration of what will be given less attention".

(Porter and McKibbin, 1988, p. 86).

McMullan and Long (1987) note that taking into consideration that entrepreneurship education is quickly becoming part of economic development strategy and not just another component of higher education, the pressures to respond to this challenge may well outstrip the adaptive capabilities of universities. Boberg and Kiecker (1988) also show that the demand for entrepreneurship education will outstrip resources. Another criticism is that business schools follow a "product" approach rather than a "customer" approach. All too often, schools teach whatever they have rather than what is needed (Plaschka and Welsh, 1990).

On a more positive note, Vesper (1993) indicates that the principal trends in entrepreneurship education are:

- Increasing number of second and third level institutions introducing entrepreneurship courses
- Interdisciplinary approach with engineering as well as business studies students participating
- Student Enterprise Centres being started
- Varied teaching approaches being used
- Endowed chairs being added.

However, Vesper states that there is almost no formal research being published upon entrepreneurial education activities. Setting up a business is an

entrepreneurial act. Therefore, more knowledge about the factors that promote entrepreneurship must be sought. From a theoretical perspective, such knowledge is needed for strengthening the theories of entrepreneurship, entrepreneurship education, entrepreneurial intentions and graduate entrepreneurship.

1.5.1 The Graduate Entrepreneur

The concentrated focus on enterprise as a subject in universities and colleges today is recognition of the need to encourage more graduates to look creatively at their future opportunities. Business ownership constitutes a legitimate and worthy career option for college graduates. There is a significant interest among students to explore this professional option and a demand to become more actively engaged in the entire process of business-formation. It is argued that educating for enterprise promotes an awareness of self-employment as a career option and motivates young people to begin equipping themselves with the skills, knowledge and experience required for effective business ownership (Ambrose, 1986).

Graduate expertise is also crucial to many sectors of an economy where increasingly educated young people are becoming intrapreneurs within existing organisations. Graduates are also needed in existing small companies where their skills and attributes contribute to the development of business and technology. Their energy and expertise in marketing, finance and operational concepts can rejuvenate many companies, particularly indigenous industry. Johnson et al. (1993) support this view. Graduates' abilities and technical know-how are needed in the SME sector, in particular in growth companies, where owner-managers can place them in a managerial or 'internal consultancy' role, brainstorm ideas and generally assist with planning and strategy. A number

of successful programmes in North-East England have established that graduates can do an efficient job in small businesses. Entrepreneurship and enterprising skills development are clearly of significance in undergraduate courses. Higher-level entrepreneurship education can contribute to the long-term goal of increasing the level of entrepreneurial activity of an economy.

Scott and Twomey (1988) argue that the long-term supply of well educated and well qualified entrepreneurs is essential to a strong modern economy. Establishing a business is a key way in which graduate talent can assist in achieving high levels of economic growth. Rothery (1977), in a study of Irish engineering entrepreneurs, found that the typical entrepreneur's background involved a low level of education with few resources but that he/she built up important but unsophisticated industries. His research also identified a group of managers with extremely good academic records who demonstrated entrepreneurial abilities. These managers headed up "complex operations" without owning them. They created sophisticated enterprises with others' capital. The real importance of this finding was, he suggested, that at a certain level of industrial development, graduate entrepreneurs were essential. Recognition of the need for more sophisticated entrepreneurship in this area has been highlighted by Shiels (1977) whose study of the Irish healthcare industry identified a lack of response by Irish entrepreneurs, whom he suggested, did not have the technical capabilities necessary for entry.

More recently, the need for research into graduate entrepreneurship has been reinforced by the establishment in 1994 of the Campus Enterprise Programme which was set up at the University of Limerick. The aim of the programme, which is sponsored by Shannon Development, the regional industrial promotion agency, is to facilitate and support entrepreneurs at the University of Limerick who are involved in the creation of new technology-focused companies, through the provision of a range of project development support services. Currently 25

projects are being assisted, the majority knowledge and intellectually-based. It is widely recognised that there is a vibrant entrepreneurial and risk culture amongst undergraduates, graduates and post-graduates on the campus. It is important to gain a greater insight into, and understanding of, the factors which are conducive to entrepreneurship among graduates.

1.6 THE GENERAL FRAMEWORK

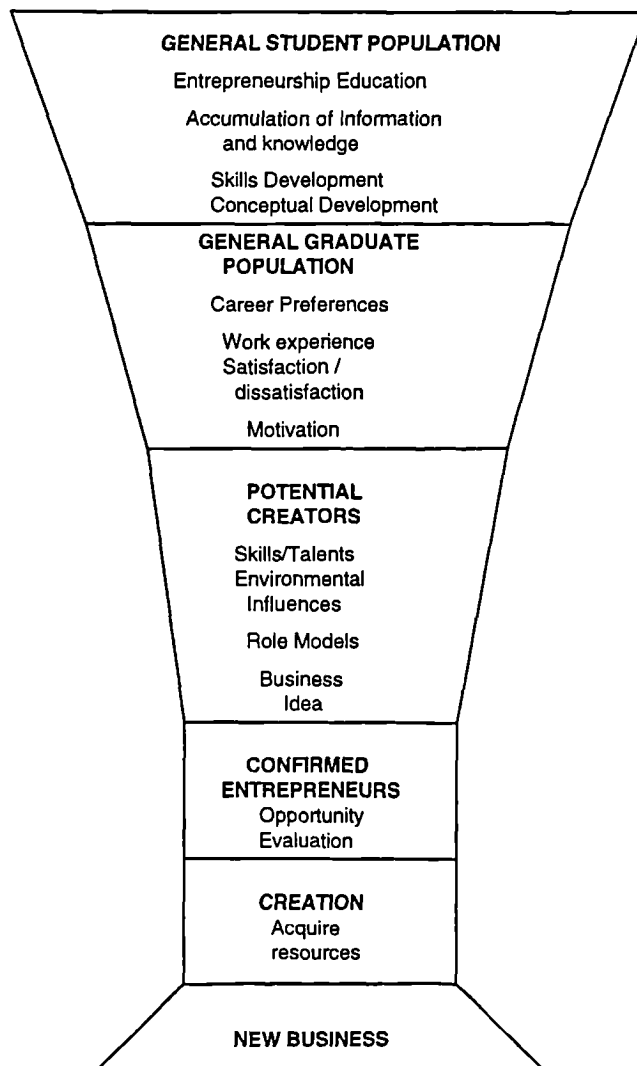
The primary aim of this study is to conduct exploratory research into the productivity of enterprise development programmes and initiatives. The main concern is to explore the effectiveness and usefulness of these programmes in encouraging graduate entrepreneurship. It is essential, therefore, that the information required is provided by a representative sample of graduates involved in enterprise initiatives and programmes at the undergraduate level.

The first step in the research process was a review of the literature on entrepreneurship and in particular education for enterprise. There are a number of studies dealing with the issue of education for entrepreneurship (Sexton and Bowman 1987, 1988; Scott and Twomey, 1988; Brown, 1990). It was concluded that further exploratory research on the topic would be valuable. To understand and analyse the complex behaviour and processes involved in a study of this nature a conceptual framework has been developed (Figure 1.2). The framework represents the various stages through which a potential entrepreneur passes to become a confirmed entrepreneur, which in turn implies the creation of a new business.

This thesis presents an exploratory study dealing with entrepreneurship education. The study includes a longitudinal survey that builds on research conducted in 1991 by the author (Fleming, 1992). In 1991 a study of graduates of Irish higher education institutions was conducted in an attempt to evaluate the

impact of enterprise initiatives in terms of shaping graduate entrepreneurship. The aim of the 1991 study was to provide insight into the process of entrepreneurship by investigating the outcomes of entrepreneurship courses in terms of entrepreneurial intentions and level of start-ups. By revisiting the sample of graduates who had studied entrepreneurship (419 in total) during the years 1984-1988 the study at the core of this thesis aims to track their career paths since graduation and seeks to identify any continued movement in this group towards entrepreneurship since 1991.

Figure 1.2: The General Framework



Source: Adapted from Gasse (1990)

A subset of the Graduate Survey is a study of 200 University of Limerick graduates who participated in an integrated entrepreneurship programme during the years 1989-1993. The purpose here is to determine outcomes in terms of career paths and entrepreneurial trends for graduates who selected entrepreneurship as a minor stream in the final two years of study on the Bachelor of Business Studies programme. In total a sample size of 619 graduates was used in the graduate survey. Comparative analysis is performed between the sub-sectors in the overall study and longitudinal trends are analysed and discussed. To obtain qualitative data to test the major hypotheses developed, interviews were conducted with eight graduate entrepreneurs. The case study details and analysis are also presented in this thesis. While the research may not, at this stage, be able to clearly enunciate the impact of entrepreneurship education, it is the author's intention to broaden the horizons of debate and to engender a better understanding of the influences on graduate entrepreneurship.

1.7 THESIS STRUCTURE

This thesis is presented in three parts. Part One, "Introduction, Literature Review and Methodology" is concerned with the theoretical aspects of the research topic. The reviewed theories and studies are those that have influenced the general framework and the design of the exploratory study reported in Part Two "The Research - Ireland and Education for Enterprise". Part Three "Discussion, Conclusions and Implications of the Research" summarises the findings, makes conclusions, analyses the implications of the research, discusses the limitations of the study, and identifies areas for further research.

Chapter two includes a critical review of the various schools of thought on entrepreneurship from the classical view to current thinking. It examines the traditional, psychological, sociological, management and intrapreneurship views of entrepreneurship. The role of education is investigated in relation to the various schools of thought.

Chapter three examines the field of entrepreneurship with particular focus on entrepreneurship as an academic discipline. It reviews the literature on graduate entrepreneurship and graduate entrepreneurial intentions and discusses entrepreneurship as a career process.

Chapter four reviews the student learning process and outlines curriculum development in entrepreneurship education. It suggests teaching approaches to improve delivery methods and discusses the role of entrepreneurship educators. An overview of educational evaluation is also presented.

Chapter five illustrates how the reviewed theories relate to the general framework presented in this chapter. A conceptual model is developed and the discussion explores a number of gaps in the existing entrepreneurship literature and proposes various hypotheses relevant to the research topic. It also describes the methodology of the study reported in Part Two.

Chapter six assesses the entrepreneurial challenge facing Ireland. It examines the importance of the family and small business sector and describes recent government and educational initiatives introduced to stimulate entrepreneurship. The higher education system is discussed and an overview of entrepreneurship education at the University of Limerick is provided.

Chapters seven and eight form the most central part of the study. In these chapters a National Graduate Survey is reported. This exploratory longitudinal study tracks graduate career paths between 1984-1995 and investigates graduate satisfaction with their career to date, graduate intentions and graduate start-ups. Also presented is a study of University of Limerick graduates who participated in an integrated entrepreneurship programme in the third and fourth year of study on their degree programme. The purpose of this additional investigation is to determine if any differences occur in terms of predisposition to entrepreneurship between graduates who studied a single enterprise course and graduates who selected to study entrepreneurship over a two-year period.

Chapter nine introduces eight case studies of graduate entrepreneurs and their enterprises. It examines the role of entrepreneurship education and other influences on the graduates' motivation and activities. A psychological typology of successful entrepreneurs is set in context within the relevant entrepreneurship theory.

Finally, chapter ten concludes with a discussion of the theoretical and methodological considerations of the research. It draws conclusions, identifies limitations and outlines the implications of the research, first, for educationalists concerning the development of entrepreneurship curricula and programmes of study, and secondly, for policymakers in relation to providing increased support to encourage expansion and growth of entrepreneurship education in institutions of higher level education throughout Ireland. The chapter also makes recommendations in this area and highlights direction for further study.

Chapter Two

The Entrepreneur - A Theoretical Overview

THE ENTREPRENEUR - A THEORETICAL OVERVIEW

2.1 INTRODUCTION

The objective of this chapter is to present a review of the literature on the entrepreneur and entrepreneurship. This review critically evaluates the various perspectives of the entrepreneur and entrepreneurship put forward by writers and researchers of diverse disciplines including economics, psychology, sociology, education and business. The role of education in relation to entrepreneurship is also examined in the context of the different theories discussed. According to Cunningham and Lischeron (1991) research activity on the entrepreneurial personality and the entrepreneur can be classified into a number of schools of thought, which may be useful for understanding the entrepreneurial process. The schools of thought outlined in this chapter are adapted from the Cunningham and Lischeron model (see Figure 2.1) to include the classical school, the psychological school, the sociological school, the management school and the intrapreneurship school.

All of these viewpoints are important to this study of graduate entrepreneurship in order to gain a thorough knowledge and understanding of the process involved in entrepreneurship and how it relates to the potential entrepreneur, the confirmed entrepreneur and to the entrepreneur who grows and expands his/her business. It is envisaged that a substantial number of graduates who are exposed to entrepreneurship concepts during their education will select a career in employment; therefore an important aspect of the literature review is to gain a perspective of the individual who affects change within an existing organisation, the intrapreneur.

FIGURE 2.1: FIVE APPROACHES TO ENTREPRENEURSHIP

Entrepreneurial Model (in historical sequence)	Important Criteria	Assumption	Focus on Education
Classical Viewpoint	Innovation	Entrepreneurship is doing rather than owning	Informal Education
Psychological Viewpoint	Unique characteristics	People behave in accordance with their values	Informal and Formal Education
Sociological Viewpoint	Family and environmental dynamics	Early childhood influences affect career decision	Informal and Formal Education
Management Viewpoint	Planning, organising, leading and control	Entrepreneurs can be developed and trained	Formal Education
Intrapreneurship Viewpoint	Venture teams within organisations	Entrepreneurs affect change within organisations	Formal Education

Source: Adapted from Cunningham and Lischeron (1991)

Much has been written about the entrepreneur and numerous attempts have been made to reach a consensus definition. However, no single agreed definition exists (Carland et al., 1984). Neither the study of entrepreneurship nor attempts at its definition are confined to recent times. As early as the eighteenth century efforts were being made to identify the role of the entrepreneur in business (Cantillon, 1755). What is unique to recent studies is the magnitude and diversity of interest which has been shown in the subject by writers from a broad spectrum of disciplines (Casson, 1982; Loasby, 1988).

The identification and definition of the entrepreneur is a subject of considerable debate and one of the major problems is a lack of conceptual consensus regarding the phenomenon. Is the function primarily

organisational in nature? Is risk-taking an essential characteristic of entrepreneurship? Does entrepreneurial behaviour imply the introduction of innovation and technical improvements or can it involve acts of simply profiting from imitating known techniques and products? Entrepreneurship may be conceptualised at several different levels. First, it may be considered a psychological characteristic of individuals which can be described by terms such as creativity, motivation, imagination and so on (Wilken, 1979). Second, it may be regarded as an activity characteristic of a social position and the analysis would then focus upon the behaviour of individuals. Third, it may be conceptualised as a social role within an organisation, a pattern of similar behaviours, that may be enacted by individuals in different social positions. Fourth, it might also be conceived as a social process consisting of a variety of behaviours combining to produce an observable sequence of activities within a system (Wilken, 1979).

For help in dealing with these complex conceptual problems, it is useful to review the work of a group of scholars including Cole (1959) and Chandler (1960) and Schumpeter (1962). The Research Centre in Entrepreneurial History, at Harvard, made a serious effort to deal with the theoretical and empirical problems of entrepreneurial research from an economic, sociological, and historical perspective. The emphasis was upon the real world of actual entrepreneurial activity, not the rigidly defined theoretical constructs of mainstream economics (Aitken, 1963; Cole, 1959). During its ten years of existence the Centre published a journal, *Explorations in Entrepreneurial History*. One point on which agreement was reached was that the search for real entrepreneurs was futile. In 1969 Cole expressed his doubt about the possibility of defining the entrepreneur:

"My own personal experience is that for ten years we ran a Research Centre in Entrepreneurial History, for ten years we tried to define the entrepreneur. We never succeeded. Each of us had some notion of it - what he thought it was, for his purposes a useful definition. And I don't think you're going to get further than that".

(Cole, 1969, p.17)

Cole's comments are interesting for a number of reasons. First and foremost he admits that despite various attempts it has not been possible to define the entrepreneur. Secondly, he makes the point that "each of us had some notion of what it was" acknowledging the fact that attempts at definition are by and large influenced by one's own particular academic viewpoint. Bearing in mind that these comments were made some twenty eight years ago, today a review of the subsequent literature suggests that little further progress has been made (Brockhaus and Horwitz, 1986; Gartner, 1990).

The Research Centre in Entrepreneurial History reached a consensus that entrepreneurial activity was a phenomenon associated with organisations. Accordingly, its researchers concentrated on searching for entrepreneurial activities within organisations and the relationships with such firms and the society of which they were a part (Aitken, 1963). Hornaday (1992) reports that as a result of the Centre's findings the term "entrepreneur" virtually disappeared from the literature in the 1950's only to be revived by Chandler and Redlich (1964), and psychologists McClelland (1969) and Collins, Moore and Unwalla (1964). Since then the debate has continued (Kilby, 1971; Boulton and Carland, 1984; Bird, 1988; Carland, Hoy and Carland, 1988; Vogel, 1989). In 1990 Gartner attempted to clarify the confusion with an elaborate Delphi study. Using 44 definitions of entrepreneurship elicited from 44 respondents, he identified 90 entrepreneurial "attributes". He claimed that eight entrepreneurial themes emerged after clustering the 90 attributes using factor analysis. These were; the entrepreneur (personality traits), innovation, organisation creation, creating value, profit or non-profit, growth, uniqueness,

and the owner/manager. Gartner conceded that his data only demonstrated that there is no agreement on a definition of entrepreneurship. He added that writers and researchers must continue to spend time making explicit what they are talking about when they talk about entrepreneurship. In other words, anybody can use the term in any way they choose so long as they provide some kind of a definition.

Some writers distinguish between small business owners and entrepreneurs who own businesses. Carland et al., (1984 p. 358) have developed the following definitions:

"Entrepreneur....an individual who establishes and manages a business for the principal purpose of profit and growth. The entrepreneur is characterised principally by innovative behaviour and will employ strategic management practices in the business"

"Small Business Owner.....an individual who establishes and manages a business for the principal purpose of furthering personal goals. The business must be the primary source of income and will consume the majority of one's time and resources. The owner perceives the business as an extension of his or her personality, intricately bound with family needs and desires"

Gartner (1989) argues that the above definitions raise more questions than they answer. One criticism made is the difficulty in distinguishing between personal goals and goals for profit and growth. The business is, it could be argued, the primary source of income for both the small business owner and the entrepreneur and also an extension of the personality of both.

The term 'entrepreneurship' has also been used to define a wide range of activities such as initiating, founding, adapting, and managing an enterprise. The nature of the entrepreneur and entrepreneurship is a continuing theme in the literature. Perhaps the most comprehensive definition found by this author is by Hisrich and Peters (1995, p. 10):

"Entrepreneurship is the process of creating something different with value, by devoting the necessary time and effort, assuming the accompanying financial, psychological, and social risks, and receiving the resulting rewards of monetary and personal satisfaction".

This chapter now moves on to review the literature on entrepreneurship. The approach adopted is deliberately eclectic, drawing upon the theoretical contributions of economists, sociologists, psychologists, researchers and business analysts in attempting to understand and integrate a number of different perspectives on entrepreneurship.

Theory is crucial, not only for understanding the processes underlying entrepreneurship, but to determine whether the size of the entrepreneurial population can be expanded, and whether it is possible, through selective educational and policy measures to increase the number of new enterprises being formed. In this chapter five broad headings, economics, psychology, sociology, management and intrapreneurship form the basis for discussion on the subject of entrepreneurship. Figure 2.1 illustrates the approach adopted in an attempt to analyse the theoretical concepts of entrepreneurship and entrepreneurship education as outlined in the literature.

2.2 THE CLASSICAL PERSPECTIVE

The word entrepreneur derives from the French verb *entreprendre* meaning to undertake, having been translated from the German verb *unternehmer*, which also means to undertake. The word entrepreneur surfaced in the writings of Cantillon (1755) an Irish economist living in Paris. He identified the entrepreneur as a pivotal figure in the economy, a risk-taker, taking chances and facing uncertainty.

In his *Essai Sur la Nature du Commerce en General*, Cantillon formally defined entrepreneurship as self-employment of any and every sort so long as the person was not hired or working for wages then he was an entrepreneur. Cantillon saw that merchants, farmers, craftsmen “buy at a certain price and sell at an uncertain price” therefore operating at a risk. Commenting on the work of Cantillon, O Farrell (1986, p. 144) says:

"Uncertainty is all-pervasive. Those who cope with it in their economic pursuits are Cantillon's entrepreneurs implying that they are not necessarily capitalists - the key role of the entrepreneur being to bear uncertainty".

Cantillon's work is held by many economists as having made a major contribution to economic theory. Schumpeter (1934) described it as the first systematic attempt to work over the whole field of economics. In 1848 John Stewart Mill identified direction, control, superintendence and risk bearing as the prime functions of the entrepreneur. The fact that Mill did not clearly differentiate between the role and functions of the entrepreneur and those of the capitalist is held by many as being a major shortcoming of his work. Mill's work is important also, because he introduced the term “entrepreneur” to the English language.

The work of Jean Baptiste Say (1845), who expanded on Cantillon's work, made a further impact on the study of entrepreneurship. He separated the profits of the entrepreneur from the profits of capital. He observed that, in the family enterprise, the owner received profit as the entrepreneur, salary as a manager, and interest as the investor of capital. Say further argued that the entrepreneur should possess not only the talents of “superintendence and administration” but also judgement, perseverance, a knowledge of the world of business and an ability to organise the factors of production and to put

them into operation. It is interesting to note that Say diverged in his concept of the entrepreneur from that of Adam Smith (1776) and classical economics despite being a strong admirer of Smith and of his ideas and policies. Classical economics appears to consign the entrepreneur to the shadowy realm of 'external forces' and accomplishes the almost impossible feat of excluding the entrepreneur completely (Kirchhoff, 1994).

From the writings of Cantillon and Say some common traits or characteristics of the entrepreneur can be identified, particularly risk-taking, profit, motivation, management, and organisation, and, according to Say, an ability to accommodate the unexpected and overcome problems. Neither writer, however, placed the entrepreneur in a particularly dynamic environment but rather within a stationary equilibrium. Furthermore, neither emphasised the innovative role of the entrepreneur and seems to view them very much in a 'managerial vein'.

2.2.1 Neo-Classical Theory

In contrast to Cantillon and Say the neo-classical view of economics, which became prominent around 1879, focused upon equilibrium results rather than adjustment processes and, consequently, left little scope for entrepreneurial leadership, action or decision making. The neo-classical paradigm fused the roles of the capitalist and the entrepreneur. The entrepreneur was viewed by theoretical economists as being an abstract figure oblivious to the influences external to the rational operation of the firm they directed (Greenfield and Strickon, 1986). Entrepreneurship is assumed in the neo-classical paradigm to be only a minor occurrence in an otherwise equilibrium-dominated market. This assumption allows general equilibrium theorists to predict overall market behaviour and overall economic performance.

Alfred Marshall (1920) was one of the few writers in the neo-classical tradition to stress the critical importance of the entrepreneur. He separated the manager from the entrepreneur and added the dimension of leadership to the list of entrepreneurial tasks. Keynes (1936) placed the entrepreneur in the role of decision-maker within the individual firm, that is the person primarily responsible for reaching investment decisions and facing uncertainty in his ability to forecast effective demand. Neo-classical theory demonstrates that capitalism equitably distributes income within society. What the theory does not do is specify the origin of “new demand” as the source of wealth creation. It is the absence of a specific mechanism for creation of new demand that many economists perceive as neo-classical theory's greatest weakness.

2.2.2 The Austrian School

Around the turn of the 20th century Austrian economists advanced their argument that the entrepreneur is the source of new demand. Carl Menger (1840-1921) is regarded as the founder of the Austrian School of Economics. The primary objective of his *Principles of Economics* (1871), was to establish the subjectivist perspective of human valuation as the starting point of economic theory (Menger, 1950). In the subjectivist view, economic change arises from an individual's awareness and understanding of circumstances, and hence, Menger's analysis relies heavily upon the role of knowledge in individual decision-making (Hebert & Link, 1982).

Schumpeter (1934) also a student of the Austrian school, ascribed the entrepreneur a key role in the process of economic development. He identified five sources of innovation:

- Developing new products and services
- Developing new methods of production
- Identifying new markets
- Discovering new sources of supply
- Developing new organisational forms.

He pictured the entrepreneur as the central innovator in a capitalist market. Instead of neo-classical competitive markets functioning systematically to achieve equilibrium between supply and demand, Schumpeter observed 'chaotic markets' driven by the regular appearance of entrepreneurs who enter markets using innovations that challenge established firms who dominate the markets.

Successful entrepreneurs expand the overall market as buyers increase their purchases to include the new product or service. Entrepreneurs, Schumpeter argues, are the mechanism of wealth creation and distribution in capitalism. Schumpeter's term "creative destruction" implies that entrepreneurs create new wealth through the process of destroying existing market structures as their innovations increase demand and create new wealth. Neo-classical theory depicts the market as static, with changes occurring only as movement from one equilibrium condition to another. Schumpeter's theory argues that the market is dynamic, depending on continuous change in buyer and supplier behaviour (Kirchhoff, 1994).

Schumpeter's position was later supported by Kirzner (1973), who argued that markets are constantly in states of disequilibrium and alertness to disequilibrium is the key characteristic of the entrepreneur. He emphasised the equilibrating aspects of the entrepreneurial role - that is, the movement necessary to shift markets towards a state of equilibrium. The entrepreneur is alert to opportunities that exist, rather than, as in Schumpeter's view, creating them. Kirzner downplays the importance of uncertainty in human

decision-making (Hebert and Link, 1982) but agrees that the notion is central to entrepreneurial activity.

2.2.3 The American Contribution

In America the most noted work on the role of the entrepreneur was provided by Knight (1921). He expanded Cantillon's concept of uncertainty by stating that entrepreneurs bear the responsibility and consequences of making decisions under uncertainty and emphasised the key distinction between insurable risks and non-insurable uncertainty. Risk implies knowledge of the probability that an event will occur and this is insurable. Uncertainty is immeasurable and therefore not insurable. He stressed that because of the unique uncertainty of entrepreneurship it cannot be insured, nor capitalised or salaried (Knight, 1921).

Another contributor to the debate on entrepreneurship was Leibenstein (1979). He argued that X-efficiency - that is, the degree of inefficiency in the use of resources within a firm - is the norm and that it measures the extent to which the firm does not fulfil its production potential. For a given set of inputs, X-efficiency occurs either because the firm's resources are being used in the wrong way or because they are wasted (Casson, 1982). The existence of market imperfections implies the availability of entrepreneurial opportunities. To Leibenstein (1968) the importance of the entrepreneur is that "he connects different markets, he is capable of making up for market deficiencies" and he is an "input-completer" and he creates or expands time-binding, input-transforming entities.

Kirchhoff (1994) purports that if Schumpeter's theory is correct and entrepreneurs play a key role in the economy, why was this not recognised

until the 1980s? America and Europe have consistently claimed that large corporations were the source of wealth creation and distribution. Galbraith (1967), in his book *The New Industrial State*, argued that large corporations work in co-ordination with government and labour unions to run America. Such views of society as being dominated by large organisations are consistent with neo-classical theory, which includes economics of scale as a necessary condition. Kirchhoff points out that when entrepreneurs enter markets with new technologies, existing large-scale plants may have difficulty adjusting and can actually fail as they lose market share. Manufacturing costs are a small part of market dynamics in an entrepreneurial economy, and production efficiency does not directly translate into profitability. In other words, equilibrium markets do not exist, and economies of scale are not a dominant economic factor (Kirchhoff, 1994).

In 1979 Birch published the results of a study indicating that in the US small firms are mainly responsible for job creation and economic growth. As a result of Birch's study, the importance of the small firm sector and society's perceptions of entrepreneurs were substantially reviewed. His research concluded that small firms, those with 100 or fewer employees, created 81 per cent of net new jobs between 1969-76 in the United States. In 1987 Birch provided a more complete assessment of his findings in a book entitled *Job Creation in America*. Since 1979 entrepreneurs have become recognised as critical to economic growth. Neo-classical theory, it could be argued, is coming under increasing pressure to accommodate the entrepreneur. Economists, it appears, are now working to construct a new theory to incorporate entrepreneurs into capitalism as Schumpeter's theory cannot be modelled mathematically or used to predict economic events (Kirchhoff, 1994).

The theory of the entrepreneur outlined in the foregoing classical body of literature suggests that the observer's perception and subsequent definition of the entrepreneur may well be representative of their academic interest and discipline. This point has been made by some writers in the past. Kilby (1971) claimed that the importance attributed to the entrepreneur will be determined by the scholar's field. In relation to the economist's view of the entrepreneur Kilby makes the following comment:

"The economist who operates in the mainstream of his discipline assumes that the supply of entrepreneurial services is highly elastic and that failures in entrepreneurship are attributal to maladjustments in the external environment. Thus, the determinants of entrepreneurial performance lie on the demand side, in the structure of economic incentives found in the market-environment, the home ground of the economist"

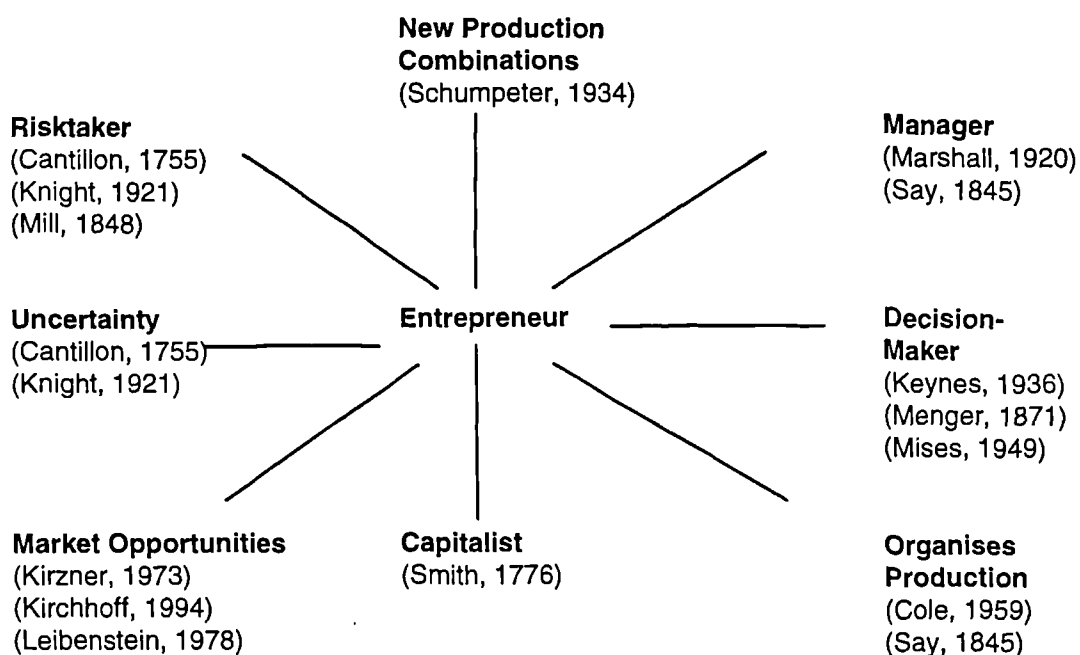
(Kilby, 1971, p3)

The classical viewpoint of entrepreneurship demonstrates that economists have usually played down the significance of entrepreneurship and have, instead, emphasised the economic conditions conducive to its emergence. Julien (1989), for example, makes the point that whilst many economists accept that the entrepreneur has an important role in the economy there may be some limitations to the extent of this importance. Hirschmann (1965) claims that a lack of entrepreneurship is not an obstacle to economic growth and Wilken (1979) points out that economists, in general, tend to view entrepreneurship as a dependent variable. On the other hand, non-economists have taken the opposite position. They allocate more significance to the impact of the entrepreneur as the key figure in economic development because of their role in introducing innovations, disequilibrating markets, and increasing economic growth.

It is apparent from the literature that the entrepreneur's role in economic activities has been central in the economic or classical literature. However, differences do exist among the views of various economists who have addressed the topic. The economists and their views of the nature and role of the entrepreneur are summarised in Figure 2.2.

The various economic perspectives described above would place the entrepreneur in both stable and dynamic environments. These perspectives suggest that the entrepreneur is an important contributor to economic change. Entrepreneurs must deal with uncertainty and innovation and do so in a very competitive environment. In this regard, entrepreneurs are seen as a destabilizing force in the economy, while their ability to adjust to change can be seen as contributing to economic stability.

Figure 2.2: The Classical Viewpoint of The Entrepreneur



The literature suggests that uncertainty, risk-bearing, the separation of the entrepreneur and the manager, innovation, creativity, decision making and

alertness to opportunities are the key factors underlying the classical or traditional body of thought and research on the entrepreneur and entrepreneurship.

2.3 THE PSYCHOLOGICAL PERSPECTIVE

Researchers have also articulated theories of entrepreneurship that concentrate specifically upon psychological factors, although they include socio-cultural variables as well. This school argues that entrepreneurs share a common type of personality which explains their behaviour. The basic assumptions are that entrepreneurs are in some way different from the general population and that this difference can be explained in terms of the entrepreneur's personality profile. The major contributor to this theory of entrepreneurship has been McClelland (1961). According to the psychological viewpoint, a range of personality traits which are indicators of high need-achievement can be identified, and individuals who exhibit these characteristics are particularly likely to behave entrepreneurially. Personality characteristics include achievement motivation (McClelland, 1961; Hornaday and Aboud, 1971), risk-taking propensity (Brockhaus, 1980; Hull, Bosley and Udell, 1980; Palmer, 1971), locus of control (Rotter, 1966; Brockhaus, 1982) and innovation (Morris and Fargher, 1974; Carland, 1982).

2.3.1 Need for Achievement

Many efforts have been made to identify some of the characteristics or attributes possessed by the entrepreneur. Research began in the 1950s with the work of McClelland et al. (1953) who explored the achievement motive or need for achievement as well as other needs, including power and affiliation. While the pioneering work of these researchers has since been criticised for

methodological and conceptual problems (Kilby, 1971; Klinger, 1966), their efforts provided a foundation upon which to build a psychological profile of the individual entrepreneur. McClelland's hypothesis was

"that a society with a generally high level of need for achievement will produce more energetic entrepreneurs who, in turn, produce more rapid economic development" (McClelland, 1961, p. 205).

He defined need for achievement as

"a desire to do well, not so much for the sake of social recognition or prestige, but for the sake of an inner feeling of personal accomplishment".

According to McClelland, entrepreneurship is the intervening variable between need-achievement and economic growth. Therefore, by increasing the level of need-achievement in a society entrepreneurship and economic development will be stimulated.

Kilby (1971) suggests that McClelland's work may be viewed as an extension of Max Weber's Protestant work ethic in that, while Weber postulated that it is strong ideological values which lead to entrepreneurial behaviour, McClelland's theory demonstrates that it is not just ideological values but also the process of family socialisation which leads to a high need for achievement and in turn to entrepreneurial behaviour (see Figure 2.3).

Figure 2.3: McClelland's Causal Sequence Producing Entrepreneurial Behaviour

Ideological Values → Family Socialisation → Need for Achievement → Entrepreneurial Behaviour

McClelland stressed the significance of parental influence in developing the need for achievement, and in particular he emphasised the importance of following standards of excellence, self-reliance training, low father dominance

and a crucial role for the mother-son relationship. McClelland's empirical testing was conducted through Thematic Apperception tests and specific games of skill. He concluded that entrepreneurs scored high on need for achievement (nAch). He argued that people who are high in nAch are characterised by the following attributes:

- A desire to take personal responsibility for decisions
- A preference for decisions involving moderate degrees of risk
- An interest in the result of decisions
- A dislike for routine or repetitive work.

In a later study McClelland (1975) shifted the emphasis from achievement to power. He argued that for organisational effectiveness power motivation is required - that is, high power combined with high self-control (socialised power). McClelland's work has been the subject of much criticism. Many writers have questioned the relevance of his theory of need achievement to entrepreneurship and economic development.

There are four major criticisms of McClelland's work. The first is that research methodologies were borrowed from psychology and were inappropriate in measuring entrepreneurship (Hornaday, 1987). Wortman (1986) comments that there have been very few instruments developed specifically for research in entrepreneurship and those that have been developed are ineffective. The second criticism is that the correlations between need for achievement and economic growth reported by McClelland are spurious (Wilken, 1979). The third problem, highlighted by Schatz (1971), is that McClelland in analysing the key relationships between need-achievement and economic growth, unconsciously selected and used his data in a way designed to *support* rather than *test* his theory. The fourth

problem is that modern research in human behaviour has indicated the need for theoretical models that both influence and are influenced by activities in the environment - that is, models that are interactive (Faulconer and Williams, 1985). Traditional personality models are inappropriate in an interactive entrepreneurial environment (Gergen, 1985; Rychlak, 1981).

Following McClelland et al., (1953) many other researchers including Collins and Moore (1970), Hornaday and Aboud (1971), Palmer (1971), Swayne and Tucker (1973) and Shapero (1975) joined the effort to find characteristics that would distinguish entrepreneurs from non-entrepreneurs. As a result, a number of key personality traits in addition to need-achievement dominate the literature. These include risk-taking propensity (Liles, 1974; Sexton and Bowman, 1983), locus of control (Rotter, 1966; Cromie and Johns, 1983; Brockhaus, 1982), problem-solving (Hagen, 1962), and motivation (Wilken, 1979). In the following sections, a number of characteristics will be considered in more detail.

2.3.2 Risk-Taking Propensity

Empirical research carried out by Colton and Udell (1976) on the issue of risk-taking and the entrepreneur suggest that it is the individual's risk-taking propensity which distinguishes him/her from the general population. Cantillon (1755) first outlined the importance of the entrepreneur as a bearer of risk. Knight (1971) indicated that entrepreneurs were 'takers of non-quantifiable uncertainties' and noted that, with the division of ownership and management, an entrepreneur may not be exposed to financial risk but rather to social and psychological risk. Liles (1974) confirms this view. He argues that risk covers a number of areas - the critical ones being financial risk, career risk, family and social risk, and psychological risk.

Ray (1986), in a study of risk-taking, discovered that self-esteem was closely associated with, and might have driven, risk-taking propensity. Those with very low self-esteem either take no risks or very high risks; each action reinforces their initial premise that they are unworthy individuals. Those with a healthy level of self-esteem are able to take risks appropriate to various situations that arise. More recently, research focusing on general risk-taking propensity such as that carried out by Brockhaus (1980 and 1982), and studies conducted by Sexton and Bowman (1983), do not provide conclusive evidence of a causal relationship between entrepreneurs and risk-taking propensity.

This point is borne out by Martin (1982, p. 16)

"a person who assumes the risk of his or her capital is not necessarily an entrepreneur but only an investor. However, one who risks his or her reputation or a portion in a large corporate organisation, as a result of innovation with which he or she is closely identified, fulfils some of the preconditions of entrepreneurship"

Numerous textbooks refer to entrepreneurs as 'moderate risk-takers'. Ray (1993) argues that the phrase may be largely the creation of academic invention unrelated to how entrepreneurs actually think about risk or cope with risk in their management decisions. Risk in entrepreneurship is better understood as a contextual and strategy variable, not a personality variable according to Ray.

Researchers are, however, divided as to the risk-taking propensity of entrepreneurs. The findings appear to vary according to the entrepreneur's sex, cultural background, stage of business development and the type of

business owned, as well as to the research method used. Brockhaus (1987) reports that his research found no statistical difference between a group of entrepreneurs and a group of managers on a number of personality characteristics.

2.3.3 Locus of Control

Related to the theory of need for achievement is the argument that entrepreneurs are characterised by their belief that their behaviour is responsible for determining their fate. According to Rotter's (1966) locus of control theory, an individual perceives the outcome of an event as being either within or beyond his personal control and understanding. Locus of control is the extent to which people believe that they control their own lives.

Rotter devised an 'Internal-External' scale to determine the locus of control of entrepreneurs. The instrument consists of 23 pairs of statements. A respondent is forced to choose one statement of the pair which is most representative of personal behaviour. Items are then summed to obtain a scale score, with lower scores indicating a greater degree of internality. Rotter claimed that an internal locus of control was consistent with a high need for achievement-orientation and that entrepreneurs tended to be on the 'internal' end of the scale. 'Internal' people were defined as individuals who felt they had some influence on the course of events in their lives, as opposed to 'external' people who felt dominated by outside forces such as luck or fate. For 'internal' people, personal destiny comes from within, and therefore, they tend to be more self-reliant and more in need of independence and autonomy (Kets de Vries, 1977).

Perry (1980) described internal locus of control as embracing three features of entrepreneurship - self-confidence, initiative-taking and responsibility-seeking. Borland (1975) studied locus of control, need for achievement and entrepreneurship. She found significant difference in internal locus of control between students who expected to start a business and those who did not. Pandey and Tewary (1979) have provided empirical evidence that people with high 'internal scores' are more likely to be successful entrepreneurs.

Brockhaus and Nord (1979) in their study of a group of entrepreneurs and a group of managers found no difference in locus of control between the groups. However, they concluded that both groups were more internal than the population as a whole. On the other hand, Cromie and Johns (1983) in a similar study of some personal characteristics of entrepreneurs and middle/senior managers found the only apparent significant differences between the groups were, first, that the business dominated the life of the entrepreneur more than it did senior managers, and secondly, the entrepreneurs were found to be more internal than the managers. Cromie and Johns argue that internals tend to be proactive rather than reactive in coping with their environments. The study identified four dominant personality traits - responsibility, determination, perseverance and reliability.

Brockhaus and Horwitz (1985) conclude that while locus of control fails to distinguish between entrepreneurs and managers, it could possibly help to distinguish successful from unsuccessful entrepreneurs. Begley and Boyd (1986) substantiate the view that internal locus of control and efficiency are related. The evidence from these various studies would seem to suggest that locus of control is a key characteristic of successful entrepreneurs.

2.3.4 Other Entrepreneurial Attributes

Other efforts that have been made to identify some of the attributes possessed by the entrepreneur include a study by Welsh and White (1981). They identify 11 personal characteristics that they consider elements for success in starting a business. They are; need to control and direct, self-confidence, a sense of urgency, good health, comprehensive awareness, realism, superior conceptual ability, need for status, an objective approach to interpersonal relations, emotional stability, and an attraction to challenge rather than risk. According to Hollingsworth and Hand (1979), the entrepreneur generally possesses a high level of motivation, good health, total commitment and self-discipline. Taylor (1978) lists such personal traits as mental alertness, analytical ability, human relations ability, responsibility, resistance to stress, ability to organise, decisiveness, integrity, persistence and family backing.

Among the characteristics that Steinhoff (1978) attributes to successful entrepreneurs are energy, initiative, ability to organise, personality, technical competence, administrative ability, good judgement, restraint, communication ability, leadership qualities and patience. Other studies have identified similar characteristics (Hornaday, 1982; Gibb, 1987). In their review of research on personal characteristics and role requirements for entrepreneurs, Timmons et al. (1990) suggest there are more than 20 personal characteristics which discriminate between entrepreneurs and others. A number of their characteristics are included as components of the attributes discussed above but additional characteristics include persistence, ability to deal with failure, and a strong belief in economic values. Timmons et al. argue that successful entrepreneurs are very determined. They are not easily intimidated by difficult situations. They are optimistic and self-confident though they do not

set themselves excessively difficult tasks where the chances of a successful outcome are small.

According to Ray (1993), the literature has ignored some of the more obvious and possibly decisive attributes in explaining entrepreneurial success, such as physical appearance and likeability. He argues that in the business literature, successful entrepreneurs, when profiled, are accompanied by pictures of highly photogenic and attractive individuals and as a result find the road to entrepreneurial success easier. He suggests that the attributes of physical appearance and likeability have not been dealt with in the literature because these attributes do not lend themselves to mail surveys or other formal research methods.

Another psychological dimension which is frequently analysed in studies of entrepreneurs is the motives underlying entrepreneurial behaviour. This emphasis on motives tends to stress the specific goals that entrepreneurs pursue (Wilken, 1979). Cole (1959) suggested security, power, prestige and social service as motives in addition to profit maximization. Stepanek (1960) identified the importance of community esteem, power, the chance to prove oneself superior and the desire for independence. Numerous researchers have suggested that entrepreneurs are motivated to seek control. It has been suggested that personal control has two components; the desire for control and the actual possession of control. A high desire for control is likely to motivate individuals to gain more control. Greenberger and Sexton (1988) in a study of the impact of the desire for personal control on potential entrepreneurs found that persons who identified themselves as potential entrepreneurs desire significantly more control than those who did not plan to initiate a venture.

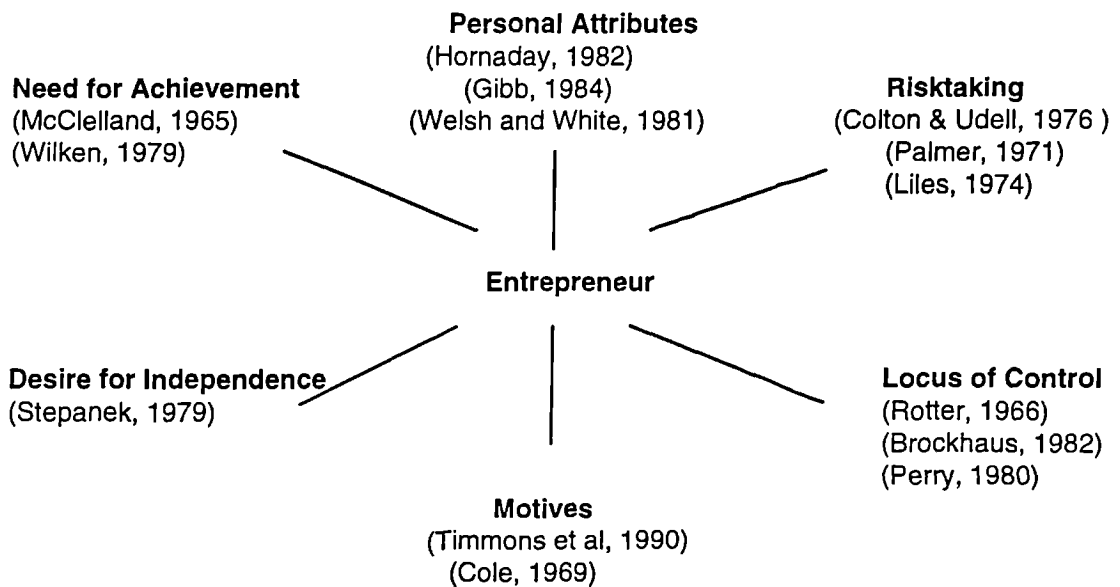
Focusing solely on the personality characteristics of the individual in an effort to determine a profile of the entrepreneur has been criticised by several researchers. Van de Ven (1980) suggests that researchers should not concentrate solely on studies of traits and characteristics. He argues that much can be learned from the history of research on leadership. This research began by studying the traits and personality characteristics of leaders. However, no empirical evidence was found to suggest that certain traits or characteristics are common to leaders. Instead, more recent research into leadership focuses on the behaviour of leaders - that is, what they do rather than what they are and what conditions or situational factors moderate the effects of their behaviour and performance.

Jencks (1950) and Kilby (1971) support this argument. Research they argue should focus on the behaviours and activities of entrepreneurs rather than on personality profiles. Gartner (1989) states that the personality characteristics of the entrepreneur are ancillary to the entrepreneur's behaviour. The primary unit of analysis is the creation of organisations where the individual is viewed in terms of activities undertaken to enable the organisation to come into existence. Research on the entrepreneur should focus on what the entrepreneur does and not who an entrepreneur is. What the entrepreneur does is explained by social learning theory. This theory emphasises the importance of environmental or situational determinants of behaviour. This will be examined in the next section of this chapter: the sociological perspective. Figure 2.4 summarises the views of the main contributors to the psychological school of thought perspective of the entrepreneur.

The psychological perspective is noteworthy for both its diversity and a general lack of specification of the various elements of the entrepreneurial character. The main argument which the psychological viewpoint supports is

that entrepreneurship is a personality variable and that entrepreneurs display greater achievement motivation, achievement values, risk-taking propensity, and self-confidence than other groups in society. They also possess an internal rather than an external locus of control.

Figure 2.4: The Psychological Viewpoint of the Entrepreneur



2.4 THE SOCIOLOGICAL PERSPECTIVE

While personality or trait theorists focus on personal determinants of behaviour, social learning theory emphasises the importance of environmental, or situational determinants of behaviour. According to this school of thought environmental conditions shape behaviour through learning a person's behaviour in turn shapes the environment.

'To predict behaviour, we need to know how the characteristics of the individual interact with the characteristics of the environment'

(Atkinson et al., 1983, p. 58).

Social learning theorists assert that individual differences in behaviour result in large part from differences in the kinds of learning experiences encountered in the course of growing up. Some behaviour patterns are learned through direct experience; the individual is rewarded or punished for behaving in a certain manner. Alternatively, many responses are acquired without direct reinforcement, through observational learning or by observing the actions of others and by noting the consequences of this behaviour (Atkinson et al., 1983).

In predicting how a person will behave in a specific situation, social learning theorists emphasise the importance of individual differences in cognitive development and in social learning experiences. Some of the individual differences, or person variables, that interact with situational conditions to influence behaviour are:

- (i) Competencies: What can the individual do?
- (ii) Cognitive strategies: How does the individual see the situation?
- (iii) Expectancies: What will happen?
- (iv) Subjective values: What is it worth?
- (v) Self-regulatory systems and plans: How can goals be achieved?

All of these individual variables interact with the conditions of a particular situation to determine what an individual will do in that situation. (Atkinson et al., 1983). Mitton (1989) in his study of the behaviour of entrepreneurs argues that it is the entrepreneur's broad thinking that the environment is abundant with opportunity. The entrepreneur's particular trait is knowing how to capitalise on opportunities which may present themselves. Mitton claims

that the entrepreneur behaves in an anticipatory mode and, since he has a sense of what the future holds, can operate with confidence and opportunism.

Many researchers have enumerated the actions the entrepreneur performs in order to set up a new business (Schumpeter, 1934; Cole, 1965; Leibenstein, 1968; Vesper, 1980; Maidique, 1980). Gartner (1985) condenses these actions into six common behaviours

- Locating a business opportunity.
- Accumulating resources.
- Producing the product/service.
- Marketing the product/service
- Building an organisation.
- Responding to government and society.

Chell (1985) lends support to the sociological school approach. She views the development of entrepreneurial behaviours as an interplay between the environment and the situation to which the individual has been exposed. The entrepreneur develops expectancies and values from social experiences. These social experiences in turn influence the person's perception of the entrepreneurial role and expression of values in that role.

Gibb and Ritchie (1982) propose a theory that suggests entrepreneurs can be wholly understood in terms of the types of situation encountered and the social groups to which individuals relate. The model assumes that individuals change throughout life and it is the individual's transactions with specific social contexts and reference groups that shape a person. This theory will be examined further in this section with the discussion focusing on two important dimensions of the sociological viewpoint - socio-cultural factors and family background - and their resulting impact on entrepreneurship.

2.4.1 Socio-Cultural and Environmental Factors

The legitimacy of entrepreneurship refers to a system of values and attitudes within a specific socio-cultural setting for the development of entrepreneurship (Wilken, 1979). A value system which approves of entrepreneurial behaviour, expresses positive attitudes towards business, and awards a high social status to entrepreneurs will stimulate entrepreneurship (Hoselitz, 1957). According to O'Farrell (1986) entrepreneurship will be more likely to flourish in settings where legitimacy is high. Wilken (1979) argues that norms and values do not by themselves either cause or prevent the expression of entrepreneurship - their influence must be seen in the context of other factors.

The importance of some kind of entrepreneurial legitimacy or ideology has been stressed by several social theorists. Weber's *Protestant Ethic* (first published in 1930, translation 1959) is the best known ideology. Weber viewed Protestantism as having to accept God's call to one's chosen profession and that, by being as God-like as possible, one was assured salvation. Since self-indulgence was sinful the individual worked long hours in his business. Unlike Catholicism, where the priest leads his followers, the Protestant, through reading the Bible himself, becomes more individualistic. Protestantism is therefore more likely to create the independence required for entrepreneurship (Storey, 1982). Although Weber's theory may offer an understanding of the role of the Protestant work ethic in the economic development of certain societies, there appear to be certain shortcomings in its applicability to other cultures. This argument is taken up by Fleming (1979) who reports that the entrepreneurs of the Mendoza Province of Argentina are very much part of the Latin America, Roman Catholic culture.

Similarly, Weber's theory does not explain the emergence of entrepreneurship in Japan since the Second World War.

An argument put forward by several researchers is that entrepreneurship is often stimulated by social marginality with groups or individuals on the periphery of a social system, or between two social systems, more likely to behave entrepreneurially. These groups or individuals, due to their religion, culture, ethnic beliefs or minority status, encounter a marginal social position which results in psychological effects which encourage entrepreneurship (Wilken, 1979). Hagen (1962) suggests that entrepreneurial behaviour among certain ethnic minorities is a means by which the disadvantaged minorities seek to alter their *status quo*. Casson (1982) argues that entrepreneurship is not an easy avenue for personal development but that, in comparison with other methods of advancement it may offer the best prospects to under-privileged people.

Stanworth and Curran (1973) support the concept of 'social marginality' in an attempt to further our understanding of the processes of entry into entrepreneurship. They suggest that there is a "perceived incongruity" between the individual's personal attributes and the role he or she holds in society. This relative deprivation may provide the necessary impetus for such individuals to move into entrepreneurship. Frequently there is some type of "determining event" such as the loss of a job, redundancy, transfer, job frustration or reaching a certain age-psychology. This event causes role deterioration and this is often where social marginality sets in. Most entrepreneurs, according to Stanworth and Curran experience some sort of role deterioration. This leads to conflict resolution or determination to regain lost status, which results in the motivation to launch a new enterprise. Shapero (1971) supports this argument and refers to entrepreneurship as a

Kets de Vries (1977, p. 35) describes entrepreneurs as "misfits" and displaced individuals. He states:

"We are usually introduced to a person with an unhappy family background, an individual who feels displaced and seems a misfit in his particular environment. We are also faced with a loner, isolated and rather remote from even his closest relatives".

Kets de Vries' argument suggests that the entrepreneur is someone unable to fit comfortably into conventional organisational life. It appears that the Bolton Committee (1971) support this theory when they state;

"The small firm provides a productive outlet for the energies of that large group of enterprising and independent people who set great store by economic independence and many of whom are anti-pathetic or less suited to employment in a large organisation but who have much to contribute to the vitality of the economy".

(The Bolton Report, 1971, p. 10)

However, many studies report that entrepreneurs use the experiences which they have gained from working with previous employers, and in particular from having worked with specialists, to their benefit when starting a new business. Cooper (1973) provides a most comprehensive and useful framework for explaining the various factors which may contribute to the entrepreneurial decision.

- Antecedent Influences - these include aspects of the entrepreneur's background which affect motivation, perception, skills and knowledge.
 - Family and religious background
 - Educational background
 - Psychological make-up
 - Age
 - Earlier career experience
 - Opportunity to form entrepreneurial groups.

- The Incubator Organisation - the organisation for which the entrepreneur has previously been working, whose characteristics influence the location and the nature of the new firm as well as the likelihood of spin-offs.
 - Geographic location
 - Nature of skills and knowledge acquired
 - Motivation to stay with or leave organisation
 - Experience in small business setting.

- Environmental Factors - various environmental factors external to the individual and his organisation which make the climate more or less favourable to the starting of a new firm.
 - Examples of entrepreneurial action
 - Societal attitudes towards entrepreneurship
 - Ability to save seed capital
 - Accessibility and availability of venture capital
 - Availability of personnel and supportive services
 - Accessibility to customers, accessibility to universities
 - Opportunities for interim consulting
 - Economic conditions.

Cooper's (1973) framework portrays the various factors that influence entrepreneurship, highlighting the most relevant. However, this model has been criticized because it does not predict which factors will actually determine whether an individual will become self-employed. The model demonstrates the individual characteristics and attitudes of entrepreneurs and the relevant environmental factors that influence the decision to become an entrepreneur.

2.4.2 Family Background

Social learning theory emphasises the effects of environmental influences on the personality development of the individual through observational learning

(Bandura, 1986). Parents are the primary role-models in the early socialisation of children. Parents affect both the personality development and career attitudes of their children. Parents as role-models affecting career preferences have been extensively studied (Palmer and Cochran, 1988; Robinson and Hunt, 1992). Factors such as parents' occupation, social status, birth order, and the relationship with parents have been found to be determinants of entrepreneurship. Many researchers argue that the existence of an entrepreneurial parent creates an environment in which entrepreneurial development is encouraged and success is stressed. Social experiences gained by children, such as observing an entrepreneur, may direct the individual's search for a career similar with those early learning experiences (Jacobowitz and Vidler, 1982).

Shapiro and Sokol (1982) assert that the family, and in particular the father or mother, plays the most powerful role in establishing the desirability and credibility of entrepreneurial action for an individual. They claim that 50-58 per cent of company founders in the US had parents who were company owners, free professionals, independent artisans or farmers. Bird (1988) has observed that the father, as an entrepreneurial role-model, helps to shape the individual's value systems and attitudes. Cooper and Dunkelberg (1987), in a survey of owner/managers, found that 50 per cent came from homes in which a parent or guardian owned a business. O'Farrell (1986), from a survey of manufacturing entrepreneurs in Ireland, observed that a high percentage of new firm founders (46 per cent) had fathers who were self-employed, compared with 13 per cent of people who were employed.

Donckels and Dupont (1987) in a study of new entrepreneurs in Belgium, found that 45 per cent had an entrepreneurial father and 19 per cent an entrepreneurial mother. Scherer et al. (1991), in their study of 337 men and

women with parent entrepreneurs, concluded that individuals who observed a parent role-model who they perceive as a high-performer, develop a profile in which personality and the preference for an entrepreneurial career are seen as complementary. Other researchers (Bowen and Hisrich, 1986; Waddell, 1983; Watkins and Watkins, 1983) have also provided descriptive evidence indicating that a large percentage of practising entrepreneurs have at least one parent entrepreneur. Collins and Moore (1970) in their study report that 25 per cent of entrepreneurs had fathers who themselves were self-employed, compared with 17 per cent in a sample of senior executives of large companies. In addition to this, 30 per cent of entrepreneurs had fathers who were labourers, either skilled or unskilled, compared with 15 per cent among business executives. In one study, Mancuso (1975) suggests that a high percentage of adult entrepreneurs were already active in business during childhood. The conclusion follows that entrepreneurs have the ability to perceive profitable opportunities even when young and that early life experiences shape prominent patterns of behaviour among entrepreneurs.

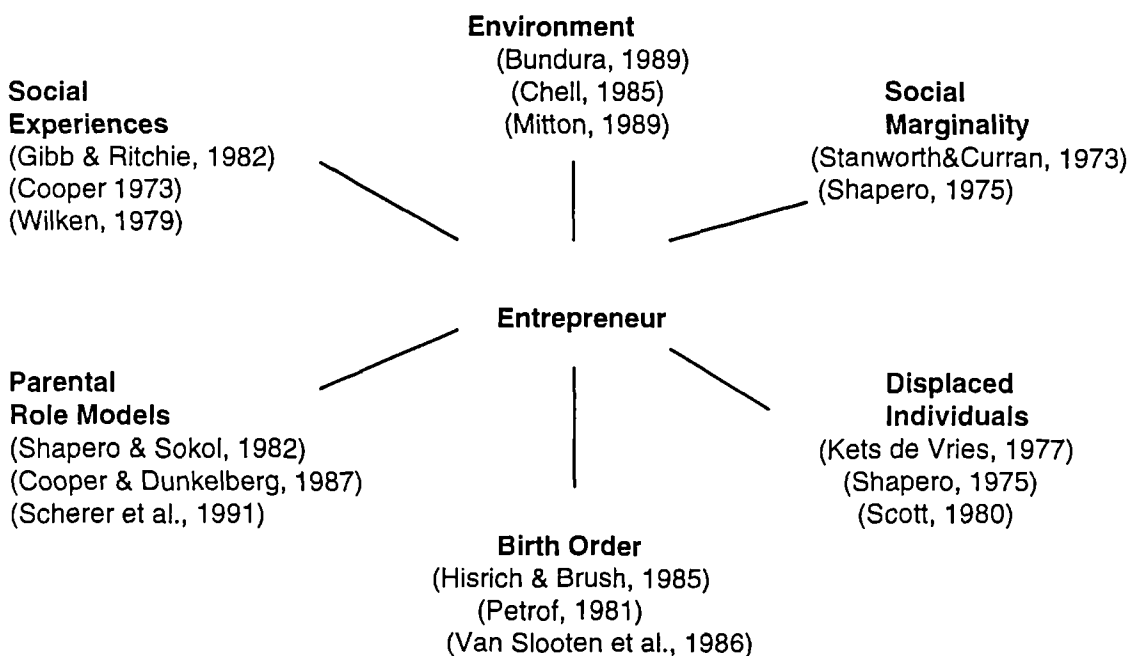
The theory that the majority of entrepreneurs are first-born children has been cited in several empirical research studies as one of the primary demographic characteristics of entrepreneurs (Van Slooten et al., 1986; Hisrich and Brush, 1985; Watkins and Watkins, 1983). Petrof (1981) conducted a discriminant analysis of twelve variables namely, age, years of marriage, years in the labour force, number of previous jobs, years of formal education, number of previous attempts to start a business, oldest child in the family, membership of professional organisations, profit expectations, outside encouragement, anticipated difficulties and evaluation of personal shortcomings. The characteristic most frequently associated with the entrepreneurial group was being the oldest child in the family. The use of birth order as a variable associated with entrepreneurship has centred on the assumption that

individuals born first in their family inherit or develop a set of personality characteristics that predispose those individuals to entrepreneurial behaviours at some point during their lives. It is argued that first, or only-born children experience greater degrees of childhood isolation than later-born children. This is claimed to result, in later life, in higher levels of motivation to achieve recognition and control via manipulation of material objects, rather than social skills and sociability (Collins et al., 1964). However, the concept of birth order has had conflicting research results. Robinson and Hunt (1992) in an empirical test, using methodological controls designed specifically to study entrepreneurship and birth order, refute the majority of the studies indicating a relationship between birth order and the entrepreneur. Hisrich and Peters (1995) report that in many studies of entrepreneurs the first-born effect has not been present. The fathers' occupation seems to be more important than birth order.

An examination of personal details is also necessary to gain an understanding of the entrepreneur. According to several studies, the entrepreneur is aged between 30 and 40 years old (Cooper, 1971; Litvak and Maule, 1974). More specific limits are suggested by Silver (1988) who claims the entrepreneur is aged between 27 and 34 years old, having gained his experience in the work field from the age of twenty. Hisrich (1988) says that the entrepreneur is typically aged 40 years, married and has two children. The mean age of the entrepreneur, at start-up, would appear to be mid thirties - this being consistent with the view that the entrepreneur needs to gain experience in a particular field before starting his/her own business. There are no stated rules which can be applied to the age when an entrepreneur should ideally start business since each particular venture is unique and an appropriate amount of expertise may be gained by different individuals at different rates.

In a study of Northern Ireland entrepreneurs Hisrich (1988) found that the most recent occupation of the majority of the entrepreneurs prior to starting business was in a management position and the highest level of education obtained for one third was second-level standard. A quarter of the sample had obtained education beyond this stage while 16 per cent had attended graduate school. Just over 50 per cent of the entrepreneurs had experience in the current business area. The sample expressed confidence in their skills in business operations, product innovation and dealing with people but reported start-up difficulties in the financial area, weak collateral and marketing problems.

Figure 2.5: The Sociological Viewpoint of the Entrepreneur



Many of the empirical studies carried out to date suggest that entrepreneurship is a male dominated field. However, that trend is changing. Research indicates that the 1990s has been one of the most successful decades for female entrepreneurs. With the world-wide change towards the

increasingly high economic importance of the service industries, women are emerging from this sector as successful entrepreneurs.

It is reported that in the US women have progressed from less than 5 per cent of the nation's businesses prior to the 1970s to owning approximately 30 per cent. They are starting businesses at twice the rate of men and are predicted to own and operate 50 per cent of the nation's businesses by the year 2000 (*The State of Small Business*, 1995).

Hisrich and Brush (1985) found that the female entrepreneur is typically the first-born child, from a middle-class background, who starts her first business venture in the service sector at the age of 35 having first obtained a liberal arts degree and raised her children. While Hisrich and Brush (1985) identify that male and female entrepreneurs have much in common, there are differences in terms of motivation, departure point, business skills brought to the venture, and type of business started.

In summary, the main criteria emphasised by researchers from a sociological point of view are depicted in Figure 2.5. The school sees individuals as changeable throughout the course of their life and career and that factors such as the socio-cultural setting, the environment, family background, work experience, frustration with existing employment, attitudes, and career history are potential influences in the decision to found a business. It appears that as more research and data become available on the interaction between the entrepreneur and the environment - that is, on entrepreneurial behaviour - the evidence increases for a sociological as well as a psychological explanation of enterprise. Socialisation patterns and informal education, particularly during childhood and also later work-life, appear to go a long way towards explaining the origins and motivations for enterprise.

2.5 THE MANAGEMENT PERSPECTIVE

The management perspective views entrepreneurship as embracing the skills required to operate a business during the rapid expansion and growth phase of a venture - skills that include planning, organising, leading and controlling. According to this school of thought entrepreneurship is a series of learned activities that integrate the functional areas of management, marketing, operations and finance into a strategic framework that applies during the growth and development of a firm. According to the management view, entrepreneurship can be taught, a central aim being to identify the specific functions involved and provide education and training to existing and hopeful entrepreneurs.

Highly-developed management capabilities are not always needed during the initial stages of an entrepreneurial small business. The primary objective is on creating and developing innovative products and services. However, as the firm expands and reaches the rapid growth stage, management talents become crucial. During this stage, many entrepreneurs lose control of their companies. Managing growth is different from managing start-up activities. Entrepreneurs often fail to move from a loose, informally-run business to one that requires a *more formal system of planning, leading, organising and controlling*. There is a need to make adjustments in company structure and key personnel. Without these changes the entrepreneur may find it extremely difficult to survive the growth stage. De Carlo and Lyons (1979) support this view. They argue that the factors needed for successful business initiation may be incompatible with those required for long-run successful management of new firms.

2.5.1 Stages of Business Development

Cooper (1980) suggests that as researchers follow the stages of development of a new venture - initiation, growth, and expansion - their focus should shift from psychological, sociological and environmental considerations, to risk-taking propensity, to personal management skills and to the entrepreneur's ability to develop a management team. Swayne and Tucker (1973) suggest that different types of entrepreneurial skills are necessary at different stages of the business life cycle. Roberts (1987) defines the transition of moving from entrepreneurial to formalised management as a strategy of co-ordination which includes the manner in which responsibilities are delegated and the degree of formality with which those tasks are controlled. These functions might include developing business plans, analysing opportunities, acquiring resources and working towards goals (Bird, 1988).

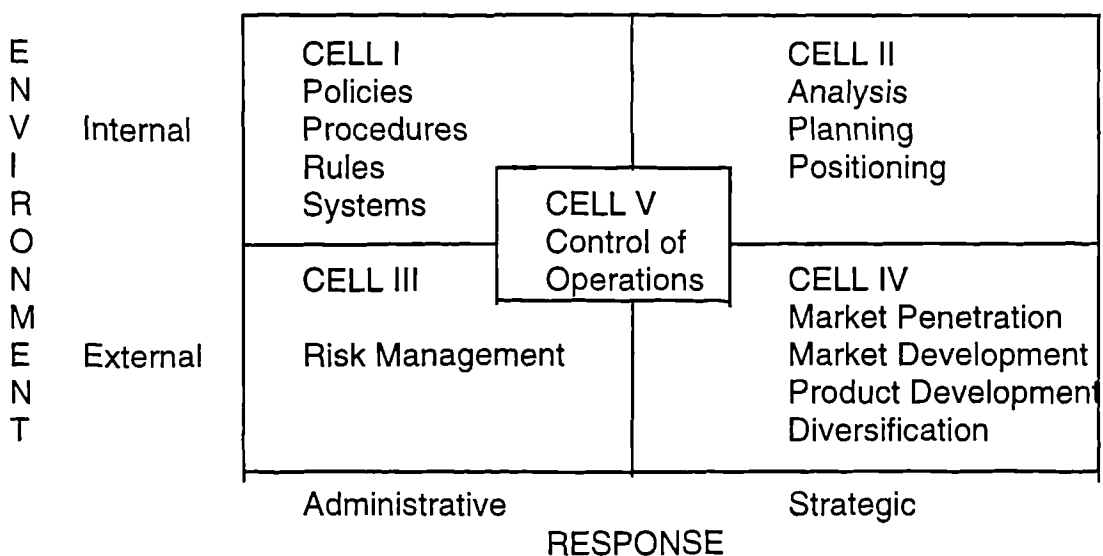
Churchill and Lewis (1983) suggests that firms move through five stages, existence, survival, success, take off, and resource-mature. Flamholz (1986), on the other hand, offers a four stage model with the first two stages of new venture and expansion being essentially entrepreneurial. At the third and fourth stages of development, there is an apparent need for professional management. As the firm moves out of its second stage, it requires formalised planning, control and organisational systems. At the final stage of consolidation, there is emphasis on the development of new structures to ensure continuing mobilisation of resources.

Boyle and Desai (1991) argue that entrepreneurs have to recognise that the transition from small, informal, owner managed operations to a larger

productive capacity involves increased leadership and delegated control on the part of management. To successfully manage the transition from a small owner-operated company to a larger organisation, one must add staff and build a hierarchy that has a well-defined division of labour. As the company moves from an internal to an external focus, the key element in this expansion is control over operations. Graphically this is illustrated in Figure 2.6.

When the company is small the owners are flexible enough to move from an Internal/Administrative perspective to an External/Strategic perspective with relative ease. However, as the company becomes larger, and the management team increases, it requires the additional Cell V (Control of Operations) to facilitate this transition. Cell V emphasises the importance of maintaining control over activities necessary for the company's expansion. A company with a missing Cell V has little chance of long-term survival in a competitive market.

Figure 2.6: The Environment / Response Matrix



Source: Boyle and Desai (1991)

2.5.2 Entrepreneurial Skills

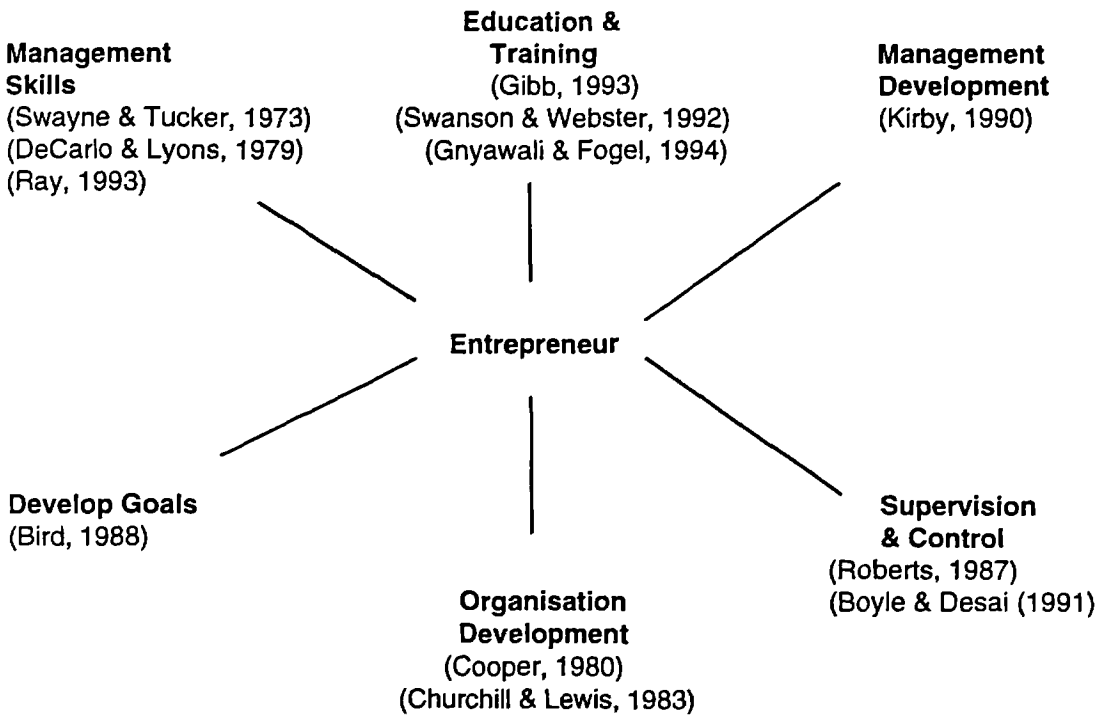
Ray (1993) identifies the skills required by the entrepreneur in order to grow their business as:

- The ability to identify new product/service opportunities. New venture creation depends heavily on creativity and the ability to think innovatively.
- The ability to assess opportunities and the ability to think critically. Critical evaluation is essential in distinguishing a good opportunity.
- Persuasive communication skills; persuasive skills include both oral and written communication, face-to-face, and telephone communication.
- Negotiating skills; dealing with suppliers, distributors, customers, bank, agencies, negotiating skills are inevitably involved.
- Interpersonal skills; without good 'people skills' it will be difficult for the entrepreneur to succeed.
- Listening and information acquisition skills; the ability to listen and the ability to discover the interests and needs of others.
- Problem-solving skills; each new venture creates a unique set of problems. It is critical for the entrepreneur to cultivate problem-solving skills.

In his identification of the skills required by the entrepreneur, Ray (1993) emphasises that he has difficulty clarifying the meaning of skills. The literature, he argues, lacks clarity as to their meaning and importance. The conceptual line between personal attributes and skills is not clearly drawn. This, he reports, is due to the lack of attention given to entrepreneurial skills in research, entrepreneurship education and training programme design. Gnyawali and Fogel (1994) emphasise the importance of training programmes for growth-orientated entrepreneurs. Unless they are well equipped with technical and business skills, they may not be able to overcome various problems they encounter at different stages of their business development. Other studies of the training needs of entrepreneurs emphasise the importance of developing training programmes that are specifically geared to meet the needs of the entrepreneur and delivered by credible training providers who are familiar with the entrepreneurial environment (Kirby, 1990; Gibb, 1993). With regard to the successful management of small firms, evidence is provided by Johnson (1993) of a relationship between business performance and the psychological concept of 'driver-behaviour'. In his study of entrepreneurs' working style, positive values such as experimentation, agreeableness, endurance, excellence and speed, were considered the attributes necessary to stimulate and grow a business.

In conclusion, the management literature on the entrepreneur emphasises the importance of education and the development of a range of skills needed to grow and expand the venture (Figure 2.7). It appears that although it is not essential for an entrepreneur to possess all the talents necessary to run a business at the start-up phase, management skills are much more important during the rapid expansion and growth stage.

Figure 2.7: The Management Viewpoint of the Entrepreneur



The entrepreneur's talents, such as creativity and a high tolerance for ambiguity, are helpful in the growth stage because the firm is undergoing rapid change. The primary focus of the growth phase turns from developing an idea to developing an organisation structure and systems that help a firm to capitalise more efficiently on its innovative ideas. Because of the importance of possessing all the skills necessary to run a company - marketing, technical, financial and management, the development of programmes to study, teach, promote and accelerate entrepreneurship are vital for the growth - oriented entrepreneur.

2.6 THE INTRAPRENEURSHIP PERSPECTIVE

It was once felt that one must own a business in order to be an entrepreneur. However, many researchers now believe it possible for entrepreneurs to exist as employees of large organisations (Kanter, 1983; Drucker, 1985; Peters, 1987).

It was America's Gifford Pinchot III who first introduced the word "intrapreneurship" in his book *Forms of Entrepreneurship* (1985). He applied the term "intrapreneurs" to people who undertake entrepreneurial work within large organisations. Intrapreneurs are people who are entrepreneurs employed by and working within the constraints and support of large organisations. Intrapreneurs are team-builders with a commitment and strong drive who can turn ideas into profitable realities. Their work takes place within the context of organisational job responsibilities and relationships. They can exist at all levels within an organisation. Alertness to opportunities is one dimension of intrapreneurial activity. This visionary behaviour will enable the organisation to discover new opportunities and extend its activities (Ellis and Taylor, 1988).

Nielsen et al. (1985) suggest that intrapreneurship involves the development of independent units designed to create, market and expand innovative products, services, technologies, or methods within an organisation. Reich (1987) found that entrepreneurship is not the sole responsibility of top managers. Rather, it is diffused throughout the company where experimentation and development go on all the time as the company searches for new ways to build on the knowledge already accumulated by its employees. This he defined as "collective entrepreneurship".

2.6.1 Intrapreneurial Characteristics

Much of the early literature and work in the area of intrapreneurship focused upon identifying, developing, training and motivating internal intrapreneurs so that companies could benefit from their ideas and encourage them to remain within the organisation and use their entrepreneurial skills to advantage. As a result, particular attention was given to defining the specific characteristics of internal, as opposed to external, entrepreneurs. Pinchot (1985) identified the following attributes as being characteristic of the intrapreneur.

- Motivation
- Vision
- Action oriented
- Confidence
- Dedication
- Goal Setting
- Risktaking
- Failures and mistakes as learning experiences
- Market/customer focus
- Communication
- General management skills
- Middle class/average educational level

Hisrich and Peters (1995) also examine the attributes of the intrapreneur. They state that there are certain characteristics needed for an individual to be a successful intrapreneur. These include; understanding the environment, being visionary and flexible, creating management options, encouraging teamwork while employing a multi-disciplined approach, encouraging open discussion and building a coalition of supporters. Cornwall and Perlman (1990) suggest that intrapreneurs behave in common ways which enhance the success of their ventures. Characteristics that apply to successful intrapreneurs include the fact that they:

- Rely on feelings as their primary motives
- Serve both self and organisation
- Value people
- Exercise leadership
- Take a long-term perspective
- Are good problem solvers
- Have organisational skills and use sponsors
- Communicate well

- Minimise failures and mistakes
- Are comfortable with risk
- Do their own market research
- Are good decision-makers.

Common to all these characteristics is a propensity to be practical and to get the job done.

2.6.2 Developing Corporate Entrepreneurship

During the mid 1980s the Swedish Foresight Group tested and developed a number of approaches designed to promote entrepreneurial behaviour in large organisations. They established a step-by-step programme for developing corporate entrepreneurship which was subsequently used in a wide range of companies in Europe and the US. The initiative involved three main phases:

Phase 1 Defining the framework for action

A key requirement was that top management create an appropriate set of processes and behaviours so that the intrapreneur can operate in a supportive environment.

Phase 2 Identifying and selecting the intrapreneurs

Here the focus was on self-selection. Intrapreneurs should make clear their interest and aptitude for the programme of their own accord rather than being selected for the task by top management.

Phase 3 Training the Intrapreneurs

The final step involved putting the intrapreneurs through a six month training period. The emphasis was on idea sharing, discussion and feedback to the

group of selected intrapreneurs ensuring the opportunity for networking once the training had taken place (Haskins and Williams, 1987).

More recently the concept of intrapreneurship has been broadened to include fostering an entrepreneurial climate within an organisation. The entrepreneur in a large company must have an organisation which supports, encourages and stimulates entrepreneurship if it is to succeed and remain competitive in the long run (Olson, 1990; Naisbitt, 1993). In establishing an intrapreneurial environment certain factors need to be present and encouraged (Hisrich and Peters, 1995). These include:

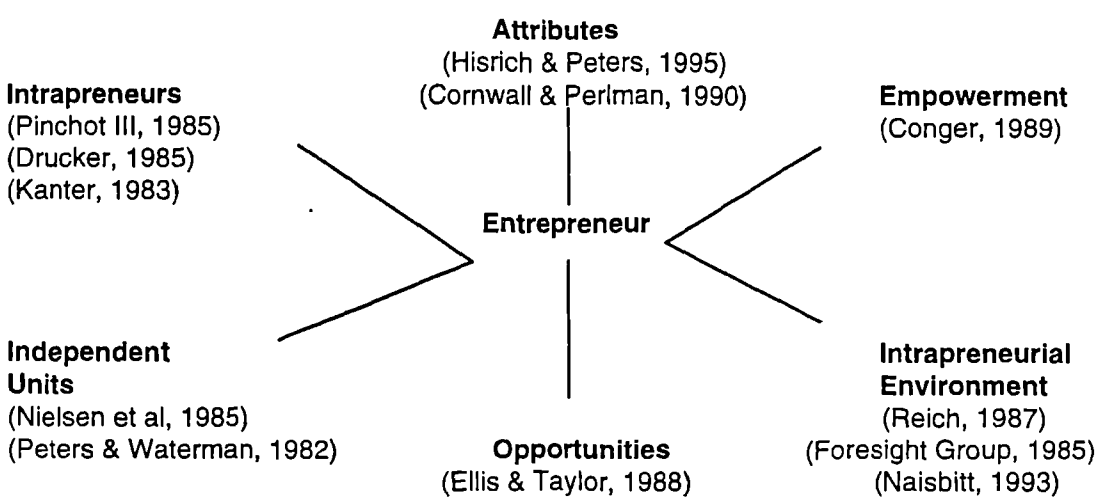
- Organisation operates on frontiers of technology
- New ideas encouraged
- Trial and error encouraged
- Failures allowed
- No opportunity parameters
- Resources available and accessible
- Multidiscipline teamwork approach
- Long time horizon
- Volunteer programme
- Appropriate reward system
- Sponsors and champions available
- Support of top management.

Today, there is also more focus on approaches that facilitate and encourage potential within groups. The term “empowerment” has entered the literature (Conger, 1989). Empowerment is accomplished by attempting to structure organisations such that people have autonomy over their ideas, decisions and judgements. Empowerment decreases domination and increases the capacity for effective entrepreneurial activity. Empowerment is important in creating or maintaining an entrepreneurial organisation capable of responding to new market demands and changing technologies (Cornwall and Perlman, 1990). As a result of empowerment, communication improves, relationships

cut across formal hierarchical lines, people have information, resources and support and anyone can become an intrapreneur if given the opportunity.

The importance of the intrapreneur has been highlighted in a number of studies. In 1981, Texas Instruments conducted a survey reviewing its last 50 or so successful and unsuccessful new product introductions. They found that one factor marked every failure, - the absence of a “volunteer champion leader”. Failures were characterised by someone who was “cajoled” into taking on the task. The survey goes on to highlight a new set of criteria for product development.

Figure 2.8: The Intrapreneurship Viewpoint of the Entrepreneur



First is the presence of a zealous, volunteer champion. After that comes market potential and project economics in a distant second and third place. In a parallel effort, Peters and Waterman (1982) conducted an in-depth study of 24 major business initiatives. Here again the role of the intrapreneur proved crucial. In 15 of the 24 cases that were successful, 14 involved a clear champion, while of the nine failures just three were champion-led.

In conclusion, intrapreneurship is a process by which new products, processes and ideas are developed and implemented within organisations. The people responsible for accomplishing these tasks are called intrapreneurs. The focus of several researchers' work on the intrapreneurship school is illustrated in Figure 2.8. The early literature on intrapreneurship emphasised the importance of identifying, developing, training and motivating these internal entrepreneurs. The specific characteristics of these people were identified including their propensity to identify opportunities and become visionary project leaders. More recent research focuses on the role of top management in organisations - facilitating change, creating an environment conducive to entrepreneurship and empowering its workforce with the ability to be effective in responding to the ever-changing environment.

2.7 CONCLUSION

Over the past two hundred and fifty years of formal theorising about entrepreneurship five major recurring and interrelated themes have emerged. This chapter has examined these five categories into which entrepreneurship can be subdivided, the classical, the psychological, the sociological, the management and the intrapreneurship schools of thought. There is a need to reconcile these various schools of thought of entrepreneurship by recognising the importance of all of them. Each school provides different insights about the many aspects of entrepreneurial behaviour.

The classical body of thought and research on the entrepreneur recognised the uncertainty associated with entrepreneurial activity. Innovation, risk-bearing, finding and recognising opportunities are key attributes of the entrepreneur associated with the traditional school of literature. Little or no

attention is paid to the role of formal education in the literature on the classical approach to entrepreneurship. The psychological school argues that people behave according to their values. It emphasises the unique characteristics and attributes of the entrepreneur, such as achievement, motivation, risk-taking propensity and self-confidence. McClelland (1961) argues that need for achievement can be developed. The influence of education is considered to some degree by psychological theorists. The sociological school focuses on the family and environmental dynamics and suggests that early childhood influences affect career decision. This school of thought recognises informal education concepts of entrepreneurship exchange from parents to children in the family environment. Emphasis on the importance of formal education in an individual's formative years appears to impact positively on the development of potential entrepreneurs according to the psychological viewpoint. That people can be developed and trained and encouraged to acquire the skills necessary to operate and manage a business is the concern of the management school of thought. The impact of education and training is fundamental to the management approach to entrepreneurship. Finally, the intrapreneurship body of thought addresses the concept of entrepreneurs and entrepreneurship within large organisations, visionary people who identify opportunities, manage venture teams, create new products and markets and affect change within their organisations. The importance of both informal and formal methods of education and training permeate the theory of intrapreneurship.

It can be concluded from the foregoing review of the literature that entrepreneurship has meant different things to different people. The concept over the years has undergone some systematic development in the literature by social theorists. It can be argued that both informal and formal methods of education which emphasise the practical transfer of knowledge and skills on

the process of entrepreneurship can assist those individuals who aspire and have the potential to become entrepreneurs. Entrepreneurs may be best described by their activities. They are individuals who start new ventures with a vision for growth, seek change, persist in gathering essential resources and use their energy to achieve profitable results. Entrepreneurs are important because they are the proportion of the business community that distinguish themselves by their entrepreneurial flair, provide new employment, increase income levels and stimulate economic growth.

Chapter Three

The Field of Entrepreneurship

THE FIELD OF ENTREPRENEURSHIP

3.1 INTRODUCTION

This chapter examines the institution and infrastructure of entrepreneurship as an academic discipline. It also considers the importance of the graduate entrepreneur and why well educated young people are essential to a strong modern economy. It reviews previous studies on graduate intentions and graduate entrepreneurship. Entrepreneurship as a career process is also examined and the key influences on a college graduate's decision to enter small business are discussed. The analysis suggests that universities and colleges play a major role in directing and influencing career choice.

It has been argued that the field of entrepreneurial studies is probably the greatest addition to the studies of business and commerce to have occurred since the early 1970s (Ambrose, 1986). Not only is there rapid growth in the number of institutions and faculty involved in teaching entrepreneurship and enterprise development but also a strong interest among university students has been apparent (Hills and Welsh, 1986). Prior to 1973, the entire area of small business, entrepreneurship, and enterprise development, was largely ignored and not included in the university curriculum. The emphasis was, and still continues to be, upon the corporate entity. However, in 1973 in the US, the Small Business Administration (SBA) began funding colleges and universities to assist small business through student research and report preparation. This funding enabled institutions to engage in the process of small business assistance and establish appropriate courses. Other parallel events which lend credence to the discipline have included the establishment of chairs of entrepreneurship in institutions noted for academic excellence. Also the appearance at that time, of a dedicated regular column on small business in the

Wall Street Journal and *Harvard Business Review* propelled the interest in entrepreneurship. Over the past 25 years entrepreneurship courses and programmes have become firmly rooted in universities and colleges world-wide.

According to Ambrose (1986) entrepreneurship would appear to be an area that is inconsistent with the main purpose and focus of the university structure. Within the historical structure of universities, knowledge was pursued for its own value and the applications of that knowledge were to be independently considered outside the university. However, it can be argued that entrepreneurship fulfils the traditional pursuit of knowledge and the development of career paths. Ambrose (1986) further contends that universities bring a degree of respectability to the process of enterprise development which might not otherwise be possible. As universities traditionally attract the clear majority of talented youth, if that talent is to be channelled into the development of enterprises, these individuals must be approached and educated while they are in the university setting. The alternative is to relegate the process of enterprise development to those less well educated and less equipped.

3.2 THE INSTITUTION AND INFRASTRUCTURE OF ENTREPRENEURSHIP

An examination of the institution and infrastructure of entrepreneurship provides an overview about the nature, the strength and the scope of entrepreneurship as an academic discipline. Discussing the "field of entrepreneurship" includes not only entrepreneurship but related fields such as small business management as well as contributors from other fields such as economics, management, and business policy. Entrepreneurship as an academic discipline has been compared to the area of business policy. During the 1960s business policy educators struggled with developing definitions, course content, models and paradigms. Entrepreneurship in its present stage of development is just

overcoming these problems. The parallels between business policy and entrepreneurship has been highlighted by Hills (1988). The area of business policy has integrated the concepts of all the functional activities of a business into a comprehensive concept of strategic management and business planning. Entrepreneurship as an academic discipline applies strategic management and planning concepts to the start-up and early growth stages of the firm.

According to Greenwood (1957), Hall (1968) and Wilensky (1964), a field becomes recognised as an established discipline by examining the elements by which a field is judged. Katz (1991) states there are four elements that make a field distinguishable.

- Systematic theory
- Authority, professional associations and communication sanction
- Ethical codes and culture
- Occupational career.

3.2.1 Systematic Theories and an Established Body of Literature

The start of the broad field of entrepreneurship commenced in the late 1950s and early 1960s. Some of the most famous studies in entrepreneurship, such as McClelland's *The Achieving Society* (1961) and Collins, Moore and Unwalla's *The Enterprising Man* (1964) were published during this time. These publications were responsible for bringing entrepreneurship research from the field of economics into the behavioural sciences. Research on the psychological and motivational characteristics of the entrepreneur grew with other writers contributing to the field, Schrage (1965), Smith (1967), Leibenstein (1968), Hornaday and Bunker (1970) and Palmer (1971). Following these contributions to the literature other researchers joined the effort to identify entrepreneurs

(Swayne and Tucker, 1973; Shapero, 1975; Brockhaus and Horowitz, 1986 and Gartner, 1990).

As discussed earlier, the term entrepreneurship means different things to different people and can be viewed from different conceptual perspectives. The definition of an entrepreneur has evolved over time as the world's economic structure has changed and become more complex. From its beginnings in the Middle Ages, where it was used in relation to specific occupations, the notion of the entrepreneur has been refined and broadened to include concepts that are related to the person rather than the occupation. Risk taking, innovation, and creation of wealth are *examples of the criteria which have been developed as the study of new business creations has evolved* (Hisrich and Peters, 1995).

The first academic courses in entrepreneurship were offered in the US in the early 1960s, followed by a period of rapid growth from 1965 to 1975. Since then the field of entrepreneurship education has experienced even more rapid and unprecedented growth. Vesper (1985) reported an increase of 50 per cent between 1976-84 in universities and colleges that have entrepreneurship courses. In a later survey Vesper (1993) reports that a 48 per cent rate of growth in entrepreneurship courses offered occurred between 1985-92. The number and variety of courses also increased, as well as the number of publications on entrepreneurship topics. Entrepreneurship education in the 1990s continues to evolve as effective methods of teaching emerge. Vesper reports that as the growth rate of entrepreneurship courses in the US has slowed, that of other countries, particularly in Europe, has risen. In the US the split between undergraduate and graduate offerings in entrepreneurship appears skewed toward the former, with 37.6 per cent of universities and colleges surveyed, offering undergraduate entrepreneurship courses only, 23.7 per cent

offering graduate only, and the remaining 38.7 per cent offering courses at both undergraduate and graduate level (Vesper, 1993).

Since 1963 there has been a dramatic increase in the entrepreneurship literature. At least 14 academic journals concentrate on entrepreneurship (see Figure 3.1).

Figure 3.1: English-language Journals Dedicated to the Field of Entrepreneurship

Journal	Starting Date
Entrepreneurship Development Review (Canada)	Unknown
Entrepreneurship Theory and Practice (originally American Journal of Small Business)	1976
Entrepreneurship and Regional Development (originally Journal of Entrepreneurship)	1988
Family Business Review	1988
International Small Business Journal (incorporating European Small Business Journal)	1982
Journal of Organisational Change Management	1988
Journal of Business and Entrepreneurship	1989
Journal of Business Venturing	1985
Journal of Small Business Management	1963
Journal of Small Business (Canada)	1983
Small Business Economics	1988
Small Enterprise Development: An International Journal	1990
Entrepreneurship, Innovation and Change	1992
International Journal of Entrepreneurial Behaviour and Research	1994

Source: Adapted from Katz (1991)

3.2.2 Conferences and Professional Associations

Another indication of progress in the field of entrepreneurship is the growing number of professional associations and research centres that have been established. The more formal disciplines are characterised by professional associations that operate through a network of formal and informal groups.

Professional associations in entrepreneurship represent groups from a wide range of functions including research, education, and practice.

Figure 3.2: Entrepreneurship Organisations and Conferences

- 1. U.S. Organisations in the Broad Field of Entrepreneurship/Small Business**
 - Academy of Management, Entrepreneurship Division
 - Association for Private Enterprise Education
 - Family Firm Institute
 - International Council for Small Business (ICSB) with 5 affiliates
 - International Small Business
 - The Association of Collegiate Entrepreneurs (ACE)
 - The Small Business Institute Directors Association (SBIDA)
- 2. U.S. Conferences**
 - Annual Creativity, Innovation and Entrepreneurship Conference (SBA)
 - Babson College Entrepreneurship Conference
 - Gateways to Entrepreneurship Research Conference (Saint Louis University)
 - AMU/UIC Symposium of Marketing and Entrepreneurship Research (University of Illinois at Chicago).
- 3. European Organisations in the Broad Field of Entrepreneurship / Small Business**
 - Entrepreneurship Research Network of Ireland (ERNI)
 - European Council for Small Business (affiliate of ICSB above)
 - European Foundation for Entrepreneurial Research (EFER)
 - European Foundation for Management Development (EFMD)
 - European Institute for Advanced Studies in Management (EIASM)
 - United Kingdom Enterprise Management and Research Association (UKEMRA)
- 4. European Conferences**
 - European Foundation for Entrepreneurial Research Conference Promoted by EIASM
 - European Small Business Seminar promoted by EFMD
 - IntEnt - Internationalising Entrepreneurship Conference
 - Nordic Small Business Conference
 - United Kingdom National Small Firms Policy and Research Conference promoted by UKEMRA.

Carsrud (1991) has highlighted some of the main differences between North American and European approaches to the study of entrepreneurship. First, it is

important to understand the social, political and cultural context of the infrastructure supporting entrepreneurship. Unlike North America, where the Small Business Administration operates as the official focus for SMEs, in Europe there is an active central government orientation toward small/medium businesses, combined with traditional government ownership of critical industries. This divergence has an impact on the policies governing entrepreneurship. There are a number of European assistance programmes strongly supported by central governments. Programmes like SPRINT and other initiatives of the European Commission such as DGXXIII, which includes promotion of SMEs among its responsibilities, are playing an increasingly critical role in the development of entrepreneurial education, support and research. Training for enterprise is also another important aspect of regional development in Europe (Dineen and Banks 1991).

Another critical difference between Europe and North America is the European emphasis on regional economic development. In North America the major emphasis in entrepreneurial studies has been on the individual entrepreneur, the venture, or capital markets. In Europe the concern has been with the regional economic development of areas of underemployment such as Ireland, Portugal, Spain, Southern Italy and Greece (Birley and Westhead, 1990). However, the European use of incubators as a formal measure to foster economic development is comparable to that in the United States.

In Europe the majority of colleges and universities are government-supported whereas in the United States there are significant number of private colleges and universities. This difference has implications for the funding of chaired professorships and programmes. In addition, major European universities have been slow to adopt entrepreneurial and small business programmes. They mostly concentrate on research in the sciences and humanities. Most business

education, especially in the U.K., has been associated with Colleges and the former Polytechnics. In North America there are 29 university-based research and teaching centres in entrepreneurship (Sandberg and Gatewood 1991). In Europe the figure though low is expanding rapidly. Many of the European centres have strong educational and regional economic development components.

3.2.3 Professional Culture

The image of the entrepreneur has changed substantially in recent years. The entrepreneur is now recognised as *the kind of person who is needed to overcome industrial stagnation and create wealth and jobs*. Entrepreneurs are seen as individuals who break new ground and undertake ventures that somehow never get started during normal everyday business activities. They identify new business opportunities, products and markets, and usually present a picture of power, success, and wealth - the image of the business elite. The entrepreneur is part of the folklore of western industrialised nations. To start a business, to be independent, to be one's own boss constitute the dreams of many people (Winfield, 1984).

In addition, the values and norms of the entrepreneur as a professional are based on the concepts of creativity, innovation, and the opportunity for development within a dynamic environment. It is now widely accepted that entrepreneurial activity is the key to innovation, improved productivity, and more effective competition in the market place (Ronstadt, 1985). Risk-taking, leadership, achievement, and an action orientation in pursuit of opportunities, are recognised as important cultural components of entrepreneurship (Plaschka and Welsh, 1990).

3.2.4 Occupational Career

Additionally, the professional status of entrepreneurship can be measured by observing whether or not it leads to an occupational position or career. A career as an entrepreneur is becoming more popular than it once was, as a result of government and educational drives to raise awareness and responsibility for self-employment and small business ownership. Entrepreneurship is now being recognised as a career process. There is a growing body of literature that indicates entrepreneurship is a process where multiple ventures are the rule more than the exception (Stevenson et al. 1985). Ronstadt (1985) suggests that an entrepreneurial phenomenon, called the *Corridor Principle* exists. It says that most entrepreneurs will see corridors leading to new venture opportunities that they could not see and/or exploit before getting into business. Just as a managerial career is often a progression of jobs and positions, an entrepreneurial career is usually a progression of ventures or the creation of new ventures within an existing venture (Ronstadt, 1985).

Ronstadt (1985) argues that most people, even entrepreneurs, do not think of entrepreneurship as a career. Only a minority of all future entrepreneurs will know when they attend college that they will probably pursue entrepreneurship as a major life goal. Of those who are considering entrepreneurship while at college only a small minority will start right after graduating. Another small minority will wait but anticipate their entrepreneurial careers by explicitly choosing to work for someone else in a position or industry which will prepare them for their future venture(s). The vast majority that become entrepreneurs will go to work for someone else without anticipating an entrepreneurial career. Ronstadt (1985) stresses the importance of sensitising students to the fact that entrepreneurship is a possible career option they will face or consider in the future.

Huuskonen (1993) suggests that an individual's career involves a sequence of interrelated decision situations. The decisions that are made restrict future choice alternatives. Entrepreneurship and career mobility are understood as decisions that can occur at any stage of a person's career. They can be repeated several times during the entire career. Each career decision involves basically similar decision processes. The career decision process incorporates three sets of choice determinants: general background factors, personal factors such as the person's abilities, values and beliefs, and the contingency or situational factors.

Background factors give potential entrepreneurs a set of values, knowledge, attitudes and abilities which affect their orientation on the career path. If there is previous nearness to entrepreneurship, such as entrepreneurial parents, it seems to have a strong positive influence on the likelihood of becoming an entrepreneur. Personal factors explain why different people evaluate entrepreneurship in different ways and have different interpretations of the business environment. As a result of learning and socialisation processes individuals have internalised those norms, ideas and behavioural patterns they follow. Situational factors can have different meanings for different persons. They have an effect on intentions only after the perceptions of the conditions have been 'screened' to fit into the relevant cognitive map of the entrepreneur. Entrepreneurial career decisions are best explained therefore with the person's cognitive perceptions and interpretations of the present situation and how they relate to that individual. Entrepreneurship develops if it is perceived as the best alternative. It involves background, personal, contingency and situational circumstances (Huuskonen, 1993).

Several career options exist within entrepreneurship. Starting a new venture is only one possibility among entrepreneurial career choices (Clouse, 1989). An individual can seek employment in a newly established firm where the activities and structures are evolving and the dynamism of the entrepreneur can be experienced (Gundy, 1989). Another option exists within established firms where entrepreneurial activity is required for renewal and change. As an intrapreneur within an established setting, an individual may pursue new ideas and innovations (Kanter, 1983). Other opportunities for an entrepreneurial career exist within established firms, creating new products and services. Franchises and family businesses also offer career choices for aspiring entrepreneurs.

3.3 PREVIOUS STUDIES ON ENTREPRENEURIAL INTENTIONS

Whether or not a graduate sets up his or her own business is dependent on a variety of factors. While it has been established that entrepreneurs appear to possess a number of common characteristics (McClelland, 1965; Gibb, 1987; Hornaday, 1982), the establishment of a business is also contingent upon a wide variety of other factors, including education and promotional activities, the entrepreneur's acquisition of knowledge and a range of skills necessary to start an enterprise and a supportive social and economic environment.

Several research studies indicate that students' attitudes towards enterprise and small business are positive (Brockhaus and Horowitz, 1986; Karr, 1988; Scott and Twomey, 1988). Jackson and Vitberg (1987) report that business college graduates and students are increasingly disenchanted with career prospects as organisational employees. Intense competition, cost cutting pressures, and acquisitions and take-overs have resulted in large company restructuring. This has undermined traditional values such as employee loyalty, security, and ownership of results. Consequently, more and more business students view the

possibility of starting and operating their own business as a viable alternative to being employed in an established company (Duffy and Stevenson, 1984).

Other surveys support this view. Karr (1988) reveals that 46 per cent of college students consider a "business of one's own" an excellent way to get ahead. In a University of Pittsburgh survey of 1,000 MBA students from top business schools in the U.S., 44 per cent responded that they wanted to become an independent entrepreneur. In contrast, only 34 per cent wished to be a high-ranking corporate manager (Sandholtz 1990). Scott (1988), based on data collected from English students, reported that 25 per cent had a business idea and that 41 per cent aspired to self-employment. Figures from Harrison and Hart (1989) revealed that over 51 per cent of a sample of Northern Ireland students expressed a positive desire to run their own business. Hills and Welsh (1986) in a survey of almost 2,000 students, found that 80 per cent expressed an interest in taking one or more courses in entrepreneurship. Brenner et al. (1991), in their study of 237 graduates in the US, found that business graduates generally perceived business ownership in a positive light. However, the survey revealed an inconsistency between the graduates' attitudes towards owning and operating their own business and their intentions toward pursuing such a career. When they were given complete freedom of choice, 55 per cent preferred operating their own business. An interesting point was that when they were asked their most likely choice considering their actual situation and constraints upon their options, only 5 per cent indicated that they would probably choose to operate their own business.

In their international study of entrepreneurial interest among business students Weihe and Reich (1993) found that 34.3 per cent of those questioned had an unreserved interest in self-employment. This figure includes a percentage of 3.2 per cent of those who were already self-employed. The percentage of those who

were undecided was 50.5 per cent. An unqualified refusal was given by 15 per cent of those questioned. The study found the highest number of students already self employed, 6 per cent, was in America. Brown (1990) reports that in Japan between 2 per cent and 2.5 per cent of graduates start their own business within a short time after graduation.

It is clear from the evidence of a number of studies in the literature that the preferred career of a considerable number of students and graduates is towards business ownership. However, many students and graduates perceive several obstacles that militate against entrepreneurship, such as lack of experience, or lack of finance, which block the path towards their preferred choice. The cause of this perception may lie in the present business curricula, which, up until recently, almost entirely has focused on the needs of aspiring middle and functional managers, rather than the needs of aspiring entrepreneurs. McMullan and Long (1987) suggest that the instructional methodology of middle management is not well suited to aspiring entrepreneurs, therefore the curriculum for an entrepreneurship programme should be very different from that of management programmes. The issue of curriculum for enterprise development is discussed in detail in the next chapter.

3.4 KEY INFLUENCES ON GRADUATE ENTREPRENEURSHIP

The demand for an entrepreneurial career is reflected in the growing number of universities that have added courses and programmes to their business curriculum. Traditionally, most entrepreneurs began their career by working for someone else. Over time, as this type of employment failed to satisfy their needs, they left to start their own businesses (Brockhaus and Horowitz, 1986). Now many students have a greater awareness of organisational life, its rewards and constraints, and often consider such employment as temporary. This allows

graduates to gain the experience and financial resources necessary to start their own business (Brenner et al., 1991). However, although a graduate might consider entrepreneurship more attractive than working for an organisation, perceived barriers, such as lack of finance or lack of experience, could cause the graduate to become an employee rather than an entrepreneur.

3.4.1 Background Factors

In a study of graduate entrepreneurs, Rosa and McAlpine (1991) found that just under half of the graduates they surveyed felt that their university had a strong influence on their ideas about a career. However, they concluded that this influence was not always oriented towards employment. Of the graduates who were self-employed (4 per cent), just under half indicated that their university had a strong influence on their idea for a career, far stronger than the influence of parents, friends and previous work experience. The study identified a number of issues that may discourage significant numbers of graduates forming their own businesses:

- Demand and competition for the limited supply of graduates is likely to increase as the supply of school leavers decreases.
- Traditionally, the graduate population has been oriented towards careers in employment. The number of graduates entering self employment directly has been relatively stable at just over 1 per cent. (Universities Statistical Record).
- Education and careers advisory systems are geared to service the recruitment requirements of the public sector and large businesses.

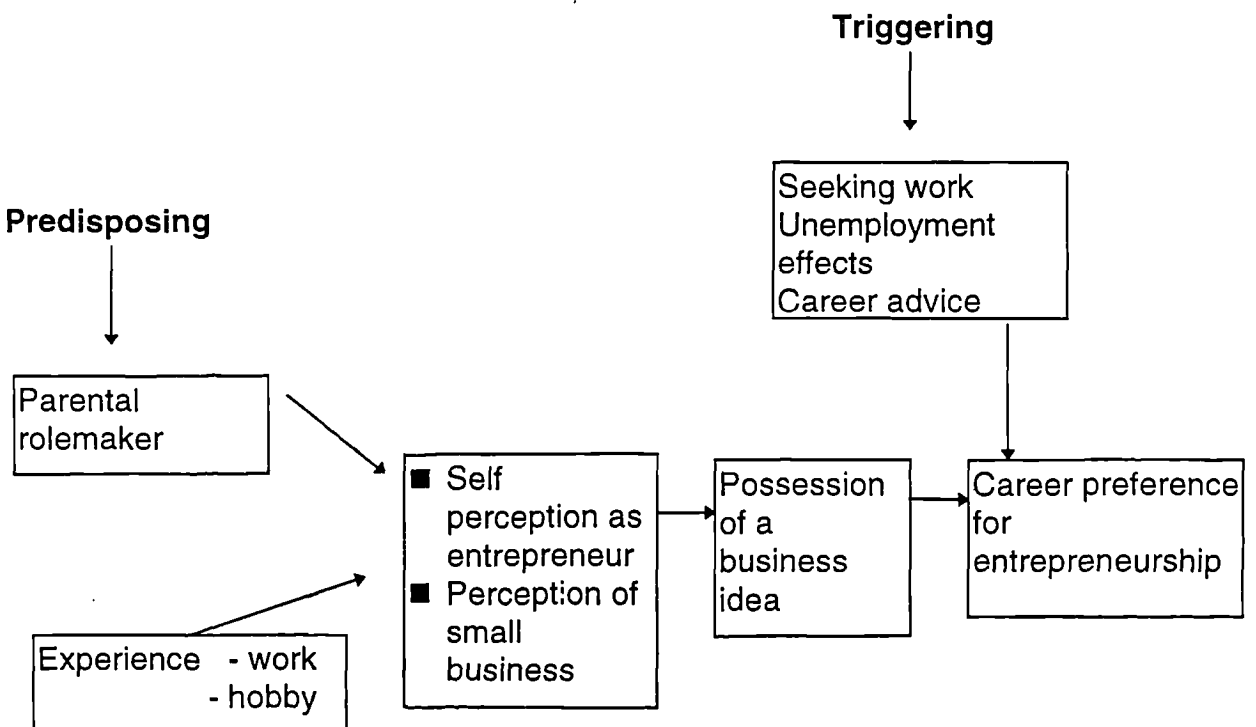
In a study of Irish graduates who had participated in entrepreneurship initiatives and programmes while at college, Fleming (1992) found that a comparatively

high proportion (45 per cent) of the sample reported that the course taken had a positive effect on the graduates' subsequent career decision. The study also found that 5 per cent of the respondents had initiated a start-up venture within five years of graduation.

According to Scott and Twomey (1988), the key influences on students' aspirations towards entrepreneurship are:

- Predisposing factors such as background, personality, and perception factors that develop over years.
- Possessing a business idea. This they state is the key to small business aspirations, as often, possessing an idea may prompt entrepreneurial aspirations and provide a pull toward them.
- Triggering factors, namely the effect of looking for work, career advice received, and the prospect of unemployment.

Figure 3.3: Main Factors Influencing Aspiration to Entrepreneurship



Source: Scott and Twomey, 1988

A similar three-step motivational model has been put forward by Hawkes (1981).

- Feasibility - perceived capacity to undertake entrepreneurial endeavour
- Achievement orientation or desirability
- Displacement - the stimulus or triggering factor.

In both surveys, it was established that those with self-employed parents expressed a preference for self-employment themselves. The influence of parents appears to be two fold - first, as occupational role models, and second, as resource providers. While research to date has not been entirely conclusive, the evidence suggests that parental value systems and expectations are seen as providing the context from which the entrepreneur emerges. Individuals who observed a parental role model who they perceive as a high-performer develop a profile in which personality and the preference for an entrepreneurial career are seen as complementary (Sherer et al, 1991).

3.4.2 Personal Factors

A number of researchers, including Borland (1975), Brockhaus (1980) and Sexton and Bowman (1984), indicate that students who express entrepreneurial intentions exhibit psychological traits that differ from those of other students and are characteristic of entrepreneurs.

Scott and Twomey (1988) in their survey of 1,000 students found that the aspiring entrepreneurs rate themselves significantly higher than other students on items that relate to independence, capacity for hard work, the ability to take risks and opportunity seeking. They also perceived that working for themselves gave an opportunity to be creative and original, freedom from supervision and an opportunity to be responsible.

Another study by Sexton and Bowman (1987) developed a profile of the entrepreneurship student. They tend to be more autonomous than others, possessing a high degree of self-reliance and self-determination. They tend to welcome change and new experiences and can be both flexible and unpredictable. The study also suggests that entrepreneurship students may often behave inconsistently when faced with routine situations. They can be depicted as independent individuals who dislike restraint, restriction and the routine and are capable of original thought, especially under conditions of uncertainty. Many of them need to develop better communication skills and to become more aware of how others perceive their behaviour.

3.4.3 Environmental and Situational Influences

It has been argued that providing a reasonable supply of graduate entrepreneurs first requires providing an environment congenial to creating potential entrepreneurs (Shapero, 1971; Reynolds, 1992). Shapero (1971) suggests that perceptions are often far more important than objective facts and that potential entrepreneurs enact an environment that appears favourable. He further contends that there is a need to provide a “nutrient rich” environment for aspiring entrepreneurs. This environment should provide credible information, credible role models and emotional / psychological support as well as the more tangible resources. It should also provide the opportunity to attempt innovative actions at relatively low risk.

Work experience, according to Scott and Twomey (1988), is another crucial factor that helps shape career aspirations. While the influence of education in the development of skills, attitudes and values may be considerable, the decision to start a new firm usually arises largely as a consequence of the work and

occupational experience during and after the education period of early adulthood. In the Scott and Twomey (1988) survey, one third of the students with work experience said they had a business idea, as opposed to less than one tenth of those who never worked. This is important, as nearly 52 per cent of those who preferred self-employment said that they had a business idea, as opposed to 16.5 per cent who wanted to work in large businesses.

The survey also indicated that those students with a business idea rank themselves significantly higher on entrepreneurial characteristics than those without a business idea. The way in which a student spends their spare time also appears to influence career aspirations, with potential entrepreneurs more likely to have either a technical or craft hobby, as well as a business idea, of course. The main economic factors which were of importance to the aspiring entrepreneur were the economic climate and the availability of support from government and financial institutions.

3.5 CONCLUSION

From a review of the literature it can be concluded that the field of entrepreneurship is growing and will continue to grow in the next decade. Ronstadt (1985) reports that the field will expand into an established and ultimately accepted field of academic inquiry. He argues that basic socio-economic forces will propel this expansion. Fundamental changes are occurring that foster a long term preference for starting, operating, and harvesting new ventures. These include the growing recognition that larger organisations do not fulfil basic needs for autonomy and security. There is a shift in values from traditional job security to self expression, personal development, and independence from large organisations.

Having examined the various schools of thought on entrepreneurship in the previous chapter, it can be argued that higher level education is not a critical ingredient for success. However, the literature indicates a marked interest by students and graduates in enterprise and small business ownership. The attitudes and values within universities and colleges are commonly seen as contributing to graduate career choice. The emerging enterprise culture in the education system appears to be having an impact. However, even though students may consider an entrepreneurial career, perceived barriers such as lack of finance or lack of experience militate against immediate entry into self-employment. It can be assumed that the vast majority of graduates will choose a career in employment.

Traditionally, universities and colleges have not prepared students for self-employment as a career option, resulting in the loss of many potential entrepreneurs. To address this educational bias towards large businesses and lack of information on entrepreneurship as a career option, many universities and colleges now are offering topics and courses related to entrepreneurship and small business. By taking such action and increasing awareness of how small businesses enter the market place and operate, the number of graduates selecting a career path that leads to entrepreneurship should increase.

Key influences such as educational enterprise initiatives, promotional activities, parental role models, work experience and possession of a business idea all contribute to a graduate's aspirations to become an entrepreneur. Universities and colleges play a major role in influencing graduate career choice. It is important that these institutions, through their culture and programmes, raise awareness that entrepreneurship is a viable career alternative that students should consider in their career choice. Students should be encouraged to explore a career path that may include entrepreneurship.

Chapter Four

The Curriculum for Enterprise Development

The Curriculum for Enterprise Development

4.1 INTRODUCTION

The primary aim of this chapter is to examine the various approaches to curriculum design and development for courses in entrepreneurship and enterprise development. The first section discusses the different elements of the student learning process and why entrepreneurship education requires different learning methods from conventional education. This is followed by a review of suggested curricula to meet the needs of aspiring entrepreneurs. The teaching strategies used to promote the development of entrepreneurial skills are outlined, together with an exploration of the role of entrepreneurship educators. Finally, an overview of evaluation theory is presented.

Various studies suggest that the entrepreneurial role can be culturally and experientially acquired and therefore influenced by education and training (DeCarlo and Lyons, 1979; Vesper et al., 1989). It is important at this point to clarify the differences that exist between the often confused areas of education and training. Enterprise education is the process or series of activities that aims at enabling the individual to assimilate and develop knowledge, skills, values and understanding that are not simply related to a narrow field of activity, but allow a broad range of problems to be defined, analysed and solved (Garavan et al., 1995). Enterprise training can be defined as a more planned and systematic effort to modify or develop knowledge and skills through learning experiences to achieve effective performance in an activity or range of activities (Garavan et al., 1995). Education is often perceived as the prerequisite for training as it provides the basic skills and ability to equip individuals to make use of and acquire expertise when required. The foregoing definitions prompt the question - whether the present educational system, at all levels, encourages the concept of

an enterprise culture? Enterprise demands imagination, lateral thinking, great flexibility and energy. Preparation and cultivation of these attributes commence in the educational system where powerful attitudes are formed.

As a result of the increased awareness of the benefits of entrepreneurship, enterprise education is being widely introduced into primary, secondary and higher education institutions. Its major objective is to help develop enterprising people and to inculcate an attitude of self-reliance through the process of learning (Cotton, 1990). Enterprise is also needed in large organisations and the public service as well as small firms. It is not confined to the context of setting up one's own business. In higher education the aim of entrepreneurship courses is to produce graduates who are capable of being innovative, who can recognise and create opportunities, take risks, make decisions, analyse and solve problems and communicate their findings clearly and effectively. McMullan and Long (1987) argue that in order to provide effective entrepreneurial education, students should deal with ambiguity and complexity. They must learn how to find problems as well as how to design solutions and should have substantial hands-on experience of the small firm sector.

Scanlan (1986) argues that education for self-employment requires the teaching of three sets of skills:

- Technical skills related to the nature or kind of business;
- Business management skills, relating to marketing, accounting, finance and personnel;
- Personal entrepreneurial skills which are closely related to the reason why people go into business.

He states that these three areas are essential for business success. Other enterprise competencies include interactional skills, initiative and efficiency skills.

4.2 THE STUDENT LEARNING PROCESS

Guskin (1994) identifies three types of student learning:

- Accumulation of information and knowledge,
- Skill development
- Conceptual development.

He states that student learning is complex. At the undergraduate level, students are required to accumulate knowledge in a wide array of subjects with depth in at least one. They are expected to develop skills in writing, communication, quantitative and scientific methods, and often also to learn a foreign language. Another requirement is the development of conceptual tools that enable them to compare and contrast the material they are acquiring and to make judgements about its relevance to other issues of concern.

There is strong consensus in the literature on how student learning can be improved. Two main approaches are suggested, first, certain types of environments foster learning, and secondly, faculty can increase student learning, through better practices. Norman (1993) states that the optimal environment for learning exists when faculty:

- Provide a high intensity of interaction and feedback
- Have specific goals and established procedures
- Motivate
- Provide a continual feeling of challenge, one that is neither so difficult as to create a sense of hopelessness and frustration, nor so easy as to produce boredom
- Provide a sense of directly working on the task
- Provide appropriate tools that fit the user and tasks
- Avoid distraction and disruptions that intervene and destroy the subjective experience.

Chickering and Gamson (1991) summarise many years of research on good practice in college training. They conclude that good practice:

- Encourages student/faculty contact
- Encourages co-operation among students
- Encourages active learning
- Gives prompt feedback
- Emphasises time on task
- Communicates high expectations
- Respects diverse talents and ways of learning.

Figure 4.1: The Student Learning Process

Types of Student Learning	Faculty role	Peer-Group Role / Individual Learning	Technology
Accumulation of knowledge and information	Faculty presenter, faculty or librarian as guide to resources; faculty assessment of learning	Independent learning; use of guides to access new technology and/or help with independent learning	Interactive technologies; access to databases; communication technology network with others throughout country
Skill development	Faculty coaching outside of class; faculty as group discussion leader; faculty as trainer of student coaches	Older and more experienced peers as coaches; action settings using skills	Interactive technologies; computer simulation
Conceptual development	Faculty as mentor and model; small group discussion leadership; faculty as convener of co-operative learning groups; one on one advising; faculty-student interaction	Peer group interaction - co-operative learning groups; testing ideas in real life experience; independent learning	Simulation / virtual reliability; human simulation; communication technology networks

Source: Guskin (1994)

Guskin (1994) emphasises the need to create learning environments focused directly on activities that enhance student learning. He suggests the role of faculty must be restructured to maximise essential faculty - student interaction, to integrate new technologies fully into the student learning process, and to enhance student learning through peer interaction. The above process model (Figure 4.1) indicates the challenge for entrepreneurship educationalists to integrate the new world of simulation and interactive technologies with their own unique role as mentors, coaches, facilitators, and teachers.

4.3 THE CURRICULUM FOR ENTERPRISE DEVELOPMENT

The first generation of modern entrepreneurship programmes and courses owed much in origin and design to developments in the leading business schools of the United States. They began to appear in higher education institutions from the late 1960s onwards. The early focus was on small business management and entrepreneurial studies. Since then the emphasis has moved to issues surrounding the creation and management of new growth oriented ventures - that is, to enterprise development. This orientation stresses the development of new business into strong, viable enterprises that are now vital to the economic and social development of a nation. Murray (1986) contends that educational activity is principally aimed at long-term effect and that its consequences will work their way out in society in a generational time scale. Since, according to Murray, the education system and its activities are viewed as one of the fundamental forces shaping society, incorporating curricula concerned with entrepreneurial and innovative matters should have a major long-term influence on economic development and society in general.

At the outset it should be noted that business schools were founded in the early twentieth century to provide middle managers for large scale organisations. The curriculum was shaped to fit the needs of upper middle managers (McMullan and Long, 1987). The functional differentiation of programmes in business schools corresponds to the functional departmentation of large corporations - marketing, accounting, finance and personnel. This type of structuring is at the core of business education. It is widely accepted that this education sector concentrates a great deal on the past with emphasis on the origins and development of ideas and concepts. The focus is on understanding, feedback, critical judgement, analysis of large amounts of information, with evaluation by written assessments. Grant (1986) refers to the concern of a number of educationalists that the education system places too much emphasis on the acquisition of knowledge and ability to analyse. Not enough emphasis is placed on helping students to acquire particular skills and to use knowledge. McMullan and Long (1987) suggest that the instructional methodology of middle management is not well-suited to aspiring entrepreneurs, therefore the curriculum for an entrepreneurship programme should be very different from that of a management programme. As the environment of the entrepreneur is different from conventional large organisations, early stage ventures have most problems. Mullan and Long argue that entrepreneurship education needs to be differentiated more by stage-of-venture development, rather than by department or functional expertise.

A review of the literature (Ronstadt, 1985; Timmons et al. 1985) indicates that the most widely supported decision criteria for a start-up venture are:

- The importance of market-related factors such as the need to determine market potential of the product or service offered and the potential competitive response facing the new venture;

- The need for cash flow and profit and loss projections to judge the potential of the new business opportunity;
- The importance of obtaining the various types of resources required by the new venture;
- The need for a good fit between the skills and abilities of the entrepreneur or the entrepreneurial team and those demanded by new venture opportunities.

All these factors must be taken into consideration when planning a curriculum that meets the needs of aspiring entrepreneurs. Aspiring entrepreneurs need to understand the process involved in initiating and managing an enterprise (Hills, 1988).

Gibb (1987) suggests that in order for education to move towards a more entrepreneurial focus changes are required in the way learning takes place. Students should be encouraged to cope with the real world by:

- Learning by doing - gaining insight as well as knowledge by involving students in problem-solving in real-world situations right up to, and through, the solution and action component.
- Encouraging students to find and explore the wider concepts relating to a problem from a multi-disciplinary viewpoint.
- Helping students become accustomed to using immediate data, personally generated, and judging the use of this, together with more impersonal information.
- Helping students to develop more independence from external sources of information and expert advice and to think for themselves.
- Helping students to develop emotional responses to dealing with conflict situations, and encouraging them to make choices and commitments to action in conditions of stress and uncertainty.

- Providing greater opportunity for the building up of networks and contacts in the outside world linked with their learning focus.
- Providing students with more flexible opportunities to learn in terms of timing and location.
- Providing more role models of successful use of learning in practice.
- Encouraging opportunities to learn by overcoming failure.
- Encouraging use of feelings, attitudes and values outside of information. This will place greater emphasis on experience-based learning.

The shift, suggested by Gibb, from traditional focus of education to the entrepreneurial focus is illustrated in Figure 4.2.

Figure 4.2: The Focus of Learning

Education focus on	Entrepreneurial focus on
The past	The future
Critical analysis	Creativity
Knowledge	Insight
Passive understanding	Active understanding
Absolute detachment	Emotional involvement
Manipulation of symbols	Manipulation of events
Written communication and neutrality	Personal communication and influence
Concept	Problem or opportunity

Source: Gibb, 1987

4.3.1 Curriculum Design

The curriculum development process begins with the desire to meet some educational need. The identification of the need to understand the

entrepreneurial phenomenon was suggested by Murray (1982). Curriculum objectives emerged primarily from a perception of their urgent educational need. Specifically, Murray states the following objectives for entrepreneurship education:

- To create awareness of
 - The need for entrepreneurial activity
 - How more enterprising activity may be generated
 - How feasible it is to enter entrepreneurship.
- To develop and transfer knowledge about the enterprising process by communicating state-of-the-art knowledge about venture creation and the venture-renewal process.
- To prepare students for the role of entrepreneur, or of entrepreneurial agent in an established organisation or in a service agency, such as a bank or development authority.

Murray argues that it is important to distinguish between the basic principles of curriculum design, which are open to continued use and reuse, and the elements of a particular curriculum designed for any one educational programme. The former are unchanging principles while the later can be tailored to any one educational programme depending on the objectives stated.

The objectives of a course help in the construction of a curriculum. Objectives may be achieved by different curriculum strategies depending on the amount of previous exposure students have to business related subjects, the planned

duration of the course, and the extent to which it is desirable to place differing degrees of emphasis on those objectives which have to do with awareness, knowledge, skill and attitudinal factors.

Murray (1982) states that these awareness, knowledge and role preparation objectives are specific enough for their achievement to be measured through classroom performance, case study analysis, project work, formal examinations and post graduate career paths.

Perhaps the most basic issue concerning objectives is whether entrepreneurship can be taught. In a survey of American professors Vesper (1985) found that 93 per cent indicated that it could. Hills (1988), in his research survey of 15 leading university entrepreneurship educators, found that their overriding educational objective was to increase awareness and understanding of the process involved in initiating and managing a new business enterprise. This objective had a mean importance rating of 6.7 on a 7.0 scale. Increasing student awareness of the new venture/smaller company career options was also a highly agreed-upon objective (5.5/7.0). The educators also thought it important to develop a fuller understanding of the inter-relationships between the business functional areas (5.5/7.0). Contributing to an appreciation of the special qualities of the entrepreneur was also considered important (5.1/7.0). Ronstadt (1985) cited the need for objectives concerning creative skills, ambiguity-tolerance, career assessment skills, deal-making skills, networking skills and ethical assessment skills. Attention to ethics was cited as a desirable objective by entrepreneurs along with attitudes and philosophy (Timmons et al. 1990).

An examination of the objectives proposed for courses in entrepreneurship and enterprise development indicates that the actual outcomes and results of these courses are not known in advance. Because of the use of actual business

situations which are dynamic in themselves, the ability to predict the outcomes of students' work is not possible. Course objectives and course elements need to be accomplished so that students' research and discoveries can be effectively incorporated into the ultimate conclusion of the course. The task requires careful and constant monitoring by the faculty concerned.

4.3.2 Course Structure

Plaschka and Welsh (1990) have offered a new evolving model of entrepreneurship structures, aimed at developing a competent curriculum for entrepreneurship education. They have formulated two frameworks to provide guidance to entrepreneurial educators. Framework A (Figure 4.7) is based on two sets of variables; the number of courses offered and the degree of integration of courses. The first dimension - the number and types of courses - can vary from a single course to a comprehensive programme which may consist of a "complete" list of courses combined with a major stream. In between the two extremes, a smaller set of courses could be offered which compose a minor stream.

The other variable "degree of integration" represents the level of acceptance and support from a variety of different groups, including deans, business faculty, students, professional associations, small business, entrepreneurs and the community. Another means of integration is the degree of co-operation and co-ordination from faculty who teach other courses in which entrepreneurship could be introduced or expanded. A third measure of integration is the set of complementary entrepreneurship activities that show that entrepreneurship is established in the college or university. These activities include active participation of entrepreneurs, entrepreneurship clubs, field and laboratory projects and establishment of an entrepreneurship centre.

The combination of a single course with low integration can be labelled *Unsupported Isolated Course*. The single course is not fully accepted, is uncoordinated, and is not combined with other established courses. This is a typical entrepreneurship course which has been placed on top of a traditional business programme. The combination of a single course with high integration can be labelled *Integrated Supplemented Course*. The lone course is well accepted and supported, is co-ordinated with other courses in the business curriculum as a required course or an elective and has a full range of complementary activities attached to it.

Figure 4.3: Emerging Structures “A” of Entrepreneurship Education

DEGREE OF INTEGRATION	High	Integrated Supplemented Course	-----	Integrated Programme
		-		-
		-		-
	Low	Unsupported Isolated Course	-----	Unrelated Assembly of Courses
		Single		Multiple
		NUMBER OF COURSES		

Source: Plaschka and Welsh (1990)

A third combination involves a string of multiple courses with low integration. The *Unrelated Assembly of Courses* is a series of unrelated courses that are not moulded well into the curriculum. Neither the design nor the structure of the curriculum is well thought out or planned. The fourth combination of multiple courses that are well-integrated both internally (with one another) and externally (with the curriculum) can be labelled the *Integrated Programme*. It represents an

“ideal state” of a mature structure that has evolved from earlier stages on the basis of experimentation, corrections and refinements. This structure offers a full complement of co-ordinated courses based on a well thought out growth-oriented framework. A strategy that follows a diagonal direction in the matrix (as more courses are added, they become more integrated) appears to be a rational progression.

A second framework, B, (Figure 4.8) is based on a model that incorporates two dimensions, transition stages and number of disciplines. The variable transition stages can be visualised around the different challenges and crises that arise at different transitional stages in the firm's evolutionary process. Course contents can be designed to meet those difficulties. The second dimension is the number of disciplines or functional fields required in solving problems with the business. These topics generally include marketing, finance, engineering, and management, as several disciplines are required to prepare the entrepreneur for the problems they will encounter.

Figure 4.4: Emerging Structure “B” of Entrepreneurship Education

Maturity Expansion	Unidisciplinary Approach Focusing on Mature Firms	-----	Interdisciplinary Programme Focusing on Mature Firms
TRANSITION GROWTH STAGES	- - -		- - -
Survival Inception	Unidisciplinary Approach Focusing on Start- up Firms	-----	Interdisciplinary Approach Focusing on Start- up Firms
	Single		Multiple
	NUMBER OF DISCIPLINES		

Source: Plaschka and Welsh (1990)

The two samples, Framework A (Figure 4.7) and Framework B (Figure 4.8) show that educational needs differ according to the stages of development and entrepreneurial career roles. Plaschka and Welsh (1990) stress that programme designers should provide multiple alternative structures and learning mechanisms to meet the evolving needs of entrepreneurs.

Another important consideration in the development of entrepreneurship curricula is that as a result of the rapid technological development in the field of communication, sophisticated interactive software for entrepreneurship subject matter is now available. Most students can now access the Internet and gather information from all over the world. A major role for the educator is to guide students to these sources to enable them to explore the vast potential of the new electronic "information superhighway". According to Guskin (1994) courses as they exist now may be radically altered so that students could learn entrepreneurship in a series of learning modules. One module could be focused on electronic sources, another on intensive interaction with a faculty member, a third on intensive lecture-discussion format and even another as a peer-study group. Evaluation of student learning would include separate assessments for each module integrated into a total assessment of the learning achieved.

4.3.3 Course Content

In their efforts to respond to the demand for entrepreneurship education colleges and universities have created a variety of course offerings. These range from traditionally-structured courses consisting of lectures, assignments, case studies and readings, to innovative courses where students actively participate with the small business sector, develop business plans, and are exposed to real entrepreneurs.

The most complete compendium of courses in entrepreneurship was assembled by Vesper (1976). Published under the title *Entrepreneurship Education: A Bicentennial Compendium*, it acts as a guide to the various methods and materials which might be incorporated into a programme. Vesper has engaged in periodic updates of the publication in subsequent years (1985, 1990, 1993).

A review of the syllabi from entrepreneurship courses (Vesper, 1993), reveals numerous teaching approaches. Though diversified, each approach provides students with exposure to entrepreneurial activities that enable them to develop the critical skills needed to pursue entrepreneurship as a career option. The most innovative courses provide an environment in which students can experience the actual decision-making activities associated with a business start-up situation.

Sexton and Bowman (1984) suggest a course structure based on nine psychological characteristics - autonomy, change, conformity, energy level, harm avoidance, interpersonal affect, risk-taking, social adroitness and succourance (low need for support). They suggest that entrepreneurship curricula should be designed to meet the needs and characteristics of entrepreneurial students. Courses should be relatively unstructured and should pose problems which require novel solutions under conditions of ambiguity and risk.

Hills (1988) in his study of entrepreneurship education explored the features of entrepreneurship courses and their importance. Entrepreneurship educators were asked to rank on a seven point scale their opinions of the attributes of entrepreneurship course. The student development of a new venture business plan was considered extremely important (6.4/7.0) by the respondents. Inviting entrepreneurs as guest speakers and role models was also considered an

extremely important course attribute (6.3/7.0). Case study analysis was considered important also (5.7/7.0). The perceived importance of lectures (5.2/7.0) and assigned readings (4.8/7.0) were less than for other course attributes. This may be explained partly by the fact that most universities require several business courses prior to taking entrepreneurship courses.

Other specific features of course content referred to by Vesper (1993) include:

- The use of personal computers in venture planning,
- The actual development of product prototypes using live entrepreneurship cases,
- Having students keep a diary of their venture study activities,
- Using videotapes of entrepreneurs,
- Making final business plan presentations to venture capitalists,
- Using role playing in connection with class discussions and business plan presentations.

Figure 4.5: Strategic Development Challenges

Section 1.	Opportunity identification
2.	Market feasibility analysis
3.	New venture planning
4.	New venture finance
5.	Production design and organisation
6.	New market development
7.	Standardising operations
8.	Expansion strategies
9.	Professionalising middle management
10.	Instructionalising innovation

Source: McMullan and Long (1987)

Other research suggests the desirability of orienting students to a multiple venture career and toward adaptive flexibility to evolve successful ventures (Ronstadt, 1985). McMullan and Long (1987) argue that entrepreneurship courses are better structured around a series of strategic development challenges. The development framework in Figure 4.3 incorporates the functional area specialism of marketing, finance, operations and management.

Mullan and Long contend that entrepreneurship education should be supplemented by skillbuilding courses to include such areas as negotiations, salesmanship, leadership and creating thinking. In order to meet the objectives of an entrepreneurship course Murray (1986) proposes a curriculum designed with the following modular structure (Figure 4.4).

Figure 4.6: A Generalised Modular Curriculum in Enterprise Development

Section 1	The Environment Of Entrepreneurship
2	Entrepreneurs And Entrepreneurship
3	Creativity And New Venture Development
4	From Idea To Business - The Innovative Process
5	Entry: Alternative Strategies
6	Financial, State Support And Other Support Organisations
7	Developing A New Business Plan
8	Launching The New Venture
9	Managing Growth
10	New Venture Project

Source: Murray (1986)

The approach outlined in Figure 4.4 provides an understanding of the role and nature of entrepreneurship, the entrepreneur and the entrepreneurial process. The course is aimed at encouraging active involvement in entrepreneurial

behaviour by students after graduation. It emphasises the transfer of conceptual / theoretical knowledge into practical application and the development of professional skills and competencies in enterprise development. Murray (1986) recommends that it is important that high priority be given to active involvement of students in project work concerning the development of new ventures of innovative organisational programmes.

Ronstadt (1985) provides a number of selection goals of entrepreneurship education (Figure 4.5). Given these goals Ronstadt outlines the conceptual structure of an entrepreneurship course at either graduate or undergraduate level.

Figure 4.7: Selection Goals of Entrepreneurship Education

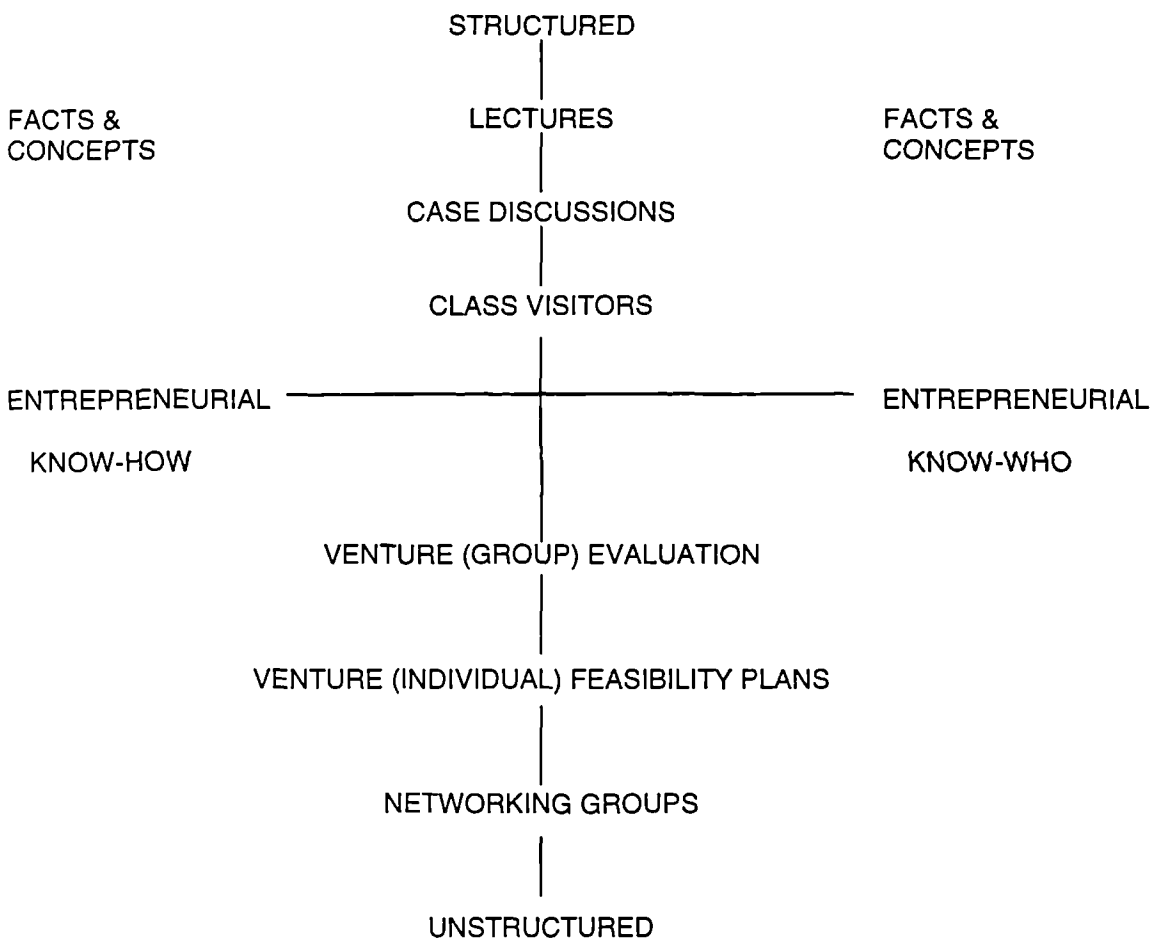
- | | |
|------------|---|
| Section 1. | Fact versus myth about entrepreneurship |
| 2. | Reality testing skills |
| 3. | Creativity skills |
| 4. | Ambiguity tolerance skill and attitudes |
| 5. | Opportunity identification skills |
| 6. | Venture evaluation skills |
| 7. | Venture start-up-action skills |
| 8. | Venture strategy skills |
| 9. | Career assessment skills |
| 10. | Environmental assessments skills |
| 11. | Ethical assessment skills |
| 12. | Deal-making skills |
| 13. | Contacts - networking skills |
| 14. | Harvesting skills. |

Source: Ronstadt (1985)

In Figure 4.6 the vertical axis shows how the entrepreneurship course proceeds from being more structured to extremely unstructured. Ultimately the individual's initiative becomes the critical variable shaping projects and outcomes.

The rationale for outlining this approach is the uncertain and often unstructured nature of entrepreneurial environments. The horizontal axis shows the course moving from entrepreneurial "know-how" to entrepreneurial "know-who". The need to understand networking and to make contacts is a critical factor for long-term entrepreneurial success (Ronstadt, 1985).

Figure 4.8: Curricular Design for Entrepreneurship Course(s) and Models



Source: Ronstadt (1985)

Another factor to be considered in the design of courses is that entrepreneurial growth ventures frequently have a potential international dimension. A venture with a strong domestic distribution system may import compatible products. A manufacturing firm may source components abroad, or have sub-assemblies or products contract-manufactured abroad. A new venture may, at a very early stage, source technology from abroad or licence its own technology in markets that it will not otherwise enter. Joint ventures may be a strategy by which new ventures can augment their financial business needs to be part of entrepreneurship education (Vesper et al. 1989).

4.4 TEACHING APPROACHES FOR ENTREPRENEURSHIP PROGRAMMES

In addition to advancing the knowledge of the content of entrepreneurship courses, it is also important to examine approaches to improving the mechanics of delivery methods used in teaching potential entrepreneurs. This question arises as to how best entrepreneurship can be developed in a student. Kirby (1992) contends that to develop more entrepreneurial graduates requires a more enterprising approach to teaching. The suggested method is learning through the development of entrepreneurial attributes such as role orientation, abilities and motivation, in addition to skill building through active student participation. This can be accomplished by giving students ownership of their learning, involving them in real life situations, allowing them to make decisions and exposing them to successful entrepreneurs. The issue, it appears, in entrepreneurship pedagogy, centres on the development of appropriate psychological traits and aspects such as creativity, intuition and decision-making. Experiential processes can be taught by the development and use of discovery methods such as projects and case studies linking theoretical knowledge with real-world problems and concepts. Harwitz (1977) in his study

concluded that experiential learning is the key to entrepreneurial behaviour. Kourilsky (1977) also found that experience based education can increase entrepreneurial aspiration. Ulrich and Cole (1987) state that the entrepreneurial-directed alternative to the traditional teaching approach is one which requires the instructor to become a learning process facilitator. Such an approach entails extensive use of learning exercises such as role playing, management simulations, structured exercises, focused learning and feedback situations in which the student must take an active role. One example of an experiential method is to incorporate into an entrepreneurship course an element that would require students to generate a business concept. Students would be required to conduct all the necessary investigation and evaluation involved in generating a realistic business idea and taking the concept through to the point of commencement of operations. Students are put in a position where they observe and develop decision-making skills whilst experiencing the varied emotions associated with an actual event.

Scanlan (1986) supports this view. He argues that entrepreneurship education cannot be addressed completely in a classroom setting. Students must be provided with opportunities to meet with entrepreneurs. To promote initiative, students should be given responsibility for their own learning. This can be encouraged through individualised instruction and by gradually allowing the student to have a greater say in the objectives and methods of instruction. Action learning must have priority over cognitive learning and therefore project work should be given more weighting than traditional examinations.

Using a model of the teaching-learning process developed by Gage and Berliner (1984) (Figure 4.9), Sexton and Bowman (1987) have developed and implemented an entrepreneurship course that was unstructured and posed problems that required novel solution(s).

Figure 4.9: A Model of the Teaching-Learning Process

Before Instruction	Before and During Instruction	Instruction	After Instruction
Decide on the objectives of teaching	Think about and use what you know about the learning process and how to motivate students	Choose and carry out methods of teaching	Evaluate instruction
Determine the characteristics of the students you will teach			
			Recycle if necessary

Source: Gage and Berliner (1984)

The students were tested and advised of their unique psychological characteristics and were told that the course would be structured as a typical doctoral level course; that assignments would be given with deadlines but no additional guidance would be provided; that the class session would not be lectures but seminar-type discussions and that each written assignment would be critiqued, graded and suggestions offered for improvement. A suggested reading list was provided but no specific assignments were made. In addition, students were advised that they would be assigned market research projects for products that had not been introduced into the marketplace. Consequently, data would not be readily available to them. A student evaluation of their approach to teaching entrepreneurship showed that the course provided a unique, positive and enhanced learning experience.

In the entrepreneurial-directed teaching approaches discussed above, continual feedback to the student is an integral part of the learning education process. The performance evaluation method must be designed to meet the students' expectations. The outcomes associated with experiential learnings are application, analysis, synthesis and evaluation. The effectiveness of these teaching methods lies in the likelihood that those who experience these approaches tend to desire more learning in addition to acquiring further entrepreneurial skills.

4.4.1 Assessing the Outcomes of the Curriculum

The assessment of an entrepreneurship course is best achieved by having a clear set of objectives against which educational achievement can be measured. Murray (1986) states that curriculum objectives need to be sufficiently explicit and behaviourally stated that measurement is possible. He suggests grouping objectives into knowledge, skill and attitudinal categories as each category will demand different forms of evaluation. The most appropriate method is examination and case studies to test knowledge acquisition, and projects, exercises and case studies to test skill development and attitude. A combination of the above assessment methods is suggested rather than evaluating solely by examination or on a project only basis.

This view is supported by Gibb (1994) who contends that wider modes of assessment than the traditional examination situation are needed. Enterprising teaching modes demand enterprising modes of assessment to test not only knowledge but also the level of enterprising capabilities and skills development. Sexton and Bowman (1984) acknowledge that few evaluations assess the impact a course has had on students' attitudes and actions following the completion of a course. They argue that, in their view, the effectiveness of an entrepreneurship

course lies in the number of graduates that subsequently participate in an entrepreneurial endeavour.

4.5 ENTREPRENEURSHIP EDUCATORS

A number of researchers have commented on, and put forward suggestions regarding, the role and perspectives of entrepreneurship educators. Katz (1991) noted that entrepreneurship faculty are by necessity integrators of all disciplines within business. There is a need to plan for all the major functions of the firm before starting a business. This approach, coupled with the strong links most entrepreneurship faculty have with operating or emerging businesses, means that even the most academically-oriented entrepreneurship faculty have frequent, involved and purposeful interaction with the real world of business.

Hills (1988) argues that educators committed to fostering attention to entrepreneurship are somewhat different from their peers. With few exceptions, entrepreneurship educators tend to be less theoretical in orientation than most faculty. Entrepreneurship educators need to strive for an effective balance between academic and practitioner perspectives. Academics are specialists in knowledge formulation, acquisition and dissemination. Practitioners are experts in the norms and practices of society. They provide examples of making things happen. McMullan and Long (1987) suggest that for motivational and informational reasons entrepreneurship education requires more interaction with entrepreneurs, team teaching and much more in the way of guest-speakers.

Robinson and Haynes (1991) note that the challenge for entrepreneurship education is not to continue to expand the breadth of the field to institutions that do not currently have courses or programmes in entrepreneurship; external forces such as media and the ability to attract funding will do this. The challenge

lies in developing existing programmes and personnel, thus improving the quality of the field. They state that there is a need to develop and test entrepreneurship theories, models, and methods that go beyond an academic interest by being applicable to both the practitioner and the educator. This may be achieved by developing graduate doctoral programmes to train future faculty in entrepreneurship education and by developing and testing theory through empirical research. Thus, the quality and quantity of research being conducted will be increased and career options and academic standing will be enhanced. Brady et al. (1985) recommend that entrepreneurship educators should keep abreast of changing needs and conditions of the small business sector through publications and journals directed toward the small business executive. They also recommend that entrepreneurship educators should be encouraged to take sabbaticals in small businesses to gain practical experience.

4.6 EDUCATIONAL EVALUATION AND ENTREPRENEURSHIP

It appears from the literature that there is no widely agreed definition of educational evaluation. Some evaluators equate evaluation with measurement (Hopkins and Stanley, 1981; Sax, 1980). Others define evaluation as the assessment of the extent to which specific objectives have been attained (Tyler, 1949). Other views are that an evaluation is primarily a scientific inquiry, a professional judgement or a political activity. However, many evaluation theorists agree that the form of an evaluation should reflect the nature and circumstances of the programme to be evaluated. Patton (1981) suggests that good evaluations are characterised by 'situational responsiveness' while Cronbach (1982) has argued that designing an evaluation is an art and that each new design must be chosen afresh in each new undertaking. According to Rosa et al. (1996) research tools are underdeveloped for evaluating the impact of entrepreneurship education and training. Several difficulties arise in education. These include designing appropriate appraisal methods, the influence of vested interests, the financial resources needed and the time element involved.

Norris (1990) argues that an evaluation is an extension of research, sharing its methods and methodology and demanding similar skills and qualities from evaluators. Evaluation he contends, is an extension of the logic of research and an application of its methods to practical problems in what he terms the 'continuity thesis'. Cooley and Lohnes (1976) state that evaluation is a process by which relevant data are collected and transformed into information for decision-making. Evaluations provide educators with information they need to improve educational practices. Cronbach and Suppes (1969) have called evaluations a decision-oriented inquiry. Evaluative research according to these writers, is not designed to support or undermine particular theoretical positions, but rather to contribute to recommendations for action.

Talmage (1982) states that evaluations have three purposes (i) to render judgement on the worth of a programme; (ii) to assist decision-makers; and (iii) to serve a political function. Guba and Lincoln (1981) noted that the idea of evaluation should determine the worth of an education programme. Scriven (1973) notes that evaluation plays many roles in education, even though it has a single goal, to determine the worth or merit of whatever is being evaluated. He makes a distinction between the goals and roles of evaluation. In terms of goals, evaluation attempts to answer certain types of questions about certain entities such as processes, procedures, policies and personnel. The roles which evaluations have in a particular educational context may vary from the process of curriculum development, the improvement of learning theory, decisions about learning materials or it may be an activity to support research finding.

Scriven (1967) distinguished between the formative and summative roles of evaluation. Formative evaluation is conducted during the operation of an educational programme to provide information useful in improving the programme. Summative evaluation is conducted at the end of the programme to provide interested parties with judgements about the programme's worth or merit. The audiences and uses for these two evaluation roles are different. In formative evaluation the audience is those responsible for developing the

curriculum. Summative evaluation audiences include potential students, teachers, professionals and funding sources. Formative evaluations lead to decisions about programme improvement or modifications. Summative evaluation leads to decisions concerning programme continuation, expansion or termination. Other evaluation practitioners and theorists have all emphasised some form of relationship between evaluation and decision-making (Stufflebeam et al. 1971; Anderson et al. 1971; Parlett and Hamilton, 1977; Alkin et al. 1985). It can be generally assumed from a review of the literature, that an evaluation study provides useful information for judging decision alternatives.

Norris (1990) indicates that another way of classifying evaluation is by conceptual approach and orientation. A number of different models of evaluation have been put forward by different writers (Worthen and Sanders, 1983; Stake, 1976; House, 1980). Approaches to evaluation have been made in terms of methodological or epistemological differences. Filstead (1979) contrasts the quantitative and qualitative paradigms. Campbell (1984) contrasts scientific and humanistic approaches while Guba and Lincoln (1981) make a similar distinction when they contrast scientific and naturalistic paradigms.

House (1976) has made a distinction between utilitarian evaluation and intuitionist - pluralist evaluation. Utilitarian approaches have tended to follow objectivist epistemology which determine value by assessing the overall impact of an educational programme on those affected. The evaluator focuses on the total group gains by using some common index to identify the greatest movement on the criterion or criteria selected to determine worth. National educational assessment programmes are utilitarian in nature. The intuitionist-pluralist approaches have tended to follow subjectivist epistemology which is based on the idea that value depends on the impact of the educational programme on each individual. The evaluator prefers data from personal interviews and testimonials of the participants. The subjective utility of the programme is based on personal judgement and each person is considered the best proponent of events.

A review of the literature indicates that there has been much debate concerning the relative utility of quantitative and qualitative approaches to evaluation (Schofield and Anderson 1984; Campell and Stanley, 1963). Evaluators have tended to become polarised in their alternative views. Talmage (1982) sees this debate as a major cause of rift that permeates the field of evaluation. During the 1950s and 1960s quantitative or the experimental tradition, was the most generally accepted evaluation approach. The precision of this method according to Worthen and Sanders (1987) led most educational evaluators to view it as ideal. Qualitative or naturalistic methods gained acceptance in the 1970s and 1980s mainly as the result of proposals for their application. to programme evaluations by Parlett and Hamilton (1976) and Guba and Lincoln (1981).

In more recent years, analysts are increasingly discussing the benefits of integrating both methods within an educational evaluation study (Cook and Reichart, 1979; Stone, 1984). It can be argued that the philosophical differences in evaluation methodology are not incompatible. Several studies use multiple approaches in the same evaluations to achieve important goals (Stake and Easley, 1978; Sanders and Sonnad, 1982). The approach taken in this evaluation study is the quantitative research method supported by the qualitative method to further investigate and illustrate the theory explored.

4.7 CONCLUSION

The foregoing examination of the literature on entrepreneurship curricula design and development indicates that there is unlikely to be one best curriculum for the area. The very nature of the discipline invites variety and intelligent experimentations among course designers and institutions. What can be concluded from the review is that the disciplinary demands of a course in enterprise development are extremely broad and encompass many aspects of

theory and practice. The course requires that students have a prior knowledge of the other major disciplines of marketing, accounting, financial management, economics and organisational management. It appears that the tasks of the educator in the area of business formation are to teach not only the discipline itself but to establish an integrative approach from these related disciplines. The literature indicates that the more effective models of instruction have placed the enterprise development course in the latter portion of the student's programme of study. Ambrose (1986) contends that if a course of this nature is positioned too early in students' academic programme it will not have any significant depth or elicit any meaningful dialogue regarding the issues of business formation. It may provide an introduction to business but does not provide for the integrative process of the disciplines to be realised. The entire instructional framework requires that the students approach the course in an advanced placement in the curriculum in an integrative manner incorporating their knowledge from prior periods of study and learning.

In summary, the curriculum models and teaching methods discussed in this chapter emphasise the transfer of conceptual and theoretical knowledge into practical application and the development of professional skills in enterprise development. The courses outlined pay special attention to developing and transmitting knowledge about the process of enterprise formation and enterprise renewal. These programmes are part of the educational support system for assisting entrepreneurs to form and grow indigenous enterprises. Success of such programmes can only be measured by the socio-economic impact they produce. There is a need to evaluate the number of companies formed, the kind of companies, the number of jobs created, the kind of jobs, the growth rate of the companies, their contribution to the economy and their potential international competitiveness. The author has attempted to address these issues in the study reported in Part Two of this thesis.

Chapter Five

The Research Approach

THE RESEARCH APPROACH

5.1 INTRODUCTION

The objective of this chapter is to outline the hypotheses formulated, the research design, and the methodology used in the study presented in this thesis. The content sets out the procedure used in exploring the factors which give rise to graduate entrepreneurship. The chapter is divided into the following areas. First, a summary of the literature is outlined and gaps and weaknesses in the studies are identified. Secondly, a discussion of the reviewed theories and how they relate to the framework of the study is included and a conceptual model is developed. Finally, the research aims, the hypotheses formulated, and the methodology used are described and justified.

The literature search for this study took place at two levels, the first being entrepreneurship in general, and secondly, studies on education for enterprise, in particular graduate career intentions and graduate entrepreneurship. The sources of information which were used in carrying out the literature search included textbooks, journals, publications and Anbar abstracts. The reference and bibliography sections at the end of this thesis provide some indication of the variety and diversity of texts and articles on the broad subject of entrepreneurship. Secondary data such as these are a valuable asset to the researcher as they provide a framework and frequently suggest areas for new research. They also extend the researcher's knowledge and understanding for collection of meaningful and valuable primary data. The limitations of secondary data are that they may not fit the needs of the researcher and their accuracy may be reduced because of the problem of time lapse.

The literature reviewed in the preceding chapters indicates that there is currently an abundance of books and publications on the subject of entrepreneurship. Research studies have covered a broad range of topics from the characteristics of the entrepreneur, the entrepreneurial process, the role of the entrepreneur in business and education for entrepreneurship. Several researchers (Vesper, 1985; Gartner et al. 1994) argue that the study of entrepreneurship is young and complex and is involved in a process of discovery and transition while also being the recipient of increased attention and the basis of economic hope. Since it is a field involving *discovery-oriented research it is not surprising to find that* research directions are fragmented, creative and diverse. There is a consensus of opinion in the literature that the field has numerous facts surrounding it but lacks a theory to encapsulate these facts.

The review of the entrepreneurship literature conducted by this author over several years through readings, exploratory studies, personal interviews and contact with students, graduates and academics, uncovered two key points which indicated that research into the area of entrepreneurship education was required. First, the continuing argument as to whether entrepreneurship could be taught was an issue that appeared to require more investigation. Much of the existing theory relating to this debate is discussed in chapter three. The second factor is the apparent lack of research in the entrepreneurship writings focusing on graduate career paths subsequent to an entrepreneurial education. The key question that requires investigation is - "do undergraduate entrepreneurship courses aid in graduate new venture creation?" It was therefore decided to examine the level of entrepreneurial activity existing in the entrepreneurship educated graduate population at various time periods subsequent to their leaving higher level education. It was also felt that the attitudes and opinions of these graduates towards the concept of self-employment and venture start-up

should be studied to identify any factors specific to encouraging or discouraging entrepreneurial endeavour.

In the past, research efforts have been hampered by the lack of a generic definition of the entrepreneur. Entrepreneurship, it has been argued, is the activity in which the entrepreneur is engaged in the process of venture creation (Gartner, 1990). Definitions of the entrepreneur have varied from small business owner, a person who has undertaken a business start-up, to an individual who develops and expands a business to a new level of innovation and growth. This definitional problem led Brockhaus (1982) and Gartner (1990) to recommend that any research effort should begin with the author's own definition of an entrepreneur. Hence, it is argued here that the core attribute of an entrepreneur is the ability to found a new enterprise. A recommendation to overcome the problems of past research has been proposed by Carsrud et al. (1986) who suggest a proposed paradigm for entrepreneurial research. They identify four general categories of primary causal factors of entrepreneurship; psychological variables, personal/demographic variables, organisational/sociological variables and situational/environmental variables. These four variables have direct and interactive effects on secondary factors such as the nature of the business started, the type of organisation and the rate of growth and development of a business.

In the general framework presented in this thesis, elements of all the four categories of Carsrud et al.'s proposed model are used (see Figure 1.2). It is argued that entrepreneurial behaviour is contingent on a number of factors, including psychological, personal, sociological and environmental variables. The framework proposes that the general student population partaking in entrepreneurship development programmes experience three important dimensions of learning; (i) the accumulation of information and knowledge, (ii)

skills development and (iii) conceptual development. Graduates who participate in entrepreneurship courses during their higher level education become aware of entrepreneurship as a career option. Their future career direction depends on many influences, including their career preference, their work experience, their satisfaction with their career to date and their motivation to pursue a career of their own choice. Many graduates may perceive themselves as potential creators of new businesses. This is largely influenced by family and personal contacts, role models and the identification of a suitable business idea. It is suggested that confirmed entrepreneurs evaluate the opportunities identified, acquire the necessary resources for start-up which results in the birth and growth of a new business.

Pauline et al. (1982) offer a similar paradigm to that proposed by Carsrud et al. (1986). In their classification of research traditions on entrepreneurship, the following areas of investigation are suggested; the entrepreneur, the entrepreneur and the firm (at both the micro and macro level) and related topics. The guidelines regarding the choice of research design suggested by Pauline et al. were considered when selecting the design of the study.

5.2 THE CONCEPTUAL MODEL

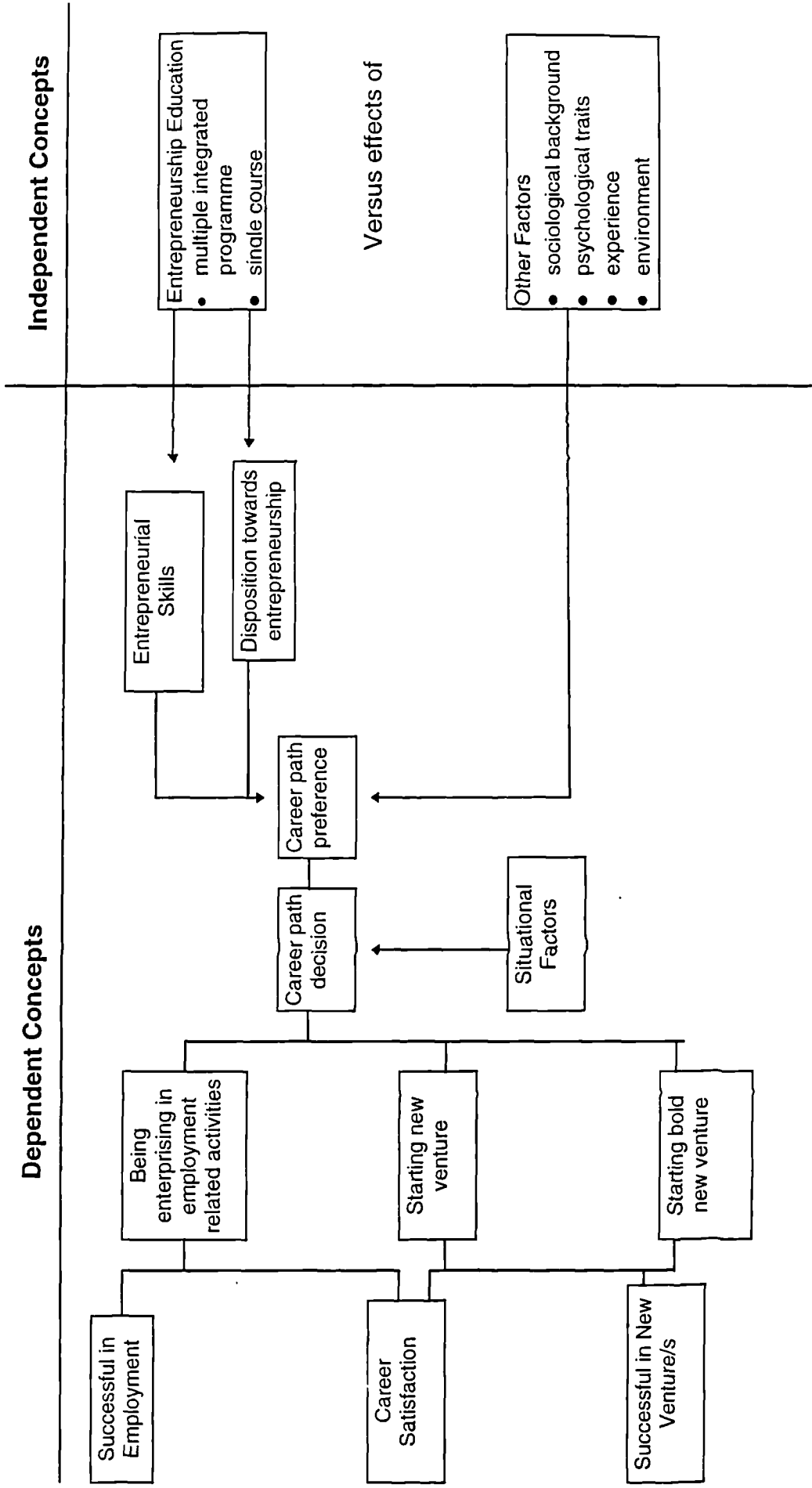
The importance of generating enterprising and entrepreneurial graduates in order to achieve Irish national development priorities is discussed in depth in chapter six. A review of the initiatives introduced since the 1980s indicates that the Irish education system is making a significant contribution in compensating for the absence of an industrial tradition through the allocation of resources to technical, scientific and business education. Traditionally there has been an emphasis toward preparing students for work within large already established organisations rather than encouraging and teaching students how organisations

can be started and how small businesses operate. From a review of the literature it can be argued that, increasingly, institutions of higher education are perceiving a role for themselves in education for entrepreneurship. Would-be entrepreneurs, young, highly qualified persons, have potentially a key role in the creation of the new enterprise of the 1990s and beyond. There is a need to investigate the measures that promote their emergence in greater numbers.

A detailed literature review of new data on entrepreneurship recognised that few research publications seem to be examining the performance and results of entrepreneurship education. *Few studies exist that track graduate career paths* and in particular the career paths of graduates who have taken enterprise development courses in their programme of studies. This absence of any substantial research linking education with actual marketplace behaviour was considered as an area that would produce useful knowledge and forms the basis of this study. A model outlining the relationship between the dependent and independent concepts to be tested in this study is presented in Figure 5.1. Scott and Twomey (1988) propose a similar motivational model on key influences on students aspirations towards entrepreneurship (see Figure 3.3). Hawkes (1981) suggests (i) feasibility - perceived capacity to undertake entrepreneurial endeavour, (ii) achievement orientation or desirability and (iii) displacement as predisposing and triggering factors. Developing a conceptual model (Figure 5.1), and relating an exploratory study to it, should result in a worthwhile contribution to the literature.

Vesper (1985) has indicated that there are few methodological programmes to monitor the impact of entrepreneurship courses. Recognition of the need for more research in this area, and drawing on the reserves of Irish higher education institutions, the study reported in Part Two of this thesis, attempts to assess the outcomes of enterprise education and enterprise initiatives at the undergraduate

FIGURE 5.1: CONCEPTUAL MODEL



level. The study investigates the role of the Irish educational system in stimulating a movement towards entrepreneurship and graduate start-up ventures. The research is also designed to examine the nature and scope of enterprises created by graduates and their ambitions for the future.

Guskin (1994) argues that the process of student learning consists of three elements, the accumulation of information and knowledge, skills development and conceptual development. Evaluating the effects of this student learning tends to take place at/or near the end of the course. Sexton and Bowman (1984) contend that course evaluation surveys frequently *measure such variables as* instructor knowledge, preparation and presentation style, course content and understanding and contribution to the student's education. Few, if any, evaluate the impact the course has had on new venture creation via the influence on student attitudes and actions following completion of the course. Consequently this research is an attempt to investigate this apparent gap in the literature.

5.3 MAJOR HYPOTHESES IN THE MODEL FOR THE DEVELOPMENT OF GRADUATE ENTREPRENEURS

Hypotheses formalise the premise to be tested by the research effort and are derived from the observations and facts described in the purpose of research statement. As such, hypotheses are statements designating what the researcher expects to find. They are precise statements reflecting questions to be answered (Blank, 1984). The main research question this study addresses is:

“Do undergraduate courses in entrepreneurship aid in graduate new venture creation?”

Although the research presented in this study is exploratory in nature given the limited knowledge of the impact of entrepreneurship courses in aiding new venture creation, nonetheless the following general working hypotheses were formulated. The hypotheses were developed as a result of the findings of a number of studies on higher level education and entrepreneurship which argue that many graduates have a career orientation towards enterprise (Hawkes, 1981; Sexton and Bowman, 1984; Scott and Twomey, 1988; Rosa and McAlpine, 1991; Fleming, 1992). The expectation is that similar relationships between several variables in these previous studies will hold in the present study.

- H₁ Graduates who are introduced to entrepreneurship concepts and the practical experience of preparing a business plan for a new start-up venture at the undergraduate level will consider entrepreneurship as a viable career option.

- H₂ Graduates who participate in multiple integrated programmes on entrepreneurship while at college will be found to have a higher level of entrepreneurial orientation than those who participate in a single supplemented entrepreneurship course.

- H₃ Graduates who participate in entrepreneurship programmes at the undergraduate level will have entrepreneurial intentions.

- H₄ Graduates' ability to initiate and develop new ventures is affected positively by entrepreneurship education.

- H₅ Graduates' ability to initiate and develop new ventures is affected positively by parental role-models.

H₆ As graduates mature, predisposition towards, and incidence of, entrepreneurship will increase.

In order to test the major hypotheses outlined above thirty-two propositions or sub-hypotheses were formulated relating to four specific areas of the study.

- (i) Entrepreneurship education, multiple integrated programmes, and career direction
- (ii) Graduates in employment and their perception of the feasibility of self-employment
- (iii) Graduate entrepreneurs, their background and their businesses
- (iv) Graduate career paths and movement towards entrepreneurship.

The proposed testing of the model developed (Figure 5.1) is exploratory and will attempt to investigate the impact of certain key variables on graduate enterprising behaviour and entrepreneurship rather than testing the combined influence of these variables on the process of moving into entrepreneurship. Consequently, the following sub-hypotheses are designed to explore the relationship between these variables.

5.3.1 Sub-Hypotheses Concerning Entrepreneurship Education, Multiple Programmes and Career Direction

The initial stages of the model proposed are concerned with education for enterprise and its influence on the career direction of graduates. Several studies indicate a positive relationship between education, work experience, career preference and students' attitudes towards entrepreneurship and small business ownership (Scott and Twomey, 1988; Brenner et al. 1991; Weihe and Reich, 1993).

To test H₁ and H₂ ten sub-hypotheses were developed.

1. *Graduates' will have intended initial career goals..*
2. *The majority of graduates will pursue their intended initial career goals.*
3. *Graduates' higher-level educational qualifications will be relevant to their careers.*
4. *The majority of graduates will seek a career in employment*
5. *Graduates will achieve a high level of career satisfaction.*
6. *Graduate entrepreneurs will have a higher level of career satisfaction than graduates in employment.*
7. *Graduate choice of preferred work situation will be towards business ownership.*
8. *Graduate entrepreneurs' career decision will be affected positively by entrepreneurship education.*
9. *Predisposition towards entrepreneurship will be evident in graduates who study enterprise at the undergraduate level.*
10. *Graduates who undertake a multiple integrated entrepreneurship programme while at college, will have a higher incidence of intention to become an entrepreneur than those who undertake a single supplemented entrepreneurship course.*

5.3.2 Sub-Hypotheses Concerning Graduates in Employment and their Perception of the Feasibility of Self-Employment

The subsequent stages of the model proposed are concerned with graduates in employment motivation to start a business, identification of a business opportunity, the skills necessary to start a business and the factors that militate against entrepreneurship. Hawkes (1982) proposes a three-step motivational

model - feasibility, achievement orientation, and displacement, as key influences on graduates aspirations towards entrepreneurship.

To test major hypotheses (H₃) ten sub-hypotheses were developed:

11. *Graduates who study entrepreneurship will find employment in small companies.*
12. *Graduates in employment will be motivated to some extent to start a business.*
13. *Graduates who undertake a multiple integrated entrepreneurship programme will be more actively seeking business opportunities than those who undertake a single supplemented entrepreneurship course.*
14. *Graduates in employment will perceive some probability of starting their own business.*
15. *Graduates who have taken an entrepreneurship course will perceive that they have the skills necessary to start a business.*
16. *Graduates in employment will perceive several factors that militate against entrepreneurship.*
17. *Graduates will frequently perceive their company of employment as lending support to the promotion of enterprise.*
18. *Graduates will frequently be involved in in-company enterprise activity.*
19. *Graduates in employment will on occasion run part-time businesses.*
20. *Graduates employed abroad will consider returning to Ireland to start a business, a viable career opportunity.*

5.3.3 Sub-Hypotheses Concerning Graduate Entrepreneurs, their Background and their Businesses

The final stages of the model proposed are concerned with graduates who start and manage a business venture. These stages investigate the features of

graduate start-ups and the factors that encourage graduates into business ownership. It is envisaged that the actual number of graduate start-ups will be low, therefore, no propositions about the actual businesses are made. Criteria such as factors that encouraged entry into entrepreneurship, the first-born effect and parental role models are examined. The debate on birth-order has remained inconclusive (Hisrich and Peters, 1995). Sherer et al. (1991) argue that individuals who observed a parental role model who they perceive as a high performer, develop a profile in which personality and the preference for an entrepreneurial career are seen as complementary. To test major hypotheses (H_3 and H_4) which focus on the relationship between the above variables, the following five sub-hypotheses have been developed.

21. *Perception of a suitable business opportunity will prompt the decision to become an entrepreneur.*
22. *Graduate entrepreneurs will be found to have marginally lower academic achievement levels than the main sample..*
23. *No relationship will be found to exist between birth order and business ownership.*
24. *Graduate entrepreneurs will be found to be more likely to have self-employed parents and siblings than non-entrepreneur graduates.*
25. *Graduate entrepreneurs will perceive expansion and growth as the future direction of their enterprises.*

5.3.4 Sub-Hypotheses Concerning Graduates Career Paths and Movement towards Entrepreneurship

This final set of sub-hypotheses were formulated in relation to major hypotheses (H_6). It was anticipated that as graduates mature their predisposition towards entrepreneurship would increase. As no similar study was found by this author

which tracks graduates' career paths over an extended period, these seven working hypotheses/propositions are exploratory in nature given the limited knowledge of the area.

26. *As graduates mature the incidence of business start-ups will increase.*
27. *As graduates mature the incidence of employment in small companies will increase.*
28. *The influence of entrepreneurship education will diminish with time.*
29. *As graduates mature career satisfaction will increase.*
30. *As graduates mature the incidence of seeking a start-up business opportunity will increase.*
31. *As graduates mature the incidence of part-time business activity will increase.*
32. *As graduates mature the importance of job security will increase.*

5.4 THE RESEARCH DESIGN

The next step after deciding on the research hypotheses was to choose a method for gathering the information required. The graduate who had undertaken an entrepreneurship course or programme at undergraduate level was determined to be the unit of analysis. To investigate this individual, some of the more theoretical aspects of research methodology were considered. The basic division in modern research is between what is termed *positivism* and what is termed *naturalism* (which is closely related to the concept of *phenomenology*) (Easterby-Smith et al. 1991, see Figure 5.2). *Positivism* assumes that the world is knowable in objective terms, that is that there is an objective reality that can be discovered and explained by laws and theories. The preference in this type of research approach is for quantitative data collection through large samples,

usually by means of large-scale questionnaire surveys. *Naturalism* assumes that reality shifts with each situation and is a product of human interaction and is situation specific rather than universal. The researcher subscribing to this frame of reference seeks to capture the subjective experience and thus uses qualitative non-structured methods such as observation techniques with a tendency to prefer the individual case study approach (Guba, 1985).

It should be noted that when choosing a research method no single method is in all ways the correct method. All methods, *positivistic* and *naturalistic*, have their respective strengths and weaknesses and each will be suitable in different circumstances (Easterby-Smith et al. 1991).

Figure 5.2: Positivist and Phenomenological Viewpoints

	Positivist Paradigm	Phenomenological Paradigm
Basic Beliefs	<ul style="list-style-type: none"> • The world is external and objective • Observer is independent • Science is value free 	<ul style="list-style-type: none"> • The world is socially constructed and subjective • Observer is part of what is observed • Science is driven by human interests
Researcher should	<ul style="list-style-type: none"> • Focus on facts • Look for causality and fundamental laws • Reduce phenomena to simplest elements • Formulate hypotheses and then test them 	<ul style="list-style-type: none"> • Focus on meanings • Try to understand what is happening • Look for the totality of each situation • Develop ideas through induction from data
Preferred Methods	<ul style="list-style-type: none"> • Operationalising concepts so that they can be measured • Taking large samples 	<ul style="list-style-type: none"> • Using multiple methods to investigate different views of phenomena • Small samples investigated in depth over time

Source: Easterby-Smith et al. (1991)

Yin (1994) argues that in order to select the most appropriate research strategy consideration must be given to (i) the type of research question posed (ii) the

extent of control an investigator has over actual behavioural events, and (iii) the degree of focus on contemporary as opposed to historical events. Figure 5.3 indicates these three conditions and shows how each is related to five major research strategies.

With the nature of the research question posed for this study it was concluded that both a positivistic and naturalistic approach would be appropriate to gather the information required. As the investigation under study asks both who, what, where, how many, and how much questions and also how, and why questions, it was decided to use both a questionnaire-based survey to focus on quantitative results and the case study method to gather qualitative data.

Figure 5.3: Relevant Situations for Different Research Strategies

Strategy	Form of Research Question	Requires control over behavioural events	Focuses on contemporary events
Experiment	How, why	Yes	Yes
Survey	Who, what, where, how many, how much	No	Yes
Archival analysis	Who, what, where, how many, how much	No	Yes / No
History	How, why	No	No
Case Study	How, why	No	Yes

Source: Yin, 1994

A further justification for selecting these methods is that the study focuses on contemporary events and the investigator cannot manipulate or have control over behaviour directly, precisely and systematically (Yin, 1994). It is widely agreed that case studies are appropriate for the exploratory phase of an investigation and surveys are appropriate for the descriptive phase (Babbie,

1990; Platt, 1992a). The argument for the selection of these two research strategies is that a broader understanding of the research topic should be gained by analysis of the results of both methods.

To conclude this section, two research strategies, positivistic and naturalistic, were selected to test the hypotheses formulated for this study (i) The Graduate Survey and (ii) The Case Study Method. The purpose of the graduate study is to evaluate the ways in which graduate attitudes and behaviour relate to new venture creation following exposure to entrepreneurial concepts while at university/college. The purpose of the case study research is to give a comprehensive description and understanding of the many variables and components involved in a new business start-up for a graduate entrepreneur.

5.4.1 Research Methodology

A review of the literature has been discussed in the preceding chapters and research on the subject has been extensively studied and analysed. Since the main aim of this study was to investigate graduate attitudes and behaviour following the completion of an entrepreneurship education, it was essential that the information required was provided by a representative sample of Irish graduates who participated in entrepreneurship courses and programmes while at college.

In order to achieve the objectives of the study and to provide the relevant information, the method chosen to collect quantitative data was a postal survey to a random sample of graduates who had participated in enterprise development initiatives during their higher level education. A postal survey was preferred to other forms of data collection for the following reasons: It is potentially very powerful in that by a careful random selection of the sample it

can be made highly representative as it attempts to control extraneous sources of variance, such as interviewer bias or inexperience and misinterpretation. This, in turn, increases the reliability of the research, that is to say the degree to which it is possible for another person to reproduce the results or produce comparable evidence. Other methods limit the collection of data to extremely small numbers of the representatives under study (e.g. case studies or interview research).

The weaknesses of a postal survey are, first, there are no interviewers to explain the purpose and to induce co-operation, to ask questions and to record answers, and in general to cope with problems. This puts a great deal of importance on the construction of the questionnaire and the cover letter which may accompany it. Secondly, flexibility to improvise the questioning is absent as once a mail survey is put in the post the researcher can only let it run its course. Sequence bias is also another threat in postal surveys in that respondents can change their answers after seeing later questions. Low response rates are another feature of postal surveys, often below 25 per cent which makes it suspect that those who return questionnaires may be different from the rest of the population (Boyd et al. 1981).

5.4.2 The Longitudinal Survey

The research design for this study includes a longitudinal survey. A longitudinal survey involves the collection of data at different points in time. It is a research design which focuses on social change and causation at the individual or micro-level. A longitudinal survey has the ability to answer questions about causes and consequences and hence to provide a basis for explanatory theory (Babbie, 1990). A panel study, such as conducted in this thesis, is a variation of a

longitudinal design. It involves the collection of data over time from the same sample of respondents. By questioning respondents over a series of points in time the researcher can learn a good deal about the order in which events occur. The main problem with panel studies is sample attrition, non-response and failure to trace sample members at each subsequent wave of the study.

In 1991 the author completed the initial part of a proposed longitudinal study of 838 graduates of Irish higher level institutions (Fleming, 1992). The primary aim of the study was to conduct exploratory research into the productivity of enterprise development initiatives on a national basis. In the study an interest group of 419 graduates and a control group of 419 graduates was selected. The interest group had participated in an entrepreneurship course or initiative during their undergraduate studies whereas the control group had not. The tentative evidence from the study showed that graduates who were introduced to entrepreneurship concepts and the practical experience of preparing a business plan while at college, were starting businesses at twice the rate of their peers and were involved in family and part-time businesses on a far greater scale. Though the overall percentage of graduate start-ups was low (5%), the graduate entrepreneurs in the interest group were starting businesses at a younger age than those in the control group and were employing a greater number of people, had a substantially higher turnover and were involved in manufacturing as well as service industries. The primary motivation of these graduate entrepreneurs was the identification of a suitable opportunity and the impact of the entrepreneurship course they had completed while at college.

5.4.3 Decision against a Control Group

In any design that involves comparing two or more groups of subjects who have been exposed to different experimental treatments there is an underlying assumption that groups being compared are equivalent before the introduction of the experimental variable (Selltiz et al., 1974). From the analysis of the 1991 study results it emerged that several of the respondents in the interest group had self-selected entrepreneurship courses and programmes, therefore, it was concluded that further comparison with a control group may put into question the validity of the present study. It was decided to revisit *only* the interest group from the original sample, that is the group exposed to entrepreneurship education and to compare the results obtained to national data collected for the 1996 Labour Force Survey. In total there were 419 graduates in the interest group sample in the 1991 study. This figure of 419 was the total number of graduates who were involved in an entrepreneurship course for which usable addresses were available.

The aim of the longitudinal study is to provide further insight into the process of entrepreneurship by revisiting the Interest Group (Cohort A) of 419 graduates from the original sample, tracking their career path since graduation and identifying any further movement towards entrepreneurship .

5.4.4 Multiple Programmes Versus Single Courses in Entrepreneurship

In addition to the longitudinal study, a survey of a sample of 200 graduates who had participated in a multiple integrated entrepreneurship programme was also conducted. The purpose of including this group in the study was, it was hypothesised, that graduates who participate in multiple integrated programmes

while at college, would be found to have a higher level of entrepreneurial orientation after graduation than those who participate in a single course, as is the case of the graduates in the longitudinal study.

5.5 THE GRADUATE SURVEY SAMPLE

As was stressed earlier, the sample providing the information required was of crucial importance to the representativeness of the research. Ideally the survey should have covered all graduates of Irish third level institutions who had participated in entrepreneurship and enterprise development courses and programmes. Clearly this was not possible. Not only would the expense of such a survey have been prohibitive but more importantly to generate a list of graduates of Irish universities and colleges was impossible due to the nature of the time span, confidentiality and possible data protection legislation. To overcome the problem of generating a suitable sample frame the assistance of Forbairt, formerly known as the Irish Development Authority (IDA), was sought.

In 1984 the IDA, the principal industrial promotion agency in Ireland, introduced an annual Student Enterprise Award scheme which is still in continuance at the present time (1998). The programme is designed to provide undergraduate students with the opportunity to demonstrate their ability to set up a business venture of their own. The objective of the programme is to encourage students to examine the option of self employment as a viable career alternative and to realise that ideas can become businesses. While still at college, students are encouraged to identify a business idea, research it for viability and market potential, prepare a formal business plan and defend it through a series of assessments and live confrontations as would happen with any real business proposal. Two key conditions for participation are that the proposal be either a manufacturing idea or an internationally traded service idea such as software

development, international financial services, or a research and development project. These conditions comply with the IDA's mandate for job creation and grant-aid policy. Interdisciplinary teams, ideally three or four students, are encouraged to participate. Professionals from the IDA and the business world judge the projects, first at regional level, then at a national final which is televised live by Radio Telefis Eireann (the Irish Broadcasting Authority). To date more than 9,000 young people from Irish universities and colleges have submitted business plans for new venture proposals.

5.5.1 Cohort A

For the longitudinal study the survey population were students of Irish higher education institutions who were at college during the five year period 1984-1988. The decision to select graduates from these particular years was chosen because the IDA annual Student Enterprise Award commenced in 1984. Details of the participants in the competition were on file at the IDA Head Office. The IDA kindly consented to make available the student application forms for the award for the purpose of this study. The application forms gave details of the participating colleges, the names of the student teams, and the addresses of the group leaders. A total of 485 business plans had been submitted during the years 1984-1988 (see Table 5.1). The 1,670 students (approximately) who participated in the award over this period had all completed an entrepreneurship course and provided the sample frame for the longitudinal study.

Table 5.1 illustrates the number of projects, approximate number of students and the number of Irish higher education institutions involved in the IDA Student Enterprise Award over the five year period 1984-1988. A more detailed breakdown is included in Appendix 5.

Table 5.1: The Sample Universe Cohort A

Year	Number of Projects	Number of Students	Number of Institutions
1984	78	270	16
1985	97	340	17
1986	79	270	16
1987	95	340	11
1988	136	450	13
Total	485	1,670*	14.6 average

Source: IDA Files (1984-1988)

* Approximate

The total number of graduates in the sample universe was determined as 1,670 (approximate). A systematic stratified random sample of 419 project group leaders was drawn from the total of 485 projects submitted 1984-1988. Group leaders were chosen as the names and addresses of these graduates were on the application forms made available by Forbairt/IDA. The group leaders of the 485 projects that were completed and submitted for the award during the five year period 1984-1988 were selected as the sample for the Interest Group (graduates who had participated in an entrepreneurship course) in the 1991 study.

Originally, it was intended that questionnaires be mailed to all 485 group leaders. However, on investigation of the application forms a proportion of them had incomplete addresses or had addresses c/o participating institutions. Due to time constraints and difficulty sourcing the correct addresses, the participants without full details of their addresses were excluded from the survey. A total of 419 usable addresses were available and questionnaires were mailed to all 419 graduates in 1991. These 419 graduates form the present sample and were revisited in 1996.

Table 5.2: Type of Third Level Institution Attended

Year of Award	University Students	RTC's & Other Colleges	Total
1984	30	25	55
1985	36	45	81
1986	31	41	72
1987	43	47	90
1988	40	81	121
Total	180	239	419
%	43%	57%	100%

A further characteristic of the sample was:

Table 5.3: Characteristics of Sample for 1991 and 1996 Surveys

Year of Award	Business / Commerce	Engineering Science	Total	Male	Female
1984	37	18	55	40	15
1985	55	26	81	59	22
1986	51	21	72	51	21
1987	66	24	90	62	28
1988	69	52	121	82	29
Total	278	141	419	294	125
%	66.5%	33.5%	100%	70%	30%

5.5.2 Cohort B

At this point it should be noted that a second group of graduates who graduated from the University of Limerick (UL) (1989-1993) was also selected for this study. This group of 200 graduates participated in the entrepreneurship minor option stream on the BBS degree programme. Ideally a matching group of 419 would have been appropriate but this was not possible as the total number of students completing the entrepreneurship minor stream 1989-1993 was 200 (approx. 40 students per year). This stream offers students a multiple integrated programme on entrepreneurship. It consists of three modules, taken over three semesters;

Enterprise Formation, Enterprise Development and Business Consulting Programme. The purpose of including a second group in the study was, it was hypothesised, that graduates who participate in multiple integrated programmes on entrepreneurship while at college, would be found to have a higher level of entrepreneurial orientation after graduation than those who participate in a single integrated supplemented course as in the instance of the graduates in the longitudinal study.

5.6 THE GRADUATE QUESTIONNAIRE, RESPONSE AND DATA ANALYSIS

To achieve the objectives of the study a structured mail questionnaire was developed. It should be noted that the objectives, and research design to best accomplish them, had been decided upon at a very early stage. This turned out to be most helpful as it allowed a highly structured approach to the literature research. The questionnaire was drafted during and after the literature review phase. Points of interest were noted as and when encountered and often directed further reading. Several themes were developed and groups of questions formulated. The questionnaire was based on an approach centred on the individual and his/her attitudes and behaviour towards entrepreneurship. The research instrument was composed of a series of dichotomous, scaled and open questions and was developed in four sections containing fifty eight questions and 520 variables in total. The layout and sequence of the questions were designed to facilitate ease of response (see Appendix 2).

The first section was entitled **Education and Career to Date**. This series of thirteen questions examined the graduate's educational qualifications, his/her career goals and career to date. It also investigated the level of job satisfaction attained and the impact the entrepreneurship course had on the direction his/her

career had taken. Areas essential to entrepreneurial success that should have received more emphasis in the entrepreneurship course taken were also considered.

In the second section, **Attitudes to Entrepreneurship**, thirteen questions were directed at graduates in employment. Graduate attitudes and actions towards starting a business were examined and the factors that discourage or militate against entrepreneurship were reviewed. Details of the respondent's current job situation and involvement in any in-company enterprise activity were also sought together with figures on the employment size of the company where he/she held their most recent job.

Section three, **Business Start-ups**, was designed specifically for those graduates who had initiated start-up ventures. In the twenty one questions in this section, the graduate entrepreneurs were asked about the factors that motivated them to go into business together with information about their company, the support received and the problems they faced. Advice for aspiring entrepreneurs was also sought.

The fourth and final section, **Personal and Family Background**, focused on personal details. In this last set of eleven questions, the graduate's personal details regarding gender, age and marital status were sought. Parents' occupation, graduate's position in the family and the influence of the family environment were investigated. A concluding question attempted to determine the graduate's career plans for the future. The final open question was designed to gather opinions, suggestions and comments in general with regard to the research and areas of further study.

A cover letter was formulated and together with the drafted questionnaire distributed to a number of faculty and staff in the Department of Management and Marketing at the University of Limerick, who through experience or theoretical knowledge could help identify ambiguous wording or design faults which could hinder analysis. Moreover, several interviews were held with graduates of the University of Limerick who had valuable advice to contribute. For example, a number of changes were suggested to the structure and layout of the questionnaire. All detected mistakes were rectified, ambiguous vocabulary changed and retested and finally a pilot study questionnaire was printed.

5.6.1 The Pilot Study

The pilot study was carried out on 5% of the sample during the summer of 1995. Several of the respondents were post-graduate students who had taken the entrepreneurship option at the University of Limerick, and were registered for an MBS degree. The pilot study turned out to be very useful. A number of printing errors were identified and further suggestions for refinement of the questionnaire were made. A few minor errors were detected and subsequently corrected. The coding, necessary only for the analysis, was planned for the final print of the questionnaire. The coding boxes were allocated and drawn onto the final questionnaire copy. It was decided to print the questionnaire in an A5 size booklet form for convenience of handling. As the research instrument was to be sent to two groups of graduates, the longitudinal survey and the UL survey, some minor changes were incorporated in the questionnaire to facilitate each group. The printed version for the longitudinal study was a pink questionnaire titled Graduate Career Path Longitudinal Study 1996, and for the UL survey, a green questionnaire titled University of Limerick Graduate Career Path Survey 1996.

5.6.2 The Response

A total of 619 questionnaires were mailed to the entire sample in early 1996. A return stamped addressed envelope was enclosed with each questionnaire and a label on the rear of the envelope posted to the sample read "please forward to graduate if not at this address". Three weeks after the initial mailing follow-up letters were posted to non-respondents indicating 01 March 1996 as the closing date for data collection.

Table 5.4: The Graduate Survey Response

	Number Issued	Valid Response	Returned Unopened	% Valid Response
Longitudinal (Cohort A)	419	91	23	23.0
UL (Cohort B)	200	73	9	38.3
Totals	619	164	31	30.7

Table 5.4 indicates the response rate of the graduate survey. A total of 91 responses were received from the longitudinal survey whereas 121 valid responses were returned in the 1991 survey from this group. The decrease in response rate can be attributed to the time lapse that has occurred since the original survey. Twenty three of the questionnaires were returned unopened as these graduates were no longer at the original address. For the UL survey 73 valid responses were obtained with 9 questionnaires returned unopened. An overall total valid response rate of 30.7% was obtained.

5.6.3 The Non-Response

In order to estimate the level of non-response bias a random follow-up telephone interview was conducted with 10 per cent of the survey sample of both Cohort A

and Cohort B who had not returned questionnaires. Making telephone contact proved time consuming and for each response often necessitated two telephone calls, the first to a home number (parent's house) and then a further one to the graduate's work or residence number. Graduates cited several reasons for not responding to the survey. The main argument being that they had intended to complete the questionnaire but had forgotten to do so. Some stated they were not interested in the survey, a number could not remember receiving a questionnaire, while others reported that they never responded to research surveys. For those willing to co-operate with the research, a shortened questionnaire addressing the key issues of the research was administered. Omitting the number of graduates selected for this non-response error survey who were not contactable, a valid response of 42% was obtained. These responses were analysed and compared with the main survey results. No significant differences were found. It can be assumed that the non-respondents were no different to the respondents to the survey.

5.6.4 The Analysis

The returned questionnaires were coded and the results were analysed using an SPSSX computer package. Comparisons with the 1991 survey results were made. The main statistical tests conducted on the data were chi-square analysis and the Kolmogorov-Smirnov Two Sample Test. The chi-square analysis involves (1) calculating a statistic which summarises the differences between two sets of categorical data, (2) determining the degrees of freedom associated with the data set, and (3) using those two values, and a table of the chi-square distribution, to determine if the calculated chi-square statistic falls within the range which could easily have occurred by chance due to sampling variation. If it does not, the differences between the two sets of data are judged to be significant. The Kolmogorov-Smirnov Two Sample Test deals exclusively with

the maximum difference in cumulative relative frequency in grouped interval data. If the maximum difference D is large the difference is considered likely to be a real one, and the two sets of data are judged to have come from two different populations. The findings of the survey are reported in chapters seven and eight of this thesis.

5.7 THE CASE STUDY METHOD

In order to expand the enquiry into graduate entrepreneurship eight case studies of new ventures started by graduates are included in this thesis (chapter nine). These case studies show how graduate entrepreneurship has, or has not, been influenced by education for entrepreneurship in a real life context. A multiple case design was chosen as the evidence produced is often considered more compelling than a single case design and the overall study is considered more robust (Herriot and Firestone, 1983). The graduate entrepreneur is considered to be the unit of analysis and his/her enterprise the embedded unit of analysis.

According to Yin (1994) a case study is an empirical inquiry that investigates a contemporary phenomenon within its real life context, especially when the boundaries between phenomenon and context are not clearly evident. Stoecker (1991) states that the case study as a research strategy comprises an all-encompassing method, with the logic of design incorporating specific approaches to data collection and data analysis. In other words the case study is neither a data collection technique tactic nor merely a design feature alone, but a comprehensive research strategy.

The chief advantages of the case study method of research is that more accurate inferences and data are obtained from the study of an entire real situation, whereas a statistical study involves abstraction from real situations. The

disadvantages of the method centre around the lack of objectivity as it is difficult to develop formal methods of observation and recording. In addition, case study analysis is often based on the intuition of investigators and this may lead to unwarranted conclusions (Boyd et al., 1981).

To address the research question of this thesis, a semi-structured questionnaire adapted from Timmons et al., (1990) was designed for the case study interview. It focused on variables such as graduates' education, work experience, career development, personality profile, personal values, role-models, personal details and description of the business (see Appendix 3). The purpose of the semi-structured questionnaire was to enable a literal replication of data analysis to be made. For the purpose of this study, extensive qualitative research interviews with both graduate and non-graduate entrepreneurs were conducted. A sample of eight case studies were drawn from a bank of eighteen face-to-face, undisguised interviews undertaken in 1998. The purpose of these interviews was to obtain a first hand overview of the entrepreneur and his/her business, allowing the identification of those subjects from whom pertinent information could be most usefully gained. Particular emphasis was placed on exploring the influence or non-influence of entrepreneurship education on the motivation and decision of the entrepreneurs to start their own business. The eight case studies, together with cross-case analysis and conclusions, are presented in chapter nine.

PART TWO

THE RESEARCH - IRELAND AND EDUCATION FOR ENTERPRISE

Chapter Six gives an overview of the small business sector in Ireland and focuses on the various government and educational initiatives introduced to encourage entrepreneurship. It includes an overview of the entrepreneurship programme at the University of Limerick.

Chapter Seven presents the findings of the National and University of Limerick graduate survey and highlights similarities and differences that occur between this and the 1991 study. Major hypotheses 1-5 are tested and the statistical findings are presented.

Chapter Eight reports the results of a longitudinal sub-study of respondents who replied to both the 1991 and 1996 surveys. Major hypothesis 6 is tested and the statistical findings presented.

Chapter Nine introduces eight case studies of graduate entrepreneurs and their enterprises. The chapter examines the role of entrepreneurship education and other influences on the graduates' motivation and activities. Trait, behavioural and sociological components are set in context within the relevant entrepreneurship theory. Finally the implications of entrepreneurship education are drawn out.

Chapter Six

Ireland - The Entrepreneurial Challenge

IRELAND - THE ENTREPRENEURIAL CHALLENGE

6.1 INTRODUCTION

There is a growing body of literature and reports on the small business sector and self-employment. Much emphasis has been put on the encouragement of small business both from reasons of social and economic development and as a response to the growing unemployment problem in Ireland and the EU. This chapter focuses on Ireland as an example of a country where successive governments have put in place a number of mechanisms to stimulate the development of an indigenous industrial base and in particular, the creation of businesses in the small firm sector. The chapter discusses the importance of small businesses to the Irish economy and some European and international trends in relation to the sector are considered. An overview of the Irish small business sector, which consists predominantly of family-owned businesses, is provided. Government initiatives to encourage entrepreneurship and business start-ups are examined and, finally, the role of the educational institutions in creating enterprise awareness is assessed.

Interest in new and small firms has recently intensified in developed economies, partly in response to the evidence emerging from several countries of the job creation potential of the small firm sector, and partly, because of the trend towards growing industrial concentration and the desire to curb the power exerted by large corporations (Birch, 1987; Storey and Johnson, 1990). As competition between countries to attract a diminishing volume of internationally mobile investment has increased, governments have had to rely more upon indigenous resources, including the small firm sector, to generate future output and employment. It is now well known that much of

an economy's ability to innovate, diversify and create new jobs comes from the small firm sector (Patell et al. 1989).

Many European countries, Britain and Ireland included, are now giving priority to the establishment of new business ventures based on indigenous resources. The EU commission in Brussels established the Small and Medium-sized Enterprise Taskforce (1993) to stimulate business growth and to encourage enterprise throughout the community. In individual member states there is now wide acceptance of the need for self-reliance and promotion of entrepreneurship. With the increased difficulty of attracting overseas investment, Ireland, for instance, has come to rely increasingly on the indigenous business sector for the achievement of new job targets. With an unemployment rate of over 11 per cent of the workforce in 1996, Ireland has had to devise many enterprise support strategies to encourage economic growth. A wide range of schemes have been introduced and administered by a series of government agencies, giving assistance to starter firms and SMEs. These include grants, loans, training allowances and tax relief incentives.

To reform enterprise support and development, increase the level of sustainable jobs and improve living standards, the Minister for Enterprise and Employment set up Enterprise Boards in each county of Ireland as well as Enterprise Areas in a number of urban locations in late 1993. The remit of these Enterprise Boards was, and remains, to create sustainable jobs through the development of an enterprise culture nation-wide. Stimulating an enterprise culture through educational initiatives is one of the prime mechanisms introduced to deal with the growing problem of unemployment and poverty which persists in Ireland today. The role of the Enterprise Boards will be discussed in more detail later in this chapter.

6.2 THE IMPORTANCE OF SMALL BUSINESS; SOME INTERNATIONAL TRENDS

The debate around the importance of small business has been conducted for some time. The issues are complex but the importance of SMEs in Ireland, as discussed earlier, cannot be underestimated and the contribution that vibrant small businesses make to the economy is one that is gaining increasing recognition with time. It is the employment potential of small business that has attracted recent attention world-wide. Since the 1970s the international trend has seen small business become a net creator of jobs, while large business has been a net shedder. Birch (1987) claims that two thirds of the net growth in employment in the United States between 1969-1979 has occurred in firms with fewer than 20 workers. He found that from 1980-1986 Fortune 500 companies dispensed with some 2.5 million jobs. The new jobs and the new products created came from the small business sector. The U.S. Small Business Administration (1992) found that the employment share of firms with over 500 employees fell from 47.5 per cent in 1977 to 42.7 per cent in 1990. Likewise, other countries are experiencing similar trends. The First Annual Report of the European Observatory for SMEs (1993), states that 75 per cent of the jobs created in the non-primary economy between 1989-1992 were in small and medium sized enterprises. Over this period, the proportion of new jobs created in micro-enterprises with fewer than 10 people were markedly greater than their share of existing jobs. Large and medium sized firms, by contrast, suffered a decline in their share of total employment.

A series of studies of job creation in Britain in the 1980s has underlined the importance of small enterprises for employment creation (Storey & Johnson 1990). Research conducted for the British Department of Employment suggests that between 1982 and 1991 firms with fewer than 20 employees

created 2.4 million net new jobs while their larger counterparts shed 0.25 million jobs (Daly et al. 1991). The research found that in firms with over 500 employees the proportion of total employment is estimated to have fallen from 42.7 per cent in 1979 to 34.2 per cent in 1989 while that of firms with under 50 employees rose over the period from 33.6 per cent to 42.3 per cent. Storey (1993) encourages caution when viewing the relationship between small enterprises and job creation. He states that it is not justifiable to assume that because small firms have been creating jobs at a time when large firms are shedding, an increase in the number of small firms leads to increased employment. Countries such as Japan and Italy in particular have achieved high levels of industrial growth despite having considerably lower levels of industrial concentration than those in Britain, the United States and Germany. In Japan in 1991, just 26.2 per cent of employment in manufacturing industry was accounted for by enterprises with over 300 employees. In Italy, the share of industrial employment in enterprises with over 500 employees was little over a quarter in 1988 (Task Force on Small Business, 1994).

Though no comparable large scale studies of job creation have been carried out in Ireland, similar trends are occurring. According to Keating and Keane (1989), excluding new start-ups, 27 per cent of manufacturing firms with fewer than 50 employees expanded their employment between 1979 and 1985, compared with 14 per cent of firms with over 50 employees. Though small firms accounted for under a quarter of total manufacturing employment in 1979, they generated over half the additional jobs created as a result of employment growth in existing firms over the period to 1985. An Economic Research and Social Institute (1994) study shows that Irish manufacturing now sustains eight jobs in services for every 10 jobs in industry.

Small enterprises also are a critical source of dynamism and innovation in economies. Research in the United States and Europe has consistently shown that small businesses contribute a disproportionate share of business innovations. A study carried out by the National Science Foundation (1981) established that small businesses produced four times as many innovations per research dollar as medium-sized firms, and twenty four times as many as large firms, where Klein (1977) claimed that large firms are seldom, if ever, responsible for major advances in their industries. For example, the present day electronics industry is largely the creation of enterprises that started out on a small scale since the 1960s. Rothwell and Zegveld (1982, 1985,) have shown that in the period since the end of the Second World War, the proportion of innovations arising from larger firms has fallen, while that for small firms has risen significantly. They claim that from 1960 to the early 1980s the small firm share of innovations has doubled. As a result of these trends policy makers and politicians are looking to the innovativeness and job creation of small business and entrepreneurial ventures as a possible solution to rising unemployment rates and economic prosperity.

In many countries a range of policies designed to encourage new start-ups and enhance the growth of existing small businesses is being promoted. In the United States, Japan and Germany governments have attached a high priority to small business and have consistently backed it with substantial resources. In each case, this is a long term commitment which has been sustained now for decades. In the United States the results are apparent in the general vibrancy of the small business sector. In Japan the example of the flexibility and quality of its sub-contracting firms are clearly visible and in Germany the efficiency, sophistication, and export performance of its SMEs are well documented (Bannock and Albach, 1991).

The commission of the European Community has cited a number of reasons for the growth of the SME sector in Europe. These include:

- The increased respectability of entrepreneurs as part of the enterprise culture.
- High unemployment generating more involuntary entrepreneurs.
- The concentration by large firms on their core businesses, hence the growth in sub-contracting and other inputs to smaller enterprises.
- The inflexibility of large firms, leading to the growing attraction of working for oneself.

Table 6.1: Number of Enterprises in EU, US and Japan 1988

Country	Number of Enterprises (000's)	Number of Enterprises per 1,000 inhabitants	Number of Enterprises per 1,000 of working age	Number of Enterprises per 1,000 in labour force
Belgium	530	53	79	128
Denmark	180	35	52	62
France	2040	36	55	84
Germany	2160	35	50	73
Greece	670	67	101	169
Italy	3170	55	80	131
Luxembourg	20	43	77	112
Netherlands	420	28	41	63
Portugal	640	62	99	139
Spain	2020	52	79	135
UK	2630	46	70	93
Ireland	(a) 130	(a) 37	(a) 60	(a) 99
	(b) 160*	(b) 45	(b) 74	(b) 122
Total EU	14600	45	67	101
Japan**	6622	54	77	107
U.S.	18979	77	117	154

* 1992 - 93 ** 1989

Sources : European Network for SME Research. *The European Observatory for SME's First Annual Report 1993*. The US Small Business Administration, *The State of Small Business 1991*, Small and Medium Enterprise Agency, Japanese Ministry of International Trade and Industry, *Small Business in Japan 1993*. The Task Force for Small Business 1994.

In Europe much of the growth in this sector can be attributed to the continued expansion of the service sector and to the trend towards increased specialisation in all areas of industry. The European Observatory for SMEs First Annual Report (1993) presents estimates of the total number of enterprises in member states of the European Union, the United States and Japan excluding farm, fishing and forestry enterprises (Table 6.1). Because of the variations of definitions of small business and methods of collecting data, the figures presented are approximate estimates.

Ireland is below the European average when considering the number of enterprises per 1000 inhabitants but when the number of enterprises as a proportion of working age population or indeed labour force is considered, then Ireland's relative performance increases significantly. The data would suggest that Ireland's proportion of small enterprises is above the level in Northern European countries, below the level in southern European countries, and more or less on a par with the United Kingdom. These statistics suggest that enterprises tend to be smaller and more numerous in the poorer European countries. Table 6.1 also reveals the European average number of enterprises per 1,000 inhabitants is somewhat below that in Japan and well behind that of the United States.

Table 6.2 gives details of the share of total employment in private sector enterprises in four categories 0-9 employees, 10-99 employees, 100-499 employees and over 500 employees in European Union member states and the United States in 1988. The European Union defines small enterprises as those employing 10-99 persons and very small or micro-enterprises as those employing 0-9 persons.

Table 6.2: Private Sector Employment by Enterprise Size in EU Member States and US 1988

Country	Enterprise Size			
	0-9	10-99	100-499	>500
	Per Cent			
Belgium	28.4	24.1	16.7	30.9
Denmark	22.1	37.0	17.1	23.8
France	28.3	24.6	14.3	32.8
Germany	16.7	27.5	17.3	38.4
Greece	59.4	20.6	10.7	9.2
Italy	47.5	23.6	10.3	18.5
Luxembourg	22.7	29.8	21.3	26.2
Netherlands	28.2	25.7	18.6	27.5
Portugal	36.4	27.3	16.7	19.6
Spain	35.9	30.4	16.9	16.8
United Kingdom	26.2	20.9	17.7	35.2
EC-12	29.6	25.1	15.8	29.5
US*	17.8	26.1	13.4	42.7
Ireland	34.3	30.3	18.1	17.3

Sources : European Network for SME Research. The European Observatory for SMEs First Annual Report 1993. US Small Business Administration, The State of Small Business 1991.

Table 6.2 shows the greater importance of medium sized and large enterprises, in the larger, longer established countries of Germany and the United Kingdom and in the smaller higher developed countries of Northern Europe, with the exception of Denmark. The highest levels of self-employment are found in Greece, Italy, Portugal and Spain. Ireland is just ahead of the international average with 34.3 per cent of all business engaging fewer than 9 employees. It is interesting to note that in the U.S. the employment share of enterprises with over 500 employees is greater than in any of the European member states.

Because of the difficulty of collecting data on, and from, the small business sector, and taking into account that no formal register or other records of small business are readily available in many countries, many of the figures

presented are estimates based on the basis of extrapolation from other sources. The data presented can serve only as broad indicators of the level of Irish, European, American and Japanese business formation and employment.

6.3 THE IRISH SMALL BUSINESS SECTOR

Before an examination of the Irish small business sector can take place, it is necessary to define what a small business is. It is generally accepted that there is no one universal definition. In Ireland the Task Force on Small Business (1994, p.3) defines a small enterprise as follows:

"A small business or enterprise is one which employs 50 people or less or where annual turnover is less than £3 million. It is the smallest industrial or commercial unit with a separate legal identity whether it be a company partnership or sole trader".

A distinction must be made between a small business and a medium-sized business. Frequently the two are put together and classified as SMEs. In Ireland a medium sized enterprise is one which employs more than 50 but less than 250 people. Large businesses have traditionally been defined as those with more than 250 employees.

It is difficult to estimate the size of the small business sector in Ireland because of the absence of an official register of small business. Estimates of the number of small businesses have to be drawn from a number of different sources due to the lack of such a database. The Central Statistics Office conducts annual censuses of enterprises in industry and construction as well as periodic censuses of service enterprises. However, the industry census is confined to enterprises in which at least 3 persons are employed, the

construction census to 20 persons employed and the service census is not subject to employment size but limited to firms operating from permanent business premises.

Of the wide variety of sources available, it is generally accepted that the records of the Revenue Commissioners provide the most accurate estimate of the size of the sector. This is due to the fact that the data is based on a wider coverage of businesses than any other sources. Additionally, businesses are required to register with, and make returns to, the Revenue Commissioners at regular intervals (see Table 6.3). The Task Force on Small Business has estimated that there are in the region of 160,000 non-farming businesses in Ireland. This estimate includes businesses in which only the owner or owners are engaged as well as businesses with employees. Businesses that have at least one employee comprise a little over half of all the businesses in Ireland, and those without an employee a little under a half. Ireland is a nation of small businesses. Enterprises with fewer than 10 persons account for roughly 30 per cent of the total private sector labour force and those with fewer than 50 persons for around half of all persons engaged in the private sector. Clearly small business is a vital force in the economy employing roughly half the nation's *private sector workforce*.

The most comprehensive guide to the sectoral distribution of business comes from the Revenue Commissioner's trade classification of VAT-registered businesses. As can be seen from Table 6.3, manufacturing industry's share of the total number of enterprises is relatively modest, whilst the vast majority of businesses are service enterprises with just under 10 per cent involved in manufacturing.

Table 6.3: Small Business in Ireland - VAT Registrations 1992

Description of category	Registrations to end - 1992	
	Number	% of Total
Hotel, guest houses	1,168	0.9
Catering	2,948	2.3
Entertainments	448	0.4
Builders	16,240	12.8
Hire Purchase	139	0.1
Services	38,929	30.7
Grocers	4,451	3.5
Grocery with public house	860	0.7
Public House	6,615	5.2
Unprocessed goods	5,197	4.1
General stores	1,206	1.0
Cake, tobacco, paper shops	2,152	1.7
Shoe shops	452	0.4
Drapers	3,212	2.5
Garages, etc.	5,818	4.6
Chemists	1,187	0.9
Builders' providers	1,538	1.1
Electrical dealers	1,403	1.1
Jewellers	484	0.4
Booksellers	731	0.6
Furniture	967	0.8
Department stores	73	0.1
Variety chain stores	77	0.1
Fuel merchants	552	0.4
Other distributors	9,107	7.2
Manufacturers	8,457	6.7
Other	12,343	9.7
Totals	126,754	100.00

Source : Statistical Report of the Revenue Commissioners 1992.

The total figure of 126,754 VAT registered businesses excludes businesses that are VAT exempt, such as medical, dental, optical services, insurance and education. Consequently, the Task Force on Small Business estimates an overall figure of 160,000 businesses in Ireland in 1994. Difficulties also arise when trying to calculate the number of small business start-ups. Table 6.4 uses three sources of information, (new VAT registrations, Companies Registration Office and Department of Enterprise and Employment Industrial

database) to show the number of firms which set up between 1983 and 1992. From the Table it can be seen that there was an increase of manufacturing start-ups during the mid-1980s. In recent years, however, the rate has declined. This may be due in part to the economic recession of recent years. In particular there is a considerable decline in the number of grant-aided businesses. It should also be noted that the level of business closures in Ireland has been high in the 1990s. Data from the Department of Enterprise and Employment tracking 526 firms from 1983 to 1992, shows that by 1992 56% had gone out of business. McCluskey (1992) in an analysis of closure rates had similar findings. Nearly 53% of firms that started business in 1981 had closed by 1990. The data available suggests that the level of Irish closure rates is high relative to European comparisons.

Table 6.4: Ireland New Business Start-ups 1983-1992

Year	New VAT Registrations		New Company Registrations		New grant-aided Irish Manf. establishments	
No. and % total at start of year						
1983	12,652	14.2	6,336	8.9	443	7.7
1984	14,553	15.0	6,071	8.0	602	10.2
1985	13,794	13.3	6,486	8.0	627	10.3
1986	14,749	13.6	7,657	8.8	560	8.9
1987	12,698	11.6	8,603	9.4	541	8.6
1988	14,173	12.9	10,880	11.4	554	8.7
1989	15,857	13.9	14,631	13.8	441	7.0
1990	15,297	12.9	15,199	14.3	336	5.3
1991	13,380	11.3	14,848	13.2	299	4.8
1992	14,262	11.7	14,549	11.5	247	4.6
TOTAL	141,395		105,254		4,650	

Sources: Annual Report of the Revenue Commissioners, 1982-92; Annual Companies Report, 1982-92; Department of Enterprise and Employment's Industrial Database in Task Force for Small Business March 1994

In summary, this chapter so far has examined a number of small business issues that need to be considered in a study of Irish entrepreneurship. These include a discussion on the importance of the small business sector and an examination of some international statistics and trends. Finally, the section

has presented some recent data on the size, sectors, start-ups and closure rates of small business in Ireland.

6.4 THE FAMILY BUSINESS IN IRELAND

In the entrepreneurial atmosphere of recent years, family businesses have become an increasingly important contributor to the Irish economy. It is estimated that family businesses comprise over 90 per cent of all businesses in Ireland and that over 50 per cent of people employed work in family businesses. Family businesses contribute substantially to the social stability and economic success of Ireland. Considering the importance of family businesses to the economy the sector has not been given a lot of attention and a shortage of research on the subject exists. Arensberg and Kimball (1968) conducted an inductive social analysis of family and community in Ireland. They explored several aspects of rural and town life in Ireland and focused on the distinctive culture of small farmers and townspeople and the distinctions between urban and rural life. They identified that the main sources of income and employment were in small farm holdings, shopkeeping, tradesmen and bank clerks. Parental choices about the education of their children had a profound effect on their future careers and carried many beyond the confines of the father's occupation. Social aspirations of the family were won or lost depending on the education and occupation of their children. The study concluded that the distinctive Irish culture that emphasises upward social mobility through education and occupation was increasing in strength and autonomy.

In general, the literature has tended to merge family businesses, as a generic term, with small businesses. This view follows the rationale that first, all family businesses are small, and secondly, that family firms are similar in

nature to non-family firms. Smyth and Leach (1993) contend that family businesses are different from non-family businesses in their strengths and opportunities, and in their problems. Family businesses differ in a variety of ways from non-family businesses and business families function quite differently from non-family businesses. Family businesses have to cope with the dynamics that surround the founder, the family, the firm and the future. They need to adopt special strategies to foster the growth of the business and the transfer of power and control within it.

Although family firms are to be found in every sector of Irish commercial activity their special strengths of commitment, flexibility, reliability and long-range thinking mean that they flourish best in fields in which their advantages can be fully exploited. They tend to do particularly well in the retail and service industries and in niche/knowledge based sectors where cash flow is good. Family businesses are also relatively successful in supply industries where the business involves supply relationships. Indeed farming may not always have been regarded as a 'business' but there is no doubt that in the current economic environment the Irish family farm needs to be run as a business in order to survive. Supply relationships depend on the knowledge and expertise of the owner of the family business.

There is evidence that a disproportionate number of the businesses that have survived the longest are, or have been, family businesses, where the task of running the family's objectives and the firm's objectives in tandem has been achieved. According to Smyth and Leach (1993) the quality of family relationships is crucial to the success of the business. Emotional issues can limit the firm's scope for commercial success. The family situation is emotion-based, emphasising care and loyalty, while the business situation is task-

based, with emphasis on performance and results. The fusion of these two domains can lead to either superior performance or serious difficulties.

Family businesses cross the full spectrum of Irish industry and the vast majority are synonymous with small businesses. A small number of the largest businesses in Ireland are still family-controlled. However, they all share a common factor, what will happen to the business when the owner retires. Lack of succession planning has been identified as one of the main reasons for the failure of family business. If there is no obvious person or persons to whom the business can be passed, the most common options are to sell the business or close it down completely. Cromie et al. (1995) argue that founders may not want to address the issue of succession because it forces them to come to terms with their own mortality. Even if the owner does not experience this thought, the natural aversion to planning by family businesses and the reluctance to choose between offspring, may be sufficient factors to discourage the issue of succession.

Traditionally, family businesses were not adept at keeping accurate books of account and submitting revenue returns. However, over the past fifteen years, with all the advance of *computer technologies and data storage* systems, and two government tax amnesties, every business now has to make accurate and timely returns to the Revenue Commissioners. This requirement saw many small businesses fail as estimated tax demands in many cases could not be challenged. It has now become imperative that business owners understand this aspect of their operation. Many of the older generation rely on their accountants and younger would-be successor/s to handle this aspect of the business, implying that education and training in book-keeping, computer skills and small business practices has become of paramount importance. Well educated owner/managers have become

increasingly necessary to run successful family businesses in today's rapidly changing environment.

In conclusion, many in the financial and business communities believe that family firms are nearing obsolescence, unable to remain competitive in the new hyper-competitive marketplace. This view is based upon an evolutionary view of business development, a belief that businesses must outgrow their 'familiness' and move towards the more mature large corporation form of enterprise. While the competitive dynamics have changed in recent years, to write off family businesses as a thing of the past is to demonstrate tunnel vision. Family businesses will continue to play a strategic role in the economic advancement of Ireland and remain the entrepreneurial engine for new business growth. The recent Forfas Blueprint for Development (1996) envisages that only 12 out of every 100 jobs in the next decade will be in manufacturing, another 16 will be in trade service, while a massive 72 out of every 100 jobs are expected to be in local services. These estimates highlight the importance of small business and in particular family-owned businesses to the Irish economy.

6.5 GOVERNMENT INITIATIVES TO STIMULATE ENTREPRENEURSHIP

For several years now there has been an increasing awareness by the Irish government of the need to develop a more enterprising perspective among Irish people. This has been reflected in the government's decision to set up a Department of Enterprise and Employment in 1992. The very title of this department indicates that enterprise comes before employment. A more recent development has been the introduction in 1993 of County Enterprise Boards (CEBs) established for the promotion of enterprise at local level.

Indications are that the government takes seriously the work of strengthening economic and social partnership in enterprise both outside and within the state sector. A report of the Science, Technology and Innovation Advisory Council (1995) has highlighted the need for a greater focus on enterprise. The report identified as an area of concern the negative attitudes to entrepreneurship, risk-taking and innovation, evident in many aspects of Irish life, reflecting the lack of an enterprise culture in Irish society.

There have been many arguments put forward to explain the poor performance of Irish industry including one that Ireland suffers from a shortage of industrial and commercial entrepreneurs, or in economic terms, a supply deficiency (Kennedy 1995). Attitudes resulting from the country's turbulent past have been argued (Meenan, 1970; Crotty, 1986) while Lee (1989) suggests that the insecurity of 19th century life in Ireland engaged in "possession" mentality rather than a "performance" ethic. Absence of a clear goal for economic development has been argued by Kennedy (1995), thus leaving a shortage of entrepreneurs. While there is no one conclusive argument as to why Ireland has a supply shortage of entrepreneurs, several government and educational interventions have been put in place during the last decade in an attempt to redress this issue.

Public intervention in the promotion of local development activity is a relatively recent phenomenon in Ireland. The main initiatives in this area, were initially, the Western Development Scheme which operated through County Development Teams in 11 of the 26 counties of Ireland. Subsequently, EU supported 'bottom-up' programmes such as 'Leader', Interreg and the Small and Community Enterprise Scheme (SCES) sub-programme of the Operational Programme for Rural Development. These approaches to local economic development in a sense constituted a response to an industrial

policy strategy that over-emphasised the attraction of international investment. The perceived failings and limitations of this essentially 'top down' model led to a growing recognition that action is also required at a local level to support small firm growth. Primarily, responsibility for the duties of the County Development Teams and the activities which were previously assisted by the Western Development Fund and the SCES are now embraced by the broad remit given to the County Enterprise Boards (CEBs) which were founded in 1993. Thirty five Boards were established nationally with the aim of developing indigenous potential and stimulating economic activity at local level. This is done primarily through the provision of financial and technical support for the development of small enterprises. The primary objective of the Enterprise Boards is to assist the creation of sustainable jobs and the development of economic infrastructure at local level through the grant-aiding of small scale economic projects.

County Enterprise Boards were developed as a country-wide scheme which would enable small enterprises to obtain funding from a variety of sources in order to assist local economic development. CEBs take as their starting point the need to promote the "know-how" of local development by switching the emphasis from support for centrally selected and funded projects towards investment in developing the knowledge, skills and entrepreneurial abilities of the local population and in changing attitudes.

The Operational Programme for Local Urban and Rural Development (LPD), 1994-99 under which the CEBs are supported by EU funding set broad targets for the initiative. The planned investment by both the State and the EU under the Operational Programme is £81.77 million for the period 1994-99. All Boards are allocated an annual total approval capacity of £500,000 to fund a wide range of activities including financial assistance in the form of

feasibility, employment and capital grants. Promoting an enterprise culture, business information, advice, counselling, mentoring and management development are the new range of “soft support” measures provided by the Enterprise Boards. The County Enterprise Boards are now well established and have been actively addressing the mandate they were given to provide a new source of support for local enterprise initiatives. They are tapping into local knowledge, energy and commitment and help maximise the efforts of the existing industrial state agencies.

6.5.1 Entrepreneurship Initiatives in the Education System

The creation of a vibrant and successful enterprise culture is also being pursued by the government in the education system. Forbairt, the government industrial promotional agency, actively encourages young people to acquire worthwhile experience and to develop useful entrepreneurial skills while still at school or college. The agency provides sponsorship of two national student business award schemes, one, The Young Entrepreneurs Scheme at the schools level, and two, The Student Enterprise Award at the university/college level.

Launched in 1991 the Young Entrepreneurs Scheme is a major voluntary initiative of teachers and parents to help stimulate enterprise and innovative activity amongst second level students in Ireland. The aim of the programme is to prepare young people for a changing and increasingly difficult employment situation by helping them to develop entrepreneurial skills through the experience of setting up and running a real business. The central activity of the programme is the organisation of Young Entrepreneurs Schemes (YES) within schools to assist the formation of micro-businesses by individual students or small groups of students. The intention is that these businesses

will prove themselves by selling products or services over a period of time and then participate in an annual school-based enterprise competition to select the best business within the school. The winners from these competitions participate in the annual National Competition. The programme is sponsored by Forbairt at national level and by CEBs and businesses at schools and county level. In 1995/96 150 schools participated in the scheme, over 800 businesses were formed by students. Further expansion of the programme is planned to involve a larger number and a wide variety of schools throughout the country.

The underlying aim of the Young Entrepreneurs Scheme is to encourage young students to become more resourceful and enterprising and to use their imagination and initiative to plan and operate real businesses of their own. In a broader sense, the programme is a very practical response by students, parents and teachers to the problems of unemployment and the scarcity of job opportunities for school leavers. Increasingly young people will be required to create their own jobs and by getting first-hand experience of business activities through the programme, they will be much better prepared to pursue entrepreneurial activities in later life.

A study of the Young Entrepreneurs Scheme was conducted in Ireland and six other European countries (O'Conneide et al., 1994). Both quantitative and qualitative research approaches were adopted, including analyses of student reports and assignments. The research findings indicated that hands-on entrepreneurship education programmes are one way of introducing young people to intangible entrepreneurship characteristics such as the flash of inspiration, the drive to succeed, the excitement of success and the ability to deal with failure.

In 1984, the Industrial Development Authority (IDA) now known as Forbairt, introduced an annual Student Enterprise Award scheme that attracted wide interest from all colleges in the higher education sector. The objective of the programme is to encourage students to examine the option of self-employment as a viable career alternative. Ideas can become businesses. Students are encouraged to identify a business idea, research it for viability and market potential, prepare a formal business plan and defend it in a series of assessments and live confrontations, as would happen with any real business proposal. The key condition for participation is that the proposal be either a manufacturing or an internationally traded service idea, such as software development, international financial services, or a research and development project. Interdisciplinary teams, in particular, are encouraged to participate. Professionals from Forbairt and the business world judge the projects, first at regional level, then at a national final which is televised live by Radio Telefis Eireann (the Irish Broadcasting Authority). To date more than 9,000 young people from Irish universities and colleges have submitted business plans for new venture proposals.

A study of the Forbairt Student Enterprise Award Scheme, Fleming (1992), revealed that graduates who were introduced to entrepreneurship concepts and the practical experience of preparing a business plan while at college were starting businesses at twice the rate of their peers and were involved in family and part-time businesses on a far greater scale. Not only were they starting businesses at a higher rate, they were starting them at a younger age, were employing a far greater number of people, had a substantially higher turnover per annum and were involved in manufacturing as well as service industries. The primary motivation of these graduates was the identification of a suitable business opportunity and the impact of the entrepreneurship course taken.

6.6 ENTREPRENEURSHIP AT THE UNIVERSITY OF LIMERICK

The discussion in the previous section has outlined some of the various interventions and initiatives taken by the government and the educational institutions during the past number of years to encourage entrepreneurship among young people. In particular, the Forbairt Student Enterprise Award should be noted as the students participating in this initiative (1984-1993) provide the sample frame for the longitudinal study reported in this thesis. To further examine the emerging enterprise culture in Ireland this chapter moves on to describe briefly the development of entrepreneurship education in one institution of higher education in Ireland - the University of Limerick. The purpose of this overview is to consider the evolving focus on entrepreneurship as an academic discipline and to put into context, a comparison of the outcomes of a single supplemented entrepreneurship course versus a multiple integrated entrepreneurship programme in the results reported in chapter seven. The University of Limerick is unique in the Republic of Ireland in offering an integrated two year undergraduate programme in entrepreneurship.

Since 1980 the College of Business at the University of Limerick has been to the fore in promoting and acting upon the idea of entrepreneurship as an integral part of its portfolio of programmes. The entrepreneurship element, which is now inter-collegiate and university-wide, was first introduced into business courses during the 1980/81 academic year. Since then several important initiatives have been undertaken both in curriculum development and the establishment of links with small businesses in the region (Fleming and O'Conneide, 1990). Figure 6.1 outlines these developments.

Figure 6.1: Chronology of Enterprise Initiatives at the University of Limerick

Date	Entrepreneurship Initiatives Introduced
1980	Small Business Management - Core Module in Bachelor of Business Studies Degree Programme
1983	Student Enterprise Centre established
1984	Small Business Institute Programme commenced
1986	Marketing Centre for Small Business established
1987	Entrepreneurship Minor Option Stream introduced
1988	Entrepreneurship - MBA Elective introduced
1990	Entrepreneurship - Core Module Graduate Diploma in Business Administration
1992	Centre for Entrepreneurial Studies (Research) established
1993	Entrepreneurship - Introduced to Non-Business Programmes
1994	Graduate Diploma/Masters in Entrepreneurship introduced
1995	Chair of Entrepreneurship established
1998	Brendan O'Regan Professor of Entrepreneurship appointed
1999	International Professorship of Entrepreneurship proposed

6.6.1 Student Enterprise Centre - Teaching Activities

Although the chronological account of what has taken place at the University of Limerick campus includes a range of initiatives perhaps the most important decision, in retrospect, was the establishment of the Student Enterprise Centre in 1983, which has become the locus for interaction between students and faculty on entrepreneurship programmes. The Centre was founded as part of the University's enterprise development philosophy. Its aim is to provide support for students in the development of innovative ideas and to encourage them to look at business ownership and management as a career choice. The Centre provides computer, printing, mailing, fax and telephone facilities, is a venue of meetings and group discussions, a contact point and a resource base. An exhibition day is held annually to give student teams the opportunity to display their business ideas. A feature of recent years is that

many groups have moved their business ideas and developed prototypes of their proposed products.

In an effort to respond to the demand for entrepreneurship education, the College of Business has created a number of course offerings. These range from structured courses consisting of lectures, assignments, case studies and readings to innovative integrated programmes where students actively participate in the small business sector, develop business plans and are exposed to real-world entrepreneurs. An important element of entrepreneurship courses is where guest lecturers, usually entrepreneurs, impart to students the facts and realities, opportunities and problems faced by small business owners in the start-up and growth phases of their companies. Discussion and workshops with representatives of government support agencies provide another important feature of the programme. Completion of enterprise modules is well accepted by employers who are often seeking employees with 'entrepreneurial flair' within medium and large organisations. Graduates who have completed the enterprise programme find that their employment prospects are greatly enhanced. Entrepreneurship courses are included not only in business but also in many engineering, science, humanities and educational faculty programmes delivered by the University.

As discussed above, entrepreneurship education at the University of Limerick incorporates both formal and informal methods of teaching. The formal aspects of entrepreneurship education focus on providing the theoretical and conceptual frameworks which underpin entrepreneurship. This theory is delivered through didactic methods such as lectures and suggested readings. These methods are assessed by formal examinations which tests knowledge and aptitudes. The informal aspects of entrepreneurship education focus on skills building, attribute development and behavioural change.

Figure 6.2: A Process Model of Entrepreneurship Education

Inputs	Process		Outputs
Students	Content Focus	Teaching Focus	
Prior knowledge base personality needs, interests motivation, role orientation abilities work experience effort resources	Entrepreneurship defined environment innovation creativity new product development market research business planning management marketing operations finance legal issues teamwork managing growth intrapreneurship	<u>Didactic Methods</u> lectures, textbooks, readings, seminars <u>Skill Building</u> case studies, group discussion, brainstorming teamwork projects <u>Discovery</u> <u>Methods</u> problem-solving networking consultancy career planning	<u>Intangible</u> goal achievements skills/knowledge confidence decision-making problem-solving communications <u>Tangible</u> assignments presentations reports drawings prototypes products exhibition

To achieve these objectives inductive and discovery methods which include case analysis, brainstorming, simulation, team projects, presentations and small business consultancy are used. These delivery methods allow the students to integrate and apply the theory learned through the more formal means. The role of the lecturer/tutor is critical as he/she needs to strive for a balance between the academic and practitioner perspective of entrepreneurship education delivery methods.

A process model of entrepreneurship education is developed here in the context of the author's experience, in addition to observations and research of other educational institutions (Figure 6.2). The model provides multiple alternative structures and learning mechanisms to ensure that correct

learning takes place. It provides for the transfer of conceptual and theoretical knowledge into practical application and the development of skills and aptitudes. The process model outlined above provides a framework which is used in the design of entrepreneurship courses and programmes to suit different student groups at the University of Limerick.

6.6.2 Entrepreneurship Minor Stream

As part of Business and Non-Business degree programmes at the University of Limerick, students are offered an “Entrepreneurship” minor option. This multiple integrated programme covers a period of four semesters during years 3 and 4 of study (see Figure 6.3).

The objectives of the programme are:

- To provide participants with an insight into the role of the entrepreneur and small business in society.
- To develop the core skills and attributes necessary for entrepreneurship, such as creative problem-solving, diagnostic skills, communication and project management.
- To induce enterprising behaviour.
- To focus participants business vision to think strategically to generate and manage business opportunities.
- To assist personal development through freedom and opportunity to practice being enterprising.

Figure 6.3: Entrepreneurship Minor Stream Structure

Year 3	
Semester 5	Semester 6
Enterprise Formation	Co-operative Placement
Year 4	
Semester 7	Semester 8
Enterprise Development	Business Consulting

Enterprise Formation

This course offers perspectives dealing with models of entrepreneurship, enterprise culture, the entrepreneurial process and an analysis of the birth, growth and development phases of a new business. Sources of finance, government support infrastructures, high technology entrepreneurship and alternative market entry strategies are also investigated. Conceptual development is encouraged through case study analysis and presentation. An important part of the assessment is an assignment to “Interview an Entrepreneur” where students are required to relate their observations and findings to the theoretical concepts of the entrepreneur outlined in the literature. This foundation module prepares students for the subsequent experiential modules offered in year 4.

Co-operative Placement

Co-operative education involves placement of students in employment relevant to their academic interests for six to eight months in their third year of study. It thus integrates classroom theory with real working conditions. The

Co-operative Education and External Affairs Division at the University of Limerick identifies appropriate employers and liaises with them to identify suitable work assignments. Students are generally selected by employers through interview. The benefit to the student is that he/she gains practical work experience prior to graduation and the benefit to the employer is an intelligent, highly motivated employee willing to learn and perform a variety of functions. Entrepreneurship students are generally placed in small companies where they experience the evolving structures of companies as they grow and expand. Alternatively, students may be placed with development companies and agencies that support enterprise.

Enterprise Development

This course is concerned with the practical application of the knowledge acquired in "Enterprise Formation". It requires multi-disciplinary teams of students; marketing, finance, personnel, engineering and science, to prepare a business plan for a manufacturing or internationally traded service area. Teams are required to conduct a thorough market analysis in order to evaluate the opportunity identified, to design and develop a prototype of their product and to formulate a comprehensive business strategy including funding requirements and financial projections. A Student Business Ideas Exhibition is held towards the end of the course where interested public and private business personnel attend. Local media coverage is a key feature of the event. The module is run in tandem with the national Forbairt Student Enterprise Awards and other competitions introduced to encourage young entrepreneurs.

Business Consulting

In their final semester, students progress to undertake formal business consulting assignments. The course involves teams of three or four students from varying disciplines consulting with a small company in the region. Preparation of feasibility studies, strategic marketing plans, market research reports, industry analysis, business plans and the implementation of financial control systems represent typical assignments. The consulting process involves both functional skills and management skills as the students work independent of any syllabus for most of the semester. Students define their terms of reference with their client company and determine the quantity and format of the report. Formal presentations to the client company and other interested parties takes place at the end of the course. The module involves a project management task structure for learning under conditions of uncertainty and an enterprising teaching mode.

The entrepreneurship minor stream has proved highly popular, attracting business, engineering, science and humanities students. In addition to the “hands-on” minor option described above and which is taken on an “elective” basis, all students on the full-time Bachelor of Business Studies programme must complete a core module “Entrepreneurship”. The course incorporates an “Entrepreneurship Forum” and special seminars on entrepreneurship topics, with invited expert speakers, to complement the lectures and tutorials. As with all the entrepreneurship courses offered by the College of Business, students are given the opportunity of combining academic as well as practical aspects of entrepreneurship. Apart from studying theory concepts and constructs, all students assemble in interdisciplinary teams to conceive their own new business enterprises and develop formal business plans for the prospective new venture.

6.6.3 Postgraduate Entrepreneurship Programmes

The University of Limerick undertakes postgraduate programmes of education and research to Doctorate level in the area of entrepreneurship. Opportunities exist for taught and research based degree programmes in the field. In 1994 a Graduate Diploma / Masters of Business Studies Entrepreneurship was introduced. The Graduate Diploma in Entrepreneurship is specifically designed to meet the needs of recent graduates or graduates with work experience who wish to establish their own small business or aspire to work in public or private agencies which support small business. This one-year, full-time programme focuses on assisting participants to identify and create businesses which are knowledge based, innovative in nature and have job creation and export potential. The main thrust of the programme is on business planning and the actual development of a business.

The Masters of Business Studies (Entrepreneurship) is designed to meet the needs of graduates who wish to become small business and entrepreneurship trainers. In year 2 the programme focuses on the fundamentals of entrepreneurship theory and practice. Components of the course include small business consulting and an advanced entrepreneurship thesis. The course is designed to educate and train students from diverse disciplines in the theoretical and practical aspects of entrepreneurship. It considers carefully how the subject has been viewed in the past from the very first contributions of the economists to the most recent years analyses that have been observed and are discussed today. Students will explore their own entrepreneurial potential and learn at first hand the experience of entrepreneurial creativity. The main focus of the programme is on an

experienced-based education where the teaching methodology includes lectures, tutorials, case studies, assignments, field visits, projects; presentations and guest speakers including entrepreneurs, consultants and government agency specialists. Continuous assessment is by assignments, project work and end-of-term examinations.

6.6.4 Centre for Entrepreneurial Studies

A Centre for Entrepreneurial Studies was established in 1992 and has a clear goal to undertake long-term, leading edge research on entrepreneurship and the SME sector. The Centre seeks to enhance the development of entrepreneurship both in the Shannon region and the Irish economy in general. It builds its activities on a tripod of teaching, research and outreach activities. Teaching emphasises the development of a repertoire of personal transferable skills including creativity, teamwork, leadership, problem solving, communication and achievement motivation - the skills necessary to initiate, develop and manage a new business. The research agenda focuses on a range of issues including understanding the entrepreneurial process, the significance of SMEs, the impact of the intervention agencies, *entrepreneurship theory and graduate entrepreneurship*. *Outreach activities* are also an important feature of the entrepreneurship activity at the University of Limerick both in terms of assisting small and medium sized firms access relevant expertise, training programmes and new technologies, firmly rooting the teaching and research activities in the community context. A very close synergy exists between the university, industry and Shannon Development, the local industrial promotion agency. The entrepreneurship programme involves close working relationships with government development agencies and small enterprises in the Shannon region. University faculty contribute to

a number of entrepreneurship programmes and initiatives run by these agencies.

In 1986 the Marketing Centre for Small Business was established. The centre has been involved in completing a wide variety of work commissioned by private clients, commercial companies, voluntary groups and state agencies. The activities of the Centre include market research reports, feasibility studies, business plans and industrial and consumer surveys.

The Centre is perceived as a valuable source of support for the small business sector and has acquired a substantial knowledge base of business, enterprise, tourism and other national resource information. The Centre plays a critical role in sourcing projects for the Small Business Institute Programme which forms an integral part of the Entrepreneurship, Agribusiness and Tourism options on the BBS degree programme. The MCSB plays a unique role on the campus in providing interface to the SME sector through its commercial activities and its close linkages with the entrepreneurship programmes offered at the University of Limerick.

From the above overview and discussion of entrepreneurship at the University of Limerick, it is clear that the process of programme development since 1980 has involved a series of iterative steps whereby courses and initiatives have been introduced over time and growth has taken place through the extension of courses at both undergraduate and postgraduate level. A strategic entrepreneurship plan has been developed to ensure continuation and expansion of this popular and important field of endeavour.

6.7 CONCLUSION

The rapid industrialisation from a predominantly agricultural to a largely industrial urban society in the period of one generation appears to be the underlying reason for the low level of entrepreneurial activity in Ireland over recent years. However, the environment in the business sector is changing and there is an improved understanding for new start-up ventures. The government have developed several programmes and initiatives to assist the small business community. The creation of a vibrant and successful enterprise culture is not a task that can be given to any individual, institution or industry. In developing an enterprising economy three key players emerge as having central roles in the evolution, the entrepreneur, the government and the educational system.

The success or failure of enterprise is the direct result of the combination of the right ideas with the right people. In Ireland it would appear there are no shortage of ideas. The challenge for the government and the educational institutions is to create the right people with correct mentality towards enterprise. This can only be achieved through education, information and a change in societal values. Ireland needs a society that values risk and tolerates failure. It is only in this type of environment that the enterprise ideal will develop and thrive.

The Irish education system is generally well regarded and is believed to produce well rounded individuals at second level and good quality graduates at higher level that compare well with international standards. Over time incubator centres and business advisory services have appeared adjacent to universities and colleges. These centres help to create an environment that supports and encourages start-ups and the development of knowledge-based

companies drawing on the expertise and facilities of these institutions. It is foreseeable that enterprise will find a permanent place in the Irish education system. In particular, concentrated entrepreneurship programmes such as that offered at the University of Limerick engender interest and motivation among young people to explore and perhaps become involved in business ownership. Whilst many believe that entrepreneurship cannot be taught, its philosophy should at least motivate people away from the dependency culture which still persists. For those on whom entrepreneurship education exerts an influence, they can be expected to go into society the best educated and informed as possible. Research has shown that education for enterprise has a tangible effect on the future business activities of students (Fleming, 1992, 1996). If the seeds of enterprise are planted at a young age, then its effects should be even more noticeable in the future.

Chapter Seven

Findings of The National And University of Limerick Graduate Survey

FINDINGS OF THE NATIONAL AND UNIVERSITY OF LIMERICK GRADUATE SURVEY

7.1 INTRODUCTION

This chapter presents the findings of the National and University of Limerick graduate survey. As outlined in chapter five (5.3) the survey conducted examined two specific target groups, which for the purpose of this analysis will be termed Cohort A and Cohort B.

Cohort A: This group of 419 national graduates (1984-1988) are the subject of the longitudinal study reported in this and the next chapter. A study of this cohort was conducted in 1991 and again in 1996. These graduates had taken a single entrepreneurship course / initiative while at college. Their average age at the time of the 1991 survey was 25.5 years old and at the time of the 1996 survey 30.5 years old.

Cohort B: This group of 200 University of Limerick (UL) graduates (1989-1993) participated in a multiple integrated entrepreneurship programme while at university. Their average age at the time of the 1996 survey was 26 years old.

As stated, this chapter focuses on the analysed data from all respondents of both the national longitudinal survey and the UL survey. In particular, the impact of entrepreneurship education on the behaviour, attitudes, opinions and career

development of the two groups are examined. It was hypothesised that graduates who had taken a single supplemented entrepreneurship course (Cohort A) may differ somewhat, in terms of predisposition to entrepreneurship, to those who had taken a multiple integrated programme (Cohort B). It was also hypothesised that graduate entrepreneurs would differ from non-entrepreneurs in terms of the perception of entrepreneurship education, career intention and career satisfaction. Trends and changes over time in the longitudinal group are presented and discussed. Further detail of these trends and changes are also reported in the longitudinal sub-study in the next chapter.

For the purpose of simplicity, the following abbreviations are made in the Tables presented in this chapter.

Cohort A	-	C_A
Cohort B	-	C_B
Entrepreneurs	-	Ents
Period 1 (1984-1988)	-	P_1
Period 2 (1989-1993)	-	P_2

In the findings presented here statistical analysis are conducted to identify similarities and/or differences that occur in the responses of:

- (i) The longitudinal group in P_1 and P_2 ($C_A P_1$ $C_A P_2$)
- (ii) The longitudinal group in P_1 and the UL group P_2 ($C_A P_1$ $C_B P_2$). These groups are similar in that they were surveyed within 3-7 years of graduation. This limit of 3-7 years was set in order to allow at least that much time to have passed to allow for career development (average age 25-26 years).

- (iii) Cohort A in P₂ and Cohort B in P₂ (C_AP₂ C_BP₂) in order to assess similarities / differences in mature versus recent graduates.
- (iv) Non-entrepreneurs versus graduate entrepreneurs (Non-Ents Ents).

Table 7.1 indicates the number of national graduates who responded to the 1991 and 1996 surveys. The response rate to the longitudinal survey indicates some attrition as expected, from 29 per cent in 1991 to 23 per cent in 1996 while the UL survey had a response rate of 38.3 per cent

Table 7.1: Graduate Samples and their Response Rate

1991 Survey Period 1 (1984-1988)				1996 Survey Period 2 (1989-1993)			
Cohort	Sample	Response	%	Cohort	Sample	Response	%
Cohort A	419	121	29.0	Cohort A	419	91	23.0
				Cohort B	200	73	38.3
Totals	419	121	29.0	Totals	619	164	30.7

While this response rate was lower than expected, it should be pointed out that it was achieved without pressure on the respondents (just one follow-up letter). *The response must also be seen as rather successful given the length of the questionnaire (58 questions).* However, on most questionnaires there were incomplete responses (not all respondents answered all questions). An overall response rate of 30.7 per cent was not considered critical as the central purpose of the research was not to describe the graduate population but to look for patterns and examine trends over time. For example, between those who had graduated in period one and those who had graduated in period two and also

between those who had taken a single enterprise initiative and those who had taken a formal integrated entrepreneurship programme.

A further aim of the analysis was to make comparisons between Cohort A and Cohort B. Does Cohort B exhibit the same entrepreneurial characteristics as Cohort A did in 1991 or are they more or less entrepreneurial? Other issues examined are how do graduate entrepreneurs differ from the rest of the sample? What patterns are emerging from a longitudinal study that tracks graduates' career paths over an extended period?

It should be noted that the analysis and discussion in this chapter focuses mainly on comparisons between $C_A P_1$, $C_A P_2$, $C_B P_2$ and Ents P_2 . A longitudinal sub-study where the 55 graduates who responded to both the 1991 and 1996 surveys, is reported in chapter eight. Results of the analysis of $C_A P_1$, $C_A P_2$ and $C_B P_2$ are included in the Tables presented in this chapter in order to highlight trends and make comparisons over time. The chi-square test is used to assess the statistical difference of apparent similarities and differences in the categorical data. The Kolmogorov-Smirnov two-sample test is used on the grouped interval data, again to identify similarities or isolate differences in the reported findings.

The chi-square analysis involves (1) calculating a statistic which summarises the differences between two sets of categorical data, (2) determining the degrees of freedom associated with the data set, and (3) using those two values, and a table of the chi-square distribution, to determine if the calculated chi-square statistic falls within the range which could easily have occurred by chance due to

sampling variation. If it does not, the differences between the two sets of data are judged to be significant. The Kolmogorov-Smirnov two sample test deals exclusively with the maximum difference in cumulative relative frequency in grouped interval data. If the maximum difference D is large the difference is considered likely to be a real one, and the two sets of data are judged to have come from two different populations.

It should be noted that the findings presented in the subsequent Tables are expressed as a % of “stated replies” to the questionnaire. The “not stated” % is omitted in the final total calculation of the % distribution of replies.

7.2 GRADUATES’ EDUCATION AND CAREER

This first section of the analysis reveals a profile of the respondents’ education and career. The analysis allows classification into (i) graduates of Universities or Regional Technical Colleges and other Institutions of Higher Education, (ii) primary qualification, (iii) quality of the award, (iv) specialism of the respondents and (v) further qualifications. Graduates’ initial career goals and pursuance of same are investigated. The relevance of their qualifications to their career to date is assessed together with the level of career satisfaction attained. Graduates’ first choice in relation to career path is determined and their attitude to entrepreneurship education and the intention of becoming an entrepreneur is explored. Finally, the analysis discloses areas of study that respondents feel

need more attention in the curriculum and are essential to entrepreneurial success.

Table 7.2: Profile of Respondents

	C _A P ₁		C _A P ₂		C _B P ₂		Total P ₂	
	n	%	n	%	n	%	n	%
University Graduates	65	53.7	56	61.5	73	100	129	78.7
Regional Technical Colleges & Other Institutions	56	46.3	35	38.5	-	-	35	21.3
Totals	121	100	91	100	73	100	164	100

Chi-square Test: C_A P₁ C_A P₂, df 1, $X^2 = .000$ (< critical value (0.05) = 3.84)

Table 7.2 presents a profile of respondents by type of higher level institution attended. In P₁ a total of 121 graduates replied and in P₂ a total of 91 graduates responded to the longitudinal survey. In P₂ 61.5% (n=56) responses were from university graduates and 38.5% (n=35) responses were from Regional Technical Colleges (RTCs) and other institution graduates. The chi-square test suggests that there was no statistically significant difference between the responses of C_A in P₁ and P₂ in terms of type of college attended. There was a higher response from university graduates when taking into consideration the profile of the sample (43% university graduates, 57% RTCs and other graduates, (see Table 5.2). This may be attributed to university graduates' better understanding of, and identification with, research of this nature and its importance. As outlined earlier, C_B P₂ are all University of Limerick graduates (100%, n=73).

Table 7.3 indicates that in P₂ 80.5% (n=132) of respondents graduated at degree level, 14% (n=23) at diploma level, and 5.5% (n=9) at certificate level. In an

examination of $C_A P_1$ and $C_A P_2$ in terms of the qualification of respondents, broad similarities are again evident in the responses of the group.

Table 7.3: Qualifications of Respondents

	$C_A P_1$		$C_A P_2$		$C_B P_2$		Total P_2	
	n	%	n	%	n	%	n	%
Degree	76	62.8	59	64.8	73	100	132	80.5
Diploma	30	24.8	23	25.3	-	-	23	14.0
Certificate	15	12.4	9	9.9	-	-	9	5.5
Totals	121	100	91	100	73	100	164	100

Chi-Square Test: $C_A P_1$ $C_A P_2$ df 2, $X^2 = .326$ (< critical value (0.05) = 5.99)

The chi-square test confirms this. The proportion of graduates holding a diploma (14%) is higher than those holding a certificate (5.5%). This can be attributed to the fact that the sample was drawn from participants in the Forbairt/IDA Award project which occurs in the third year of study in most colleges, certificate courses being of two years duration. $C_B P_2$ are university graduates and all received a degree qualification.

Table 7.4: Level of Award

	$C_A P_1$		$C_A P_2$		$C_B P_2$		Total	
	n	%	n	%	n	%	n	%
First Honours	5	5.3	3	3.8	2	2.8	5	3.3
Honours - 2.1	22	23.4	18	23.1	15	21.1	33	22.2
Honours - 2.2	20	21.2	19	24.4	28	39.4	47	31.5
Pass / Credit	27	28.7	30	25.6	26	36.7	46	31.0
Merit / Distinction	20	21.4	18	23.1	-	-	18	12.0
Not Stated	27	22.3	3	14.2	2	2.73	15	9.1
Totals	121	100	91	100	73	100	164	100

Chi-Square Test: $C_A P_1$ $C_A P_2$, df 4, $X^2 = .589$ (< critical value (0.05) = 9.49).

An examination of the quality of the award received by the respondents in Cohort A indicates a relatively normal distribution in terms of honours and pass qualifications. The chi-square test indicates no significant difference between $C_A P_1$ and $C_A P_2$ in terms of the level of award achieved by the respondents at the 0.05 level. Respondents in $C_B P_2$ also show normal distribution consistency in their award results.

Table 7.5: Specialism of Respondents

	$C_A P_1$		$C_A P_2$		$C_B P_2$		Total	
	n	%	n	%	n	%	n	%
Business / Commerce	89	73.6	60	65.9	73	100	133	81.0
Engineering	15	12.4	19	20.8	-	-	19	11.7
Science	17	14.0	12	13.3	-	-	12	7.3
Totals	121	100	91	100	73	100	164	100

Chi-Square Test: $C_A P_1$ $C_A P_2$, df 2, $X^2 = 4.09$ (< critical value (0.05) = 5.99)

An analysis of the academic specialisms of respondents in $C_A P_1$ and $C_A P_2$ again indicates broad similarities between respondents with the majority of graduates having a business/commerce qualification, while the remainder of the respondents were engineering/science graduates (Table 7.5). These findings correspond to the profile of the total sample surveyed (see Table 5.3, 66.5% business, 33.5 engineering and science). The chi-square test indicates that there is no statistical difference between $C_A P_1$ and $C_A P_2$ in terms of specialism of respondents. All respondents in $C_B P_2$ graduated with a Bachelor of Business Studies degree from University of Limerick.

Table 7.6: Further Educational Qualifications

	C _A P ₁		C _A P ₂		C _B P ₂		Total	
	n	%	n	%	n	%	n	%
Masters Degree	5	4.0	10	11.0	6	8.2	16	9.8
Postgraduate Qualification (excluding Masters)	29	24.0	26	28.5	12	16.4	38	23.2
Primary Qualification	87	72.0	55	60.5	55	75.4	110	67.0
Totals	121	100	91	100	73	100	164	100

Chi-Square Test: (i) C_AP₁ C_AP₂, df 2, $X^2 = 4.91$ (< critical value (0.05) = 5.99)

(ii) C_AP₁ C_BP₂, df 2, $X^2 = 2.63$ (< critical value (0.05) = 5.99)

What is interesting in the findings represented in Table 7.6 is the increase in national graduates (C_AP₂) who have obtained a Masters degree in 1996 - 11% (n=10) compared with 1991 C_AP₁ - 4% (n=5). This finding suggests that Master level qualifications were pursued and accomplished by 7% of respondents between 1991 and 1996. This may be due to constraints in the labour market and the availability of funding from the EU for post-graduate courses. Although the chi-square test (i) suggests that the post-graduate pattern of study of C_AP₁ and C_AP₂ are similar, the result indicates that the relationship is not strong or clear cut.

On average, 23.2% (n=38) of respondents in P₂, other than those who have obtained a Masters degree, have gone on to achieve a further qualification such as a graduate diploma, marketing or accounting qualification. University of Limerick graduates, C_BP₂, report a lower than national average in terms of post-graduate study with 8.2% (n=6) qualifying with a Masters degree and 16.4% (n=12) obtaining a further qualification. A possible explanation for this finding may be attributed to two six month work placements that occur during the four

year degree programme; this may have enabled them to more readily gain employment rather than selecting further study as an option. The chi-square test (ii) indicates that University of Limerick graduates are no different than national graduates in terms of post-graduate study at the 0.05 level.

Table 7.7: Personal Details of Respondents

	C _A P ₁		C _A P ₂		C _B P ₂		Total P ₂	
	n	%	n	%	n	%	n	%
Male	80	66.1	67	73.6	55	75.3	122	74.4
Female	41	33.9	24	26.4	18	24.7	42	25.6
Totals	121	100	91	100	73	100	164	100

Chi-Square Test 1: (i) C_AP₁ C_AP₂, df 2, $X^2 = 1.38$ (< critical value (0.05) = 5.99)

(ii) C_AP₁ C_BP₂, df 2, $X^2 = 1.83$ (< critical value (0.05) = 5.99)

Single	101	86.0	47	51.6	61	83.6	108	65.8
Married	20	14.0	43	47.3	11	15.1	54	32.9
Other	-	-	1	1.1	1	1.4	2	1.3
Totals	121	100	91	100	73	100	164	100
Mean Age	25.5 yrs		30.5 yrs		26 yrs		28.2 yrs	

Chi-Square Test: (i) C_AP₁ C_AP₂, df 2, $X^2 = 24.93$ (> critical value (0.05) = 5.99)

(ii) C_AP₁ C_BP₂, df 2, $X^2 = .000$ (< critical value (0.05) = 5.99)

An analysis of the personal details of respondents is outlined in Table 7.7. In total in P₂ 74.4% (n=122) of respondents were male and 25.6% (n=42) of respondents were female. This response is fairly in line with the profile of the sample as outlined in Table 5.3 (70% male, 30% female). The chi-square test confirms the similarities in C_A and C_B in terms of gender composition. Regarding marital status, the findings indicate, as expected, that as graduates mature, (see C_AP₂), the number married increases from 14% (n=20) in P₁ to 47.3% (n=43) in P₂. A statistically significant difference occurs in terms of marital status of C_A

between P_1 and P_2 . $C_B P_2$ report a marriage rate of 15.1% ($n=11$). This is very much in line with $C_A P_1$, 14.0% ($n=20$) where the average age in both groups is approximately 25/26 years old. No statistical difference occurs between these two groups in terms of marital status.

7.2.1 Testing of Hypotheses Concerning Entrepreneurship Education, Multiple Programmes and Career Direction

The first set of sub-hypotheses (numbered 1-10) as outlined in chapter five concern graduates' education and career intentions. The results are outlined in Tables 7.8 - 7.18.

Sub-hypothesis 1 - Graduates will have intended initial career goals.

Table 7.8: Graduates' Initial Career Goals

	$C_A P_2$		$C_B P_2$		Total P_2	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Employment in Specialism	35	40.2	26	36.1	61	38.4
Promotion / Management	23	26.4	18	25.0	41	25.8
Experience / Self-Employment	24	27.7	18	25.0	42	26.4
Education / Further Study	2	2.3	4	5.5	6	3.8
Not Clear / None	3	3.4	6	8.4	9	5.6
<i>Not Stated</i>	4	4.4	1	1.4	5	3.0
Totals	91	100	73	100	164	100

Chi-Square Test: $C_A P_2$ $C_B P_2$, *df* 4, $X^2 = 3.02$ (< critical value (0.05) = 9.49)

Graduates in P_2 were questioned regarding their initial career goals. Responses from the sample were many and varied. A closer analysis of the data on respondents' career aspirations identified five main categories of responses as outlined in Table 7.8. It is interesting to note that the vast majority of national

graduates, $C_A P_2$ 40.2% (n=35), selected a short-term goal of employment in their specialism, while 26.4% (n=23) chose a long-term goal of promotion / management. Interestingly, 27.7% (n=24) indicated, first, experience and then self-employment as their career objective. The respondents in $C_B P_2$ appear to be equally disposed to business ownership with 25% (n=18) indicating entrepreneurship as their chosen career path. A remark by one entrepreneur sums up the views of several of the respondents:

"I had a plan to achieve experience in a number of areas. Once these were achieved I moved on until I had enough experience to establish my own firm".

The chi-square test $C_A P_2$ $C_B P_2$ indicates no significant difference between these groups at the 0.05 level in terms of initial career goals.

Sub-hypothesis 2 - The majority of graduates will pursue their intended initial career goals.

Table 7.9: Pursuance of Initial Goals

	$C_A P_2$		$C_B P_2$		Totals P_2	
	n	%	n	%	n	%
Yes	69	79.3	52	71.2	121	75.6
No	18	20.7	21	28.8	39	24.4
<i>Not Stated</i>	4	4.4	0	0	4	2.4
Totals	91	100	73	100	164	100

Chi-Square Test: $C_A P_2$ $C_B P_2$, df 1, $X^2 = 1.44$ (< critical value (0.05) = 3.84)

The sample were then questioned as to whether they were now pursuing their initial career goals. In total, 75.6% (n=121) replied in the affirmative while the remainder of the respondents 24.4% (n=39) stated several varying reasons for a change in their initial career objectives (Table 7.9). A number of respondents

cited changes in their circumstances and workfield. Several had moved from marketing, accounting and personnel careers to information technology and technical fields and vice versa. Others had changed from specialised areas to general management positions. Five respondents reported that their original goals had not changed but were just taking longer to achieve than expected. Five other respondents indicated that a Masters degree had changed their original focus, while two other graduates had selected a religious vocation. Overall the results indicate that the vast majority of graduates were quite clear on, and actively pursued their career decision on leaving college. The chi-square tests indicate no significant difference between $C_A P_2$ and $C_B P_2$ in terms of pursuance of initial goals.

Sub-hypothesis 3 - Graduates' higher-level educational qualifications will be relevant to their careers

Table 7.10: Relevance of Qualification to Career to Date

	$C_A P_2$		$C_B P_2$		Totals P_2	
	n	%	n	%	n	%
Very Relevant	24	26.4	21	29.6	45	27.8
Relevant	28	30.8	21	29.6	49	30.2
Fairly Relevant	24	26.4	17	23.9	41	25.3
Little Relevance	11	12.1	8	11.3	19	11.7
No Relevance	4	4.4	4	5.6	8	5.0
<i>Not Stated</i>	0	0	2	2.7	2	1.2
Totals	91	100	73	100	164	100
Weighted Average Score	3.63		3.75		3.65	

Kolmogorov-Smirnov Test: $C_A P_2$ $C_B P_2$, $D=.02$ ($<$ critical value (0.05) = .215)

The relevance of the qualification, received by the sample, to their career to date was explored. Graduates were asked to rank the relevance on a five point scale, ranging from 'very relevant' (score 5) to 'no relevance' (score 1). The vast

majority of respondents 83.3% (n=135) felt that their primary qualification was relevant to the direction their career had taken with 27.8% (n=45) indicating that the qualification was essential to their employment position (Table 7.10). Several respondents expanded on this relevancy and stated that their qualification was broad based and opened up opportunities in related areas. Fourteen graduates indicated that their post-graduate qualification secured their employment position while seven respondents reported the entrepreneurship course as directly responsible for their job position. The importance of co-operative work placement experience was cited by six UL graduates as a major contributing factor to obtaining their present employment.

Of the 16.7% (n=27) who felt that their qualification was of little or no relevance to their career to date, these respondents cited a number of reasons for this opinion. Ten graduates reported that their work was in a completely different field. Two respondents stated they were unemployed and their qualification had been of little use to date, while another two respondents felt that their qualification was useful but had little relevance to the real world. Regarding education in Ireland, one respondent with an engineering qualification was quite forthright in his opinion of the university system:

“After five years at university, I didn’t know how to balance my cheque book, get a mortgage, save money, invest money, open any Windows applications, use CAD, lead people, manage projects and a few other things. If I was content with wearing a white coat all day thrashing out the maths on stresses built up in cylinders then my degree would be very useful. However, the real world demands good communication skills and problem-solving abilities, both lacking in my education.”

This statement certainly highlights the inadequacy of an engineering degree programme that fails to address the more practical issues of the workplace and the development of more rounded skills of the student.

Another respondent expressed similar views regarding perceived expectations and the world of work:

“There was one major criticism that I did have regarding my course, that was lack of experience and training gained in the actual workplace, that is on-the-job training, even if it only consisted of filing, faxing, answering the phone, it would be a major plus to students. It would also help them to understand a little better what is involved. Work can be a lot different from what students actually think it is”.

The Kolmogorov-Smirnov test $C_A P_2$ $C_B P_2$ indicates that broad similarities occur between the groups in terms of graduates’ attitudes to the relevance of their primary qualification. The weighted average score of the groups’ attitude to the relevance of their qualification to their career to date was 3.65, that is towards the upper end of the ‘relevant’ to ‘very relevant’ band.

Sub-hypothesis 4 - The majority of graduates will seek a career in employment.

Table 7.11: Employment Status of Respondents

	$C_A P_1$		$C_A P_2$		$C_B P_2$		Total P_2	
	n	%	n	%	n	%	n	%
Employed	108	89.2	76	83.3	59	80.8	135	82.4
Self-Employed	6	5.0	13	14.5	8	11.0	21	12.8
Studying	5	4.0	1	1.1	4	5.5	5	3.0
Unemployed	2	1.8	1	1.1	2	2.7	3	1.8
Totals	121	100	91	100	73	100	164	100

Chi-Square Test (i) $C_A P_1$ $C_A P_2$, df 3, $X^2 = 6.71$ (< critical value (0.05) = 7.82)

(ii) $C_A P_1 C_B P_2$, df 3, $X^2 = 2.99$ (< critical value (0.05) = 7.82)

An analysis of the data presented in Table 7.11 indicates a number of interesting results. Comparing $C_A P_1$ with $C_A P_2$, the number of graduates entering self-employment has increased from 5% (n=6) in 1991 to 14.5% (n=13) in 1996. All these respondents participated in a single entrepreneurship initiative while at college. The group of respondents who selected a multiple entrepreneurship programme, $C_B P_2$, indicate business ownership of 11% (n=8) of the respondents. The entrepreneurs in $C_B P_2$ are graduates who are between 3-8 years out of college and comparison can be made with $C_A P_1$ who in P_1 similarly were between 3-8 years since graduation. This tentative evidence would suggest that those who engage in several courses on entrepreneurship have a greater propensity towards business ownership. It should be noted that the chi-square tests (i) $C_A P_1 C_A P_2$ and (ii) $C_A P_1 C_B P_2$ indicate no significant differences between the groups at the 0.05 level, although the relationship is not strong or clear cut.

Perhaps the most interesting finding of the study is the trend that emerges when comparing $C_A P_1$ with $C_A P_2$. The number of graduate entrepreneurs has increased in this cohort from 5% (n=6) in P_1 to 14.5% (n=13) in P_2 . It would appear that as graduates mature the number starting new businesses increases. According to the Irish Labour Force Survey (1996) the national percentage of persons with higher level education who run his/her own business in the age group < 24 years is 1.3% and in the age group 25-34 years is 8.3%. The results in Table 7.11 suggest that the number of persons with an

entrepreneurship education entering business ownership is substantially higher than the national norm, that is 5% compared to 1.3% in the < 24 years age group and 14.5% compared to 8.3% in the 25-34 years age group.

These results suggest that graduates who are exposed to entrepreneurship concepts and practices are starting and running businesses at a higher rate than their peers nationally. It is accepted that the entrepreneurial employment is low in comparison with the total sample. The majority of the respondents have selected a career in employment which suggests a strong attitudinal orientation towards employment. Nonetheless, the overall results appear to indicate a positive trend towards entrepreneurship over time.

Sub-hypothesis 5 - Graduates will achieve a high level of career satisfaction.

Table 7.12: Satisfaction with Career to Date

	C _A P ₁		C _A P ₂		C _B P ₂		Total P ₂	
	n	%	n	%	n	%	n	%
Very Satisfied	34	36.2	28	30.8	17	23.9	45	27.7
Satisfied	42	44.7	37	40.6	31	43.7	68	41.9
Fairly Satisfied	5	5.3	22	24.2	17	23.9	39	24.0
Dissatisfied	9	9.6	3	3.3	5	7.0	8	4.9
Very Dissatisfied	4	4.2	1	1.1	1	1.4	2	1.2
<i>Not Stated</i>	27	22.3	0	0	2	2.7	2	1.2
Totals	121	100	91	100	73	100	164	100
Weighted Average Score	3.99		3.97		3.81		3.89	

Kolmogorov-Smirnov Test: (i): C_AP₁ C_AP₂, D=.095 (< critical value (0.05) = .20)

(ii): C_AP₁ C_BP₂, D=.068 (< critical value (0.05) = .215)

Again using a five point scale the sample were questioned about their satisfaction with their career to date (Table 7.12). The vast majority of respondents in P₂ 69.6% (n=113) were very satisfied or satisfied with the direction their career had taken since graduation. A lower than average response to 'very satisfied' was reported by C_BP₂, 23.9 (n=17). A possible explanation is that among this group there may be a higher proportion of aspiring entrepreneurs who have not yet achieved their goal of business ownership. The results also indicate that 30.1% (n=49) of respondents are less than satisfied, with expectations of career direction and status not being met.

Examining trends over time the results indicate that Cohort A have a higher level of career satisfaction with a weighted average in P₁ of 3.99 and in P₂ 3.97, respectively. The Kolmogorov-Smirnov test (i) confirms that no statistical difference occurs between C_AP₁ and C_AP₂. C_BP₂ is no different than C_AP₁ in terms of career satisfaction according to the Kolmogorov-Smirnov test (ii).

Sub-hypothesis 6 - Graduate entrepreneurs will have a higher level of career satisfaction than graduates in employment.

Table 7.13: Graduate Entrepreneurs' Career Satisfaction

	C _A P ₂ *		C _B P ₂ *		Ents P ₂		Total P ₂	
	n	%	n	%	n	%	n	%
Very Satisfied	23	28.6	13	21.3	9	42.8	45	27.8
Satisfied	32	40.0	26	42.7	10	47.7	68	41.9
Fairly Satisfied	21	26.4	16	26.2	2	9.5	39	24.2
Dissatisfied	3	3.7	5	8.2	-	-	8	4.9
Very Dissatisfied	1	1.3	1	1.6	-	-	2	1.2
Not Stated	-	-	2	3.2	-	-	2	1.2
Totals	80	100	63	100	21	100	164	100
Weighted Average Score	3.91		3.73		4.33			

* non-entrepreneurs

It is interesting to note that on isolating from the main sample, the responses of the graduate entrepreneurs, with respect of their level of career satisfaction, versus the remainder of the group in P₂, Table 7.13 indicates a higher than average score for entrepreneurs with a weighted average score of 4.33. The findings suggest that business ownership results in an extremely high level of career contentment and satisfaction.

Sub-hypothesis 7 - Graduates choice of preferred work situation will be towards business ownership

Table 7.14: Choice of Preferred Work Situation

	C _A P ₂ [*]		C _B P ₂ [*]		Ents P ₂		Total P ₂	
	n	%	n	%	n	%	n	%
(a) The job you have now (whether you are employed or self-employed)	21	26.9	8	14.5	19	90.4	48	31.1
(b) The same kind of job but with some changes in working conditions or people you work with	17	21.8	13	23.6	2	9.6	32	20.9
(c) The same kind of work but in an enterprise of your own (for those in employment)	23	29.5	21	38.2	-	-	44	28.6
(d) A different kind of work entirely in an enterprise of your own	15	19.2	10	18.2	-	-	25	16.2
(e) A different kind of work entirely but not in an enterprise of your own	2	2.6	3	5.5	-	-	5	3.2
<i>Not Stated</i>	<i>2</i>	<i>2.5</i>	<i>8</i>	<i>12.6</i>	<i>0</i>	<i>0</i>	<i>10</i>	<i>7.0</i>
Totals	80	100	63	100	21	100	164	100

*non-entrepreneurs

Chi-Square Test: C_AP₂, C_BP₂, df 4, X² = 3.84 (< critical value (0.05) = 9.49)

In order to explore in more detail respondents' satisfaction with their career to date and their current work situation, a choice of five job alternatives was offered as outlined in Table 7.14. The sample were asked to select their preferred option.

A number of interesting findings emerge from the above results. A comparison of non-entrepreneurs in $C_A P_2$ and $C_B P_2$ indicates that the majority of C_A , 29.5% (n=23), selected an enterprise of their own as their number one choice and the majority of $C_B P_2$, 38.2% (n=21) also selected business ownership as their choice of preferred work situation. This result would appear to indicate a strong orientation towards entrepreneurship in the sample in general and especially in Cohort B, the group who had completed an integrated entrepreneurship programme. The chi-square test (i) indicates no statistical difference between the two groups when questioned on preferred choice of work situation.

It should be noted that some of the respondents had reservations concerning going it alone in business. One graduate remarked;

"With jobs so scarce and job security valued so highly in Ireland, people with jobs even if they spot an opportunity, are probably not inclined to take it. In my own case I would like to try my hand at an enterprise but the job I am now in is quite good and reasonably secure. Perhaps entrepreneurial skills are not developed and encouraged enough during higher level education".

Another respondent commented;

"One of the problems that was identified by our lecturer while taking the enterprise course was that in places like Germany, graduates of their education system had an advantage in that they focused to a much greater extent on engineering subjects which gave them a better outlook to setting up their own business in the future".

It is interesting to note that on isolating the responses of the graduate entrepreneurs, the vast majority 90.4% (n=19) selected their current position in self-employment as their number one choice while 9.6% (n=2) indicated that they would like some changes in their working environment.

On the issue of business ownership, a further examination of the data indicates that 58.4% (n=90) of total respondents considered entrepreneurship and self-employment as their first career choice, while 41.6% (n=72) preferred a career in employment.

Sub-hypothesis 8 - Graduate entrepreneurs career decision will be affected positively by entrepreneurship education.

Whether the undergraduate enterprise initiative taken by the sample had an effect on graduates' subsequent career decision was also explored (Table 7.15). While the majority of non-entrepreneurs in P_2 , 63.5% (n=87), stated there was 'little' or 'no effect', a reasonably high proportion 36.4% (n=50) responded positively with 2.9% (n=4) stating that the entrepreneurship course had a 'very important effect' on their career decision. The Kolmogorov-Smirnov test (i) indicates no statistical differences between $C_A P_2$ and $C_B P_2$.

An analysis of the responses of the graduate entrepreneurs to this question indicates that the majority, 57.6% (n=10) felt the entrepreneurship course had a 'very important' or 'important' effect in directing their career. A weighted average score of 3.38 v. 2.33 indicates the entrepreneurs' positive attitude to the enterprise initiative in comparison the rest of the sample.

Table 7.15: Influence of Entrepreneurship Course on Career Decision

	C _A P ₁		C _A P ₂ *		C _B P ₂		Ents P ₂		Totals P ₂	
	n	%	n	%	n	%	n	%	n	%
Very Important Effect	8	10.8	2	2.7	2	3.2	5	23.8	9	5.7
Important Effect	13	17.6	10	13.3	6	9.7	5	23.8	21	13.3
Fairly Important Effect	12	16.2	13	17.3	17	27.4	6	28.6	36	22.8
Little Effect	26	35.1	30	40.0	27	43.6	3	9.5	60	38.0
No Effect	15	20.3	20	26.7	10	16.1	2	10.3	32	20.2
<i>Not Stated</i>	47	38.8	5	6.3	1	1.6	0	0	6	3.7
Totals	121	100	80	100	63	100	21	100	164	100
Weighted Average Score	2.63		2.25		2.40		3.38		2.33	

*non-entrepreneurs

Kolmogorov-Smirnov Test: (i) C_AP₂ C_BP₂, D=.105 (< critical value (0.05) = .23)

(ii) Non-Ents P₂ Ents P₂, D=.397(>critical value(0.05)= .318)

This result suggests that graduate entrepreneurs' career decision was influenced by the entrepreneurship course taken at college. **A statistical significant difference occurs between non-entrepreneurs and entrepreneurs in relation to the influence of entrepreneurship education.**

The following statements and comments on the returned questionnaires illustrate a sample of the diversity of attitudes and opinions held by graduates concerning their entrepreneurship education. On the positive side, remarks such as the following were frequently in evidence.

"I wrote to the Head of Engineering some years back specifically to tell him that by taking the entrepreneurship course in my final year, it was the single biggest impact on my career direction".

"The entrepreneurship course for me opened up an avenue of opportunity. I know through family circumstances that I always wanted a job with job security and thought entrepreneurship was for risk-takers. The course made me realise the value of the entrepreneurial spirit even in large organisations. I don't think I will ever open up my own business, but I'm being entrepreneurial in a semi-state organisation and that is breaking the mould. I would therefore consider myself not as a failure from the entrepreneurial programme but rather a success. I may not be self-employed, but I am certainly being more entrepreneurial than I ever thought possible".

"I was very much influenced by my study of entrepreneurship. In addition, many of my friends have started their own business which has encouraged me to consider it".

"At the end of the course we know a lot more about the business world than the average nineteen year old".

"Before the course I would have thought that entrepreneurship was for major risk takers. It has changed my perception and so made me more open to intrapreneurship in large organisations".

"The entrepreneurship course is an opportunity for undergraduates to experience a taste of what it takes to get on. Whether as an entrepreneur or working for someone else."

A number of graduates viewed the impact of entrepreneurship course with more caution and criticism included comments as follows:

"Our class took the entrepreneurship module in 2nd year when no one was really interested. If moved up to 4th year and made more interesting it might have more impact".

"My participation in the entrepreneurship course was ill conceived and ill prepared".

"Although I don't think the course will ever make an entrepreneur out of someone who doesn't have the right character, it is useful in giving those who tend in this direction a chance to find out more and try out an idea".

"I feel the business plan was useful in coming together as a team, realising your strengths and weaknesses, giving you the opportunity to meet business people and question them about their successes and failures. Its

a good subject for personal development. However, much of the research on projects has been scanty and would not in anyway accurately reflect the extent of planning required to start a business. Whilst some people may have good ideas for potential businesses they often would not have the availability of the necessary funding, and as students, would find obtaining funding from financial institutions rather difficult. Hence, although the enterprise awards are fundamentally a very good idea, I imagine they don't make too many entrepreneurs".

Table 7.16: IDA/Forbairt Award and Employment

	C _A P ₂		C _B P ₂		Total P ₂	
	n	%	n	%	n	%
Very Helpful	6	6.7	11	15.5	17	10.6
Helpful	16	17.8	19	26.8	35	21.7
Fairly Helpful	13	14.4	13	18.3	26	16.1
Little Help	19	21.1	16	22.5	35	21.7
No Help	36	40.0	12	16.9	48	29.9
<i>Not Stated</i>	1	1.0	2	2.7	3	1.8
Totals	91	100	73	100	164	100
Weighted Average Score	2.30		3.01		2.56	

Kolmogorov-Smirnov Test: C_AP₂ C_BP₂, D=.23 (> critical value (0.05) = .216)

Continuing on the examination of *entrepreneurship* education and its effect, the impact on gaining first employment was addressed. Graduates were questioned whether the enterprise initiative taken at college was in any way helpful in obtaining employment. Of the total respondents 48.4% (n=78) replied positively, with 10.6% (n=17) stating that the initiative was 'very helpful' (Table 7.16). A closer analysis of the results shows that C_BP₂ considered this enterprise initiative most helpful in terms of gaining employment with an average weighted score of 3.01 versus 2.30. The Kolmogorov-Smirnov test indicates a significant difference between C_AP₂ and C_BP₂ at the 0.05 level, which suggests that

graduates who participated in a multiple entrepreneurship programme found the initiative more beneficial in terms of gaining employment.

Additional comments by respondents emphasised that participation in the Student Enterprise Awards was included on their curriculum vitae and was often a question addressed at employment interviews. Participation in the award indicated a self-starter with well developed all round skills and motivation. Several national graduates were of the opinion that the award should be compulsory for all undergraduate students because of its practical nature and the team skills and leadership qualities developed. A number of respondents reported that they had gained substantial publicity and prize money by reaching the finals of the award. Five graduates stated that they had met their employer as a direct result of their project. Two graduates reported that the award had the single biggest impact on their careers. Participation in the IDA/Forbairt Award was summed up by one respondent as follows:

"In my case the Student Enterprise Award did not play any real part in either obtaining my job or subsequent success in my job. However, the team of people involved did find it interesting and useful in the sense that it helped us to develop skills such as teamwork and planning which is vital in any business today. I also feel that this award was an education to us all and I am sure that if at some stage in my life, I do decide to open my own business, that the enterprise development we studied will of course be helpful in helping me to make my business a success".

Another respondent, who is employed by an Enterprise Board, viewed the entrepreneurship initiative very positively. He remarked:

"The IDA Award Scheme was very important to me. Without participating I would have very little opportunity to get the job I have today."

It can be concluded from the comments of many respondents that participation in the IDA/Forbairt Student Enterprise Award was a very positive and rewarding experience.

Of those who considered the initiative of 'little' or 'no help' 51.6% (n=83) statements such as 'not relevant to my job', 'not significant to employers' and 'award not known abroad' were frequent responses.

Sub-hypothesis 9 - Predisposition towards entrepreneurship will be evident in graduates who study enterprise at the undergraduate level.

Sub-hypothesis 10 - Graduates who undertake a multiple integrated entrepreneurship programme while at college will have a higher incidence of intention to become an entrepreneur than those who undertake a single supplemented entrepreneurship course.

Table 7.17: Intention of Becoming an Entrepreneur

	C _A P ₂ [*]		C _B P ₂ [*]		Ents P ₂		Totals P ₂	
	n	%	n	%	n	%	n	%
Yes	43	53.7	51	83.6	16	76.1	110	67.9
No	37	46.3	10	16.4	5	23.9	2	32.1
<i>Not Stated</i>	0	0	2	2.7	0	0	2	1.2
Totals	91	100	63	100	21	100	164	100

*Non-entrepreneurs

Chi-Square Test: C_AP₂ C_BP₂, df 1, X² = 13.93 (> critical value (0.05) = 3.84)

Graduates were asked the reason why they took an entrepreneurship option at college. Had they the intention of becoming an entrepreneur? Overall, 67.9% (n=110) of the total respondents replied in the affirmative (Table 7.17). Respondents gave a number of reasons for taking the initiative. Entrepreneurship is a broad based course offering the opportunity to develop

personal skills was argued by several respondents. To conduct research, to experience teamwork, to acquire practical experience and to understand better the supports available from the development agencies and professionals were other reasons cited. Graduates' comments on the reason for taking the entrepreneurship option included the following statement:

"Taking the course implies that I have initiative. It separates an accountant from the crowd. As a result I am a more rounded person".

"It helped to indicate that I was a self-starter".

"My employer saw initiative and motivation in me because I took an enterprise course. I plan to eventually have my own business".

"Ultimately I would like to do consultancy for SMEs. I have already done some work on a consultancy basis due to the experience gained from the option".

A number of respondents stated that the enterprise initiative was obligatory in their college and part of their course work. On a less positive note, three graduates claimed that their reason for studying entrepreneurship was because it looked good on their curriculum vitae, they gained extra credits and they were striving to attain an honours degree.

What is interesting in Table 7.17 is the very high proportion of non-entrepreneurs in C_BP₂ who responded positively to the question - 83.6% (n=51). This result is understandable as this group of University of Limerick graduates had selected the elective entrepreneurship stream in their final two years of study. The probability is that at some future point in time these graduates may start businesses. **The chi-square test confirms that C_AP₂ and C_BP₂ are**

as fields of study requiring more attention to ensure entrepreneurial success. An interesting result to note is that 41.7% (n=26) of C_AP₂ highlighted management education as crucial. It is probable that this group, who are more mature by five years than the remainder of respondents, have identified, as they now progress in their careers, that their management education at college was inadequate. Another rather significant result is the high proportion of C_BP₂, 40.6% (n=24) who indicated that finance was an area of concern in their college course. A probable explanation is that the majority of students who study entrepreneurship at UL are marketing students who take a limited number of finance modules during their programme of study. Deficiencies in management and finance education are important points that should be considered by the educators concerned. Information technology is identified as another area where more emphasis needs to be placed in the college system and highlighted by 17.0% (n=28) of all respondents.

Many comments regarding additions and improvements to the entrepreneurship course were made by respondents. These included the following:

“Looking back it was a useful exercise but I think important elements such as teamwork and aspects of finance, management and marketing should and could have been highlighted more. Having left the study environment these elements appear more real and applicable to me”.

“Entrepreneurship module at university was excellent in a practical way but the related theory was irrelevant. Students at university are all capable of setting up a business and doing it well, therefore, I feel that more emphasis should be placed on inspiring and fostering this spirit of enterprise in young people”.

“Now most colleges have job placements. In my term in college this facility was not available so I had no contact with companies in my area of

interest. There should be more employer/college liaison as it is very difficult to gain experience and almost all employers want experience”.

An examination of the responses of the graduate entrepreneurs highlights management, 19% (n=8), finance 26.1% (n=11) and information technology, 26.6% (n=7) as key areas requiring more attention in the curricula. In particular, this group highlighted the importance of selling, both face to face and telephone techniques and interpersonal skills.

Other areas needing more attention in the entrepreneurship curriculum identified by graduates in response to this question were; idea generation, feasibility of business idea, selling techniques, negotiating, logistics, exporting, languages, government regulations, tax and venture capital.

In summary, the above section has presented findings relating to sub-hypotheses 1-10 concerning entrepreneurship education, multiple integrated entrepreneurship programmes and career direction.

7.3 GRADUATES' ATTITUDE TO ENTREPRENEURSHIP

While the first part of the findings in this chapter revealed a profile of all respondents and their education and career intentions, the second part explores graduates in employment and their perceptions and views toward entrepreneurship. Details and opinions of respondents who started enterprises are treated later in section 7.4 of this chapter. Attitudes concerning motivation to start a business, the skills required, the probability of business ownership, the

presence of business ideas and factors militating against entrepreneurship are now examined. Enterprise activity in the workplace, steps taken towards pursuing a business idea and any involvement in part-time business activity are also explored. Graduates working abroad report their attitude towards returning to Ireland to set up a business venture.

7.3.1 Testing of Hypotheses concerning Graduates in Employment and their Perception of the Feasibility of Self-Employment

There are ten sub-hypotheses in this section numbered 11-20 as set out in chapter five. The objective is to test the assumptions made in relation to graduates in employment and their predisposition towards entrepreneurship. The results are presented in Tables 7.19 - 7.30.

Sub-hypothesis 11 - Graduates who study entrepreneurship will find employment in small firms

Table 7.19: Employment Size of Firm

	C _A P ₁		C _A P ₂		C _B P ₂		Totals P ₂	
	n	%	n	%	n	%	n	%
Employed in company > 50 employees	67	69.3	57	62.6	39	54.9	96	59.3
Employed in company < 50 employees	37	33.3	30	33.0	26	36.6	56	34.5
Not applicable	7	6.4	4	4.4	6	8.5	10	6.2
<i>Not Stated</i>	10	8.3	0	0	2	2.74	2	1.2
Totals	121	100	91	100	73	100	164	100

Chi-Square Test: (i) C_AP₁, C_AP₂, df 2, X² = .374 (< critical value (0.05) = 5.99)

(ii) C_AP₁ C_BP₂, df 2, X² = .618 (< critical value (0.05) = 5.99)

Respondents were asked to indicate the employment size of the firm they were currently employed in. An expected finding was that over one third 34.5% (n=56)

of graduates worked in small companies with fewer than 50 employees (Table 7.19). The Task Force on Small Business (1994) states that in Ireland small businesses account for around half of private sector employment. This finding also supports research studies that indicate that increased job opportunities are occurring in the small firm sector (Hart et al. 1993). This result may be of interest to designers of university and college curricula which have up to recently almost entirely focused on the functions and needs of the large company. Comparing $C_A P_1$ with $C_A P_2$ no statistical difference occurs. A further analysis of the data indicates that in P_2 16% (n=26) of respondents worked in micro-enterprises with fewer than ten employees. This figure includes all of the graduate entrepreneurs. Although the percentage of graduates in $C_B P_2$ working in small companies is slightly higher, 36.6% (n=26), the chi-square test indicates that there is no statistical difference between $C_A P_1$ and $C_B P_2$ in terms of the size of firm where graduates were employed.

Sub-hypothesis 12 - Graduates in employment will be motivated to some extent to start a business.

Table 7.20: Motivation to Start a Business

	$C_A P_2$		$C_B P_2$		Totals P_2	
	n	%	n	%	n	%
Very Large Extent	16	19.8	10	15.6	26	17.9
Large Extent	16	19.8	16	25.0	32	22.0
Some Extent	26	32.0	28	43.8	54	37.2
Little Extent	18	22.2	6	9.4	24	16.5
No Extent	5	6.2	4	6.3	9	6.4
<i>Not Stated</i>	<i>10</i>	<i>11.0</i>	<i>9</i>	<i>8.1</i>	<i>19</i>	<i>11.6</i>
Totals	91	100	73	100	164	3.26
Weighted Average Score	3.25		3.28		3.26	

Kolmogorov-Smirnov Test: (i) $C_A P_2$ $C_B P_2$, $D=.127$ ($<$ critical value (0.05) = .227)

Respondents other than those self-employed were asked to report on a five point scale the extent of their motivation towards starting a business. Motivation appears high among this group with a weighted average score of 3.26 for the group as a whole. A closer examination of respondents in $C_A P_2$ and $C_B P_2$ and their motivation towards business ownership indicates that $C_B P_2$ appear slightly more motivated with a score of 3.28 v. 3.25. No significant difference exists between these two groups as confirmed by the Kolmogorov-Smirnov test.

Many respondents emphasised the importance of gaining experience before they made the move towards business ownership.

"My short-term career plans involve further advancing my accounting qualification and experience. On the long-term I would like to start my own business".

"I would like to get product knowledge and experience in the industry I am in, become a salesperson, and go on from there to start my own business".

"I intend to get involved in the marketing/public relations end of a big company if possible, gain experience while searching for a suitable opportunity for myself. Experience and finance would be my initial priorities".

"In the long-term once I have gained the relevant experience I would like to set up a training consultancy business. I feel the entrepreneurship course has steered me to that ideal".

Table 7.21: Ideas for Starting a Business

	C _A P ₂		C _B P ₂		Totals P ₂	
	n	%	n	%	n	%
Have Ideas	50	65.8	41	64.1	91	65.0
No Ideas	26	34.2	23	35.9	49	35.0
Not Stated	15	16.5	9	12.3	24	14.6
Total	91	100	73	100	164	100

Chi-Square Test: C_AP₂ C_BP₂, df 1, $X^2 = .044$ (< critical value (0.05) = 3.84)

Respondents in employment were asked if they had any specific ideas on areas of business opportunities presenting in their environment. Interestingly, 65.0% (n=91) of total respondents replied positively (Table 7.21). Responses regarding the type of business opportunity identified were many and varied. These ranged from graphic design, computer animation, software development, import substitution, arts, music, crafts, tourism, consultancy, financial services, food products, engineering and plastic products, franchising and service related ideas. Several respondents stated that they had already started making enquiries and conducting market research to determine the feasibility of their ideas. The chi-square tests indicate broad similarities between graduates who left college in P₁ and P₂ in terms of ideas for new venture start-ups.

Sub-hypothesis 13 - Graduates who undertake a multiple integrated entrepreneurship programme will be more actively seeking a business opportunity than those who undertake a single supplemented entrepreneurship course.

Table 7.22: Actively Seeking Business Opportunity

	C _A P ₁		C _A P ₂		C _B P ₂		Totals P ₂	
	n	%	n	%	n	%	n	%
Very Large Extent	6	5.6	4	5.3	6	9.4	10	7.1
Large Extent	13	12.1	8	10.5	11	17.2	19	13.6
Some Extent	31	29.0	27	35.5	15	23.4	42	30.0
Little Extent	36	33.7	25	32.9	18	28.1	43	30.7
No Extent	21	19.6	12	15.8	14	21.9	26	18.6
<i>Not Stated</i>	14	11.6	15	16.5	9	12.3	24	14.6
Totals	121	100	91	100	73	100	164	100
Weighted Average Score	2.46		2.57		2.64		2.60	

Kolmogorov-Smirnov Test (i) C_AP₁ C_AP₂, D=.046 (< critical value (0.05) = .225)

(ii) C_AP₁ C_BP₂, D=.108 (< critical value (0.05) = .230)

Continuing with the exploration of respondents in employment aspirations towards entrepreneurship, the next question was directed at establishing if any of the sample were, in fact, actively seeking a business opportunity. Table 7.22 presents the findings. A weighted average score of 2.64 for C_BP₂ shows a slightly higher tendency in this group to more actively seek out a business opportunity and a more positive orientation towards business ownership. The Kolmogorov-Smirnov test concludes that broad similarities occur between C_AP₁, C_AP₂ and C_AP₁ and C_BP₂.

Sub-hypothesis 14 - Graduates in employment will perceive some probability of starting their own business

Table 7.23: Probability of Starting Own Business

	C _A P ₁		C _A P ₂		C _B P ₂		Totals P ₂	
	n	%	n	%	n	%	n	%
Highly Probable	27	25.2	19	25.0	15	23.4	34	24.3
Probable	28	26.2	20	26.3	20	31.3	40	28.5
Some Probability	36	33.6	24	31.5	23	35.9	47	33.7
Improbable	12	11.3	12	15.8	4	6.3	16	11.4
No Probability	4	3.7	1	1.4	2	3.1	3	2.1
<i>Not Stated</i>	14	11.6	15	16.5	9	12.3	24	14.6
Totals	121	100	91	100	73	100	164	100
Weighted Average Score	3.58		3.58		3.65		3.61	

Kolmogorov-Smirnov Test: (i) C_AP₁ C_AP₂, D=.024 (< critical value (0.05) = .204)

(ii) C_AP₂ C_BP₂, D=.056 (< critical value (0.05) = .214)

The question on the probability of running a business of their own was used to establish respondents' feelings and motivation towards entrepreneurship. The majority of all respondents in employment 52.8% (n=74) in P₂, felt that it was 'highly probable' or 'probable' that one day they would start a business. With regard to the possibility of one day starting a business, one graduate remarked:

"The questionnaire itself may lead to graduates considering starting their own enterprise if not in the next few years but later in their lives".

Another respondent felt that a team approach was what was needed to commence a business.

"Emphasis is always on starting your own business. For me most enterprise opportunities have been two to three person ventures bringing together the skills of a number of people. I expect to develop my career to form a small company of this type".

No difference occurs between national graduates in P₁ and P₂ regarding the probability of starting their own business as indicated by the Kolmogorov-

Smirnov test (i). The Kolmogorov-Smirnov Test (ii) indicates that the responses of $C_A P_2$ $C_B P_2$ are also broadly similar. It can be concluded from the results in Table 7.23 that just over half of all respondents felt it likely that they may start a venture.

Sub-hypothesis 15 - Graduates who have taken an entrepreneurship course will perceive they have the skills necessary to start a business.

Table 7.24: Skills Necessary to Start a Business

	$C_A P_2$		$C_B P_2$		Totals P_2	
	n	%	n	%	n	%
Yes	68	84.0	49	76.6	117	80.6
No	7	8.6	8	12.5	15	10.4
Unsure / Not Yet	6	7.4	7	10.9	13	9.0
<i>Not Stated</i>	<i>10</i>	<i>11.0</i>	<i>9</i>	<i>12.3</i>	<i>19</i>	<i>11.6</i>
Totals	91	100	73	100	164	100

Chi-Square Test : $C_A P_2$ $C_B P_2$, df 2, $X^2 = 1.27$ (< critical value (0.05) = 5.99)

Graduates in employment were questioned as to whether they had the skills necessary to set up and run a new business. Table 7.24 presents some interesting results. Comparing the mature group $C_A P_2$ with more recent graduates $C_B P_2$ it appears that respondents who graduated in P_1 were more confident that they had the skills required with 84% (n=68) responding in the affirmative compared with 76.6% (n=49) in Cohort B. This result is not surprising since several years of work experience had been obtained by $C_A P_2$ resulting in confidence in their abilities to create a new venture. Overall, the majority of respondents 80.6% (n=17) were confident that they possessed the skills necessary to start a new venture.

Table 7.25: Steps Taken in Setting Up Own Business

	C _A P ₂		C _B P ₂		Totals P ₂	
	n	%	n	%	n	%
Identified Opportunity						
Yes	54	69.2	42	64.6	96	67.1
No	24	30.8	23	35.4	47	32.9
Totals	78	100	65	100	143	100
Chi-Square Test (i) C _A P ₂ C _B P ₂ , df 1, X ² = 1.94 (< critical value (0.05) = 3.94)						
Initial Enquiries						
Yes	45	57.7	38	38.5	83	58.0
No	33	42.3	27	41.5	60	42.0
Totals	78	100	65	100	143	100
Chi-Square Test (i) C _A P ₂ C _B P ₂ , df 1, X ² = 0.00 (< critical value (0.05) = 3.94)						
Market Research						
Yes	21	27.0	10	15.4	31	21.7
No	57	73.0	55	84.6	112	78.3
Totals	78	100	65	100	143	100
Chi-Square Test (i) C _A P ₂ C _B P ₂ , df 1, X ² = 5.11 (> critical value (0.05) = 3.94)						
State Agency Advice						
Yes	16	20.5	6	9.2	22	15.4
No	62	79.5	59	90.8	121	84.6
Totals	78	100	65	100	143	100
Chi-Square Test (i) C _A P ₂ C _B P ₂ , df 1, X ² = 3.40 (< critical value (0.05) = 3.94)						
Financial Advice						
Yes	10	12.8	12	18.5	22	15.4
No	68	87.2	53	81.5	121	84.6
Totals	78	100	65	100	143	100
Chi-Square Test (i) C _A P ₂ C _B P ₂ , df 1, X ² = .86 (< critical value (0.05) = 3.94)						

Another direct indicator of entrepreneurial aspirations was a question which asked graduates who were in employment not only if they had a business idea and wished to start a business, but to what extent they had pursued the idea. Five steps towards business ownership were explored; business opportunity

identified, initial enquiries made, market research carried out, state agency advice and financial advice sought. Table 7.25 outlines the findings.

Overall responses to this question were positive with 67.1% (n=96) of respondents stating that they had identified an opportunity, supporting the results in Table 7.22 and 58% (n=83) reporting that they had made initial enquiries regarding their business idea. Market research has been carried out by 21.7% (n=31) of respondents while 15.4% (n=22) had sought state agency advice and financial advice was obtained by 15.4% (n=22). Rosa and McAlpine (1991) in their survey of graduates asked respondents whether they had a business idea and wished to start a business, 40% responded positively. On the issue of market research, a significant difference occurs between national and UL graduates indicating a higher instance of practical application of research techniques in the latter group.

A possible explanation for this difference is that during their education this group had more exposure to the marketplace thereby enabling them to a greater extent to consider and evaluate feasible business ideas.

Graduates were given the opportunity to expand on this enquiry. They were asked if they had carried out any other initiatives with regard to starting a business. Responses included preparation of a business plan, acquired patent, priced equipment, made prototype, sought partner, obtained grant aid, and agreement of contracts and terms of reference. It can be concluded that a

substantial number of graduates in employment are aware and are actively taking steps in pursuing business opportunities.

Sub-hypothesis 16 - Graduates in employment will perceive several factors that militate against entrepreneurship.

Table 7.26: Factors that Militate Against Entrepreneurship

	$C_A P_2$	$C_B P_2$	Total P_2
	Weighted Average Score		
Lack of Finance	3.78	4.22	4.00
Importance of Job Security	3.64	3.50	3.57
Lack of Perceived Opportunity	3.72	3.72	3.72
Perceived Risk too High	3.45	3.48	3.46
Lack of Relevant Experience	3.14	3.37	3.25
Unsuitable Business Climate	3.09	2.78	2.93
Constraint of Family Responsibilities	2.73	2.40	2.56

It was felt that it might be useful to enquire from the graduates who were in employment what were the factors they believed militated against entrepreneurship. Respondents were asked to respond on a five point scale their perception of the criteria that hinder or discourage entrepreneurship. Seven main constraints were outlined, importance of job security, lack of perceived opportunity, lack of finance, lack of relevant experience, perceived risk too high, constraint of family responsibility and unsuitable business climate. Table 7.26 summarises the responses to this question. A weighted average score for each factor is presented. Respondents were also asked to add any other factors they considered relevant as deterrents to entrepreneurship.

Regarding lack of finance both $C_A P_2$ and $C_B P_2$ considered this the most important obstacle to business ownership with a score of 3.78 and 4.22 respectively. Lack of relevant experience and the risk involved in self-employment featured higher for UL graduates, $C_B P_2$, 3.37 and 3.48, respectively, while the more mature group, $C_A P_2$ felt that family constraints were a more important factor 2.73 v. 2.40. $C_B P_2$ were less concerned with the suitability of the business climate with the lowest score of 2.78. This may well be due to the very practical nature of their entrepreneurship course which involves extensive environmental scanning and analysis.

When examining the responses to job security, $C_A P_2$ appear more risk averse with a score of 3.64 in the consideration that this was an important factor. The result here would seem to indicate that this group were less prepared to explore employment alternative such as self-employment than the UL graduates, $C_B P_2$ at 3.50. With regard to lack of perceived business opportunity, both groups had a similar score at 3.72.

It can be concluded from the results presented in Table 7.26 that as graduates mature, criteria such as finance, the identification of a suitable business opportunity, job security and the constraints of family responsibilities become more important while finance, experience, risk and the general business environment become less important. A common remark in several of the returned questionnaires is reflected in the following statement:

“Family responsibilities is a big influencing factor for me and I suspect for others. I don’t see myself doing anything entrepreneurial until our children are at school and my wife is working again”.

Graduates with an in-depth study of entrepreneurship, C_BP₂, reported the lack of finance and the identification of a suitable business opportunity as the main factors that impinge on entrepreneurship. Hawkes (1981) in his survey of MBA graduates identified that finding the right opportunity constituted the single most important factor *militating against entrepreneurship*. Several respondents cited what they considered other important factors that hinder entrepreneurship. They quoted considerations such as the long hours of work involved, the necessity of knowledge of the available support for new business, the availability of partners to set up an entrepreneurial team, the commitment and ability to get from idea to start-up and the need for self-confidence to overcome fear and setbacks.

Sub-hypothesis 17 - Graduates will frequently perceive their company of employment as lending support to the promotion of enterprise.

Table 7.27: Company Support for Promotion of Enterprise

	C _A P ₂		C _B P ₂		Totals P ₂	
	n	%	n	%	n	%
Support Enterprise	18	23.7	15	23.4	33	23.6
Does Not Support	50	65.8	40	62.5	90	64.3
Not Applicable	8	10.5	9	14.1	17	12.1
<i>Not Stated</i>	15	16.5	9	12.3	24	14.6
Total	91	100	73	100	164	100

Chi-Square Test: C_AP₂ C_BP₂, df 2, X² = .43 (< critical value (0.05) = 5.99)

When asked whether the organisation they worked for supported the promotion of enterprise, 23.6% (n=33) of the total sample replied positively (Table 7.27). It had been considered that many of the sample may well be attracted to employment in development agencies, banks, financial corporations and educational institutions which have an involvement with new ventures. Examples include:

"I work for an enterprise development agency providing hands-on support for SMEs".

"The financial institution I work for helps fund companies with viable business plans by means of loans, finance and security".

Sub-hypothesis 18 - Graduates will frequently be involved in in-company enterprise activity.

When questioned if their job involved in-company enterprise activity (Table 7.28), a high proportion of respondents, 48.9% (n=68) indicated that new product development, marketing, innovation, research and development and education were areas in which they were occupied. Examples of innovativeness and enterprise are reflected in the following statements:

Table 7.28: Enterprise Activity within the Work Environment

	$C_A P_2$		$C_B P_2$		Totals P_2	
	n	%	n	%	n	%
Job involves enterprise activity	38	50.0	30	47.6	68	48.9
Job does not involve enterprise activity	33	43.4	24	38.0	57	41.0
Not Applicable	5	6.6	9	14.4	14	10.1
<i>Not Stated</i>	15	16.5	10	13.7	25	15.2
Totals	91	100	73	100	164	100

Chi-Square Test: $C_A P_2$ $C_B P_2$, df 2, $X^2 = 2.33$ (< critical value (0.05) = 5.99)

"I started a development section to offer uniqueness to our business and now represents 25 per cent of our business".

"My job involves the design of new software products".

"Always looking for new better ways of doing things while focused on bottom line".

"I am setting up a centralised accounting unit for group as part of a data centre for Europe".

"I am solely responsible globally for new product development".

No statistical difference occurs between $C_A P_2$ $C_B P_2$ in terms of in-company enterprise activity.

Sub-hypothesis 19 - Graduates in employment will on occasion run part-time businesses.

Table 7.29: Run a Business on a Part-Time Basis

	$C_A P_1$		$C_A P_2$		$C_B P_2$		Totals P_2	
	n	%	n	%	n	%	n	%
Yes	14	15.3	12	15.8	14	19.2	26	17.4
No	77	84.7	64	84.2	59	80.8	123	82.6
Not Stated	30	24.8	15	16.5	0	0	15	9.1
Totals	121	100	91	100	73	100	164	100

Chi-Square Test (i): $C_A P_1$ $C_A P_2$, df 1, $X^2 = 0$ (< critical value (0.05) = 3.84)

(ii): $C_A P_1$ $C_B P_2$, df 1, $X^2 = 1.44$ (< critical value (0.05) = 3.84)

Another interesting finding of the survey was the high proportion of respondents in employment 17.4% (n=26) who ran or were running a business on a part time basis. Interestingly, the majority of the part-time businesses were in the service sector such as catering, consulting, teaching, insurance, information technology, property management, and the haulage business. A number of respondents

reported farming as their part-time occupation. The chi-square test indicates broad similarities across all respondents in terms of part-time business ventures started. The phenomenon, labelled the Corridor Principle, proffers that most entrepreneurs will see corridors leading to new venture opportunities (Ronstadt, 1985). Starting a business on a part-time basis suggests that these respondents (n=26) may well be aspiring entrepreneurs.

Sub-hypothesis 20 - Graduates employed abroad will consider returning to Ireland to start a business a viable career option

Overseas work experience represents a useful mechanism for acquiring new ideas and discovering new innovations. It was decided to investigate if the graduate sample employed abroad would consider returning to Ireland to start a business.

Table 7.30: Graduates Employed Abroad

	C _A P ₂		C _B P ₂		Totals P ₂	
	n	%	n	%	n	%
Return to Ireland	16	20.8	13	20.6	29	20.7
Not Return	5	6.5	3	4.8	8	5.7
Not Applicable	56	72.7	47	74.6	103	73.6
<i>Not Stated</i>	14	15.4	10	13.7	24	14.6
Totals	91	100	73	100	164	100

Chi-Square Test: C_AP₂ C_BP₂, df 2, X² = .198 (< critical value (0.05) = 5.99)

The survey identified that 26.4% (n=37) of the total respondents were working overseas (Table 7.30). When those abroad were questioned as to whether they would consider returning to Ireland to start a business if the opportunity arose,

78.4% (n=29) replied positively. Several indicated that this was their intention when they had gained the necessary experience and skills required to set up and run a business. The remainder 21.6% (n=8) responded negatively and cited issues such as the high tax system, the limited market size and the lack of support for the service sector were reasons stated for not giving consideration to return to Ireland. The chi-square test indicates that no difference occurs in the views of C_AP₂ C_BP₂ towards starting a new venture in Ireland. As one graduate stated:

“As an Irish graduate abroad I feel that there are many ideas/opportunities that can be taken from outside the country and possibly be used in the creation of new business in Ireland. I’m not sure how this source could be tapped in the future but I believe it could prove an interesting one for future development”.

7.4 GRADUATE BUSINESS START-UPS

Having examined the opinions and perceptions of graduates in employment, studying and unemployed in relation to entrepreneurship, this section of the findings provides information on the business ventures initiated by the graduate entrepreneurs. These results are more exploratory in nature rather than geared to providing data related to specific hypotheses.

The findings examine the type of business started, the form of ownership established and the operating details of the ventures. An investigation of the factors that encouraged the graduates into business ownership is conducted and a number of the characteristics of the group are examined. Among these are

graduates' motivation to start a business, their previous work experience and in particular the influence of their social and family environment. Graduate entrepreneurs report the main problems they encountered during the start-up and early growth of their ventures and offer some useful advice to aspiring entrepreneurs. Some educational and personal details of the graduate entrepreneurs are also presented. The chapter concludes with an overview of the future career plans of all respondents to the survey.

Table 7.31 reports the number and type of businesses initiated by the graduate entrepreneurs. Although the type of business activities were varied a closer examination reveals five main sectors, manufacturing, financial services, electronics, distribution and general services. The findings indicate that distribution is the sector that has offered the greatest opportunity for new business start-ups with 33.3% (n=7) of respondents involved in this activity.

Table 7.31: Type of Business Start-Ups

	C _A P ₂		C _B P ₂		Totals P ₂	
	n	%	n	%	n	%
Manufacturing	3	23.0	-	-	3	14.3
Financial Services	3	23.0	-	-	3	14.3
Electronics/Computers	5	38.8	1	12.5	6	28.6
Distribution	1	7.6	6	75.0	7	33.3
Services	1	7.6	1	12.5	2	9.5
Total	13	100	8	100	21	100

This is closely followed by the electronics/software, manufacturing and financial services sector. It is interesting to note that manufacturing concerns occur in C_AP₂, the cohort that includes graduates with an engineering qualification, while C_BP₂, who are all business graduates, have no manufacturing start-ups.

Table 7.32: Company and Operating Details

	C _A P ₂		C _B P ₂		Totals P ₂	
	n	%	n	%	n	%
Legal Structure						
Sole Trader	1	7.7	5	62.5	6	28.6
Partnership	1	7.7	-	-	1	4.8
Limited Company	11	84.6	3	37.5	14	66.6
Totals	13	100	8	100	21	100
Share of Company						
0% - 25%	2	15.4	1	12.5	3	14.3
26% - 50%	3	23.1	-	-	3	14.3
51% - 75%	6	46.1	1	12.5	7	33.3
76% - 99%	-	-	1	12.5	1	4.8
100%	2	15.4	5	62.5	7	33.3
Totals	13	100	8	100	21	100
Location						
Ireland	11	84.6	6	75.0	17	81.0
Abroad	2	15.4	2	25.0	4	19.0
Totals	13	100	8	100	21	100
Average Start-up Capital	£52,300		£35,000		£43,650	
Average Turnover p.a.	£795,000		£510,000		£625,500	
Average Employees	8.8		5.5		7.15	
Trading Internationally	2		3		24%	

The type of manufacturing activities included engineering products, automotive parts and clothing. Financial services were mainly investments, stockbroking, accounting and insurance. Electronic companies were involved in software development, software applications, training and consultancy. The main areas of

distribution were retail, wholesale and exporting, in particular in the automotive and food sectors. The service sector start-ups focused on property, publishing, and entertainment.

Details of the legal structure of the business, the percentage ownership and some operating details are presented in Table 7.32. The majority of the businesses 66.6% (n=14) were incorporated and 33.3% (n=7) were solely owned by the respondents.

As expected, a high proportion of the companies were located in Ireland, 81% (n=17). The remainder were located in the UK and the US. The results indicate an average start-up capital of £43,650 employed, a mean annual turnover of £625,500 and an average of seven people engaged in employment. Four companies stated that they had received grant-aid (average of £13,000 per company) to assist start-up. Five reported they were trading internationally. The mature graduates, $C_A P_2$, operate ventures which appear more established, with a mean annual turnover of £795,000 and an average of 8.8 people employed.

Continuing with an examination of the business start-ups, some additional factors were investigated. The circumstances under which graduates had initiated the venture, alone or with a partner/s, were examined. The majority, 52.4% (n=11) reported that a partner was involved in the business while 38.1% (n=8) indicated that he/she started alone (Table 7.33). Interestingly, the majority, 52.4% (n=11) did not have previous work experience in the area

relevant to their business idea. A number of the respondents, 20% (n=6) commenced trading immediately after graduation.

Table 7.33: Features of Graduate Start-Ups

	C _A P ₂		C _B P ₂		Total P ₂	
	n	%	n	%	n	%
Started Business						
Alone	2	15.4	6	75.0	8	38.1
With a Partner	10	78.0	1	12.5	11	52.4
More than one partner	1	7.6	1	12.5	2	9.5
Totals	13	100	8	100	21	100
Same as former employment	6	46.1	4	50.0	10	47.6
Not as former employment	7	53.9	4	50.0	11	52.4
Totals	13	100	8	100	21	100
Mean Scores						
Age at Start-Up	28 yrs		26 yrs		27 yrs	
No. years in business	2.5 yrs		2 yrs		2.25 yrs	
Approx. salary	£29,000		£22,000		£25,500	
More than 1 start-up	46%		62.5%			

An examination of the age at start-up and the number of years in business of the graduate entrepreneurs reveals an interesting finding. C_AP₂ although more mature by five years, were two and a half years in business, while their younger counterparts were two years in operation. This result may well indicate a trend whereby start-ups early after graduation do not continue and that business births and deaths are occurring continuously. This observation is supported by the number of respondents in C_BP₂ , 62.5% (n=5), who report involvement with more than one new venture start-up.

7.4.1 Testing of Hypotheses Concerning Graduate Entrepreneurs, their Background and their Businesses

The following five sub-hypotheses (numbered 21-25), developed in chapter five, concern graduate business start-ups. The results are presented in Tables 7.34 - 7.40.

Sub-hypothesis 21 - Perception of a suitable business opportunity will prompt the decision to become an entrepreneur.

Graduate entrepreneurs were asked to rank on a five point scale the factors which prompted their decision to enter business ownership. This question was designed as a straight-forward enquiry to graduate entrepreneurs to obtain their views of the factors that encouraged them to start a business.

Table 7.34: Factors that Encouraged Entrepreneurs to Start Business

	$C_B P_2$	$C_B P_2$	Total P_2
	Weighted Average Score		
Perceived suitable opportunity	4.15	4.50	4.32
Availability of finance	3.38	3.40	3.39
Discovery of partner	3.53	3.40	3.46
Influence parents/role models	2.69	3.30	2.99
Entrepreneurship Course	2.92	3.83	3.37
Low perceived risk	2.76	2.86	2.81
Frustration with job	2.76	2.16	2.46

It was hypothesised that perception of a suitable opportunity would be the main contributing factor to their decision to become entrepreneurs. Table 7.34

presents the weighted average scores of the responses. The most obvious finding was that the perception of a suitable business opportunity represented the most important factor for respondents, achieving an average score of 4.32. The availability of finance and discovery of a suitable partner also ranked highly with scores of 3.39 and 3.46 respectively. A closer examination of the data indicates that C_BP₂ found the entrepreneurship course taken of particular importance with a score of 3.83, supporting the findings presented in Table 7.17. The influence of parents, peers and role models was also of particular importance to this group.

Several graduates expanded on their response as to the factors that triggered their entry into business. Ambition, independence, flexibility and the challenge were reasons cited. To make money, to be in control of one's life and the identification of a gap in the market were additional factors stated. Dissatisfaction with previous employment, frustration and the failure of company of employment were other contributing factors to graduates decision to become entrepreneurs. Two statements concerning job frustration were;

"My previous employment provided huge experience but I reached a stage where I was no longer developing myself and was becoming frustrated".

"Frustration with existing job, underpaid, knew I could do better than employer, not enough control".

Continuing on the exploration of business start-ups, respondents were asked whether they considered satisfactory their own financial return from the company they initiated. The majority, 62% (n=13) found the financial return to date 'very satisfactory' or 'quite satisfactory', whereas only 19% (n=4) found 'little

satisfaction' in monetary terms from their investment (Table 7.35). C_AP₂ appear to achieve slightly higher level of satisfaction with a weighted average score of 3.76 v. 3.62 of the other group. Referring back to Table 7.33, C_AP₂ report a higher annual salary which is the possible explanation for the higher level of satisfaction with financial return reported here.

Table 7.35: Level of Satisfaction of Financial Return

	C _A P ₂		C _B P ₂		Totals P ₂	
	n	%	n	%	n	%
Very Satisfactory	5	38.6	1.	12.5	6	28.7
Quite Satisfactory	3	23.0	4	50.0	7	33.3
Satisfactory	2	15.4	2	25.0	4	19.0
Little Satisfaction	3	23.0	1	12.5	4	19.0
No Satisfaction	-	-	-	-	-	-
Totals	13	100	8	100	21	100
Weighted Average Score	3.76		3.62		3.69	

Sub-hypothesis 22 - Graduate entrepreneurs will be found to have somewhat lower academic achievement levels than the main sample.

The next question was designed to investigate the academic qualifications of the graduate entrepreneurs and to establish whether there was a higher incidence of business/commerce or science/engineering in the group of entrepreneurs.

Table 7.36 indicates that the vast majority 81% (n-17) of the entrepreneurs were university graduates, specialised in business/commerce and held a degree qualification. Four of the respondents had achieved a Masters degree with five others holding an additional qualification. However, it is interesting to note that further investigation of the data concerning level of award of all the graduate

entrepreneurs indicated that their overall academic achievement was somewhat lower than the sample in general, with none achieving a first class honours, 14.3% (n=3) achieving a 2.1 honours, 33.3% (n=7) holding a 2.2 honours and 47.6% (n=10) holding pass and 4.8% (n=1) achieving merit/distinction (see Table 7.4). It can be argued that entrepreneurs are less than high academic achievers but rather fall into the category of good pass/2.2 honours graduates.

Table 7.36: Qualifications of Graduate Entrepreneurs

	C _A P ₂		C _B P ₂		Totals P ₂	
	n	%	n	%	n	%
University Graduates	9	69.2	8	100	17	81.0
Other Institutions	4	30.8	-	-	4	19.0
Totals	13	100	8	100	21	100
Business / Commerce	9	69.2	8	100	17	81.0
Science / Engineering	4	30.8	-	-	4	9.0
Totals	13	100	8	100	21	100
Degree	9	69.2	8	100	17	81.0
Diploma	3	23.1	-	-	3	14.2
Certificate	1	7.7	-	-	1	4.8
Totals	13	100	8	100	21	100

In terms of personal variables, graduate entrepreneurs were predominantly male, 76.2% (n=16), over half were married, 57.1% (n=12) and 42.9% (n=9) were first born.

Table 7.37: Personal Details of Graduate Entrepreneurs

	C _A P ₂		C _B P ₂		Totals P ₂	
	n	%	n	%	n	%
Sex of Respondents						
Male	11		5	48.3	16	76.2
Female	2	15.4	3	51.7	5	23.8
Totals	13	100	8	100	21	100
Marital Status						
Married	7	53.9	5	48.3	12	57.1
Single	6	46.1	3	51.7	9	42.9
Other	-	-	-	-	-	-
Totals	13	100	8	100	21	100
Rank in Family						
First born	5	38.5	4	50.0	9	42.9
Second Born +	8	61.5	4	50.0	12	57.1
Totals	13	100	8	100	21	100

Sub-hypothesis 23 - No relationship will be found to exist between birth order and business ownership

Research studies have found birth order to be a determinant of entrepreneurship (Hisrich and Peters, 1989). Petrof (1981) in his study of entrepreneurs found the characteristic most frequently associated with entrepreneurship was being the oldest child in the family. However, Hisrich & Peters (1989) report that in many studies of entrepreneurs the first born effect has not been present. The findings regarding birth order in Table 7.38 support this argument.

Table 7.38: Position in Family of All Respondents

	Entrepreneurs P ₂		Remainder P ₂		Total P ₂	
	n	%	n	%	n	%
First Born	9	42.8	55	39.0	64	39.5
Second Born	12	57.2	86	61.0	98	60.5
Not Stated	0	0	2	.07	2	1.2
Totals	21	100	143	100	164	100

Chi Square Test: df 1, $X^2 = .11$ (< critical value (0.05) = 3.84)

Continuing with the exploration of birth order, it was considered that an analysis of this factor in relation to the entire group of respondents would be useful. The rationale for asking respondents to state their rank in family was to establish whether the graduate entrepreneurs and non-entrepreneur graduates were significantly different on the variable. Table 7.38 indicates that 42.8% (n=2) of entrepreneurs and 39.0% (n=55) of non-entrepreneur graduates were the eldest or only child in their family. The chi-square test indicates no significant difference between the two groups in terms of birth order. This finding suggests that occupying the eldest position in the family is not a determinant of entrepreneurship in this study.

Sub-hypothesis 24 - Graduate entrepreneurs will be found to be more likely to have self-employed parents and siblings than are non-entrepreneur graduates.

Table 7.39: Family Profile of All Respondents

	Entrepreneurs P ₂		Remainder P ₂		Total P ₂	
	n	%	n	%	n	%
Father self-employed						
Yes	15	71.4	63	45.0	78	48.4
No	6	28.6	77	55.0	83	51.6
Not Stated	0	0	3	2.1	3	1.8
Totals	21	100	143	100	164	100
Chi-Square Test	df 1, X ² = 5.05 (> critical value (0.05) = 3.84)					
Mother self-employed						
Yes	8	38.0	22	15.9	30	18.9
No	13	62.0	116	84.1	129	81.1
Not Stated	0	0	5	3.5	5	3.0
Totals	21	100	143	100	164	100
Chi Square Test	df 1, X ² = 5.84 (> critical value (0.05) = 3.84)					
Siblings self-employed						
Yes	10	47.6	30	21.7	40	25.1
No	11	52.4	108	78.3	119	74.9
Not Stated	0	0	5	3.5	5	3.0
Totals	21	100	143	100	164	100
Chi Square Test	df 1, X ² = 6.45 (> critical value (0.05) = 3.84)					
Influence of Family						
Yes	12	57.1	41	29.4	53	32.0
No	9	42.9	98	70.6	107	68.0
Not Stated	0	0	4	2.8	4	2.4
Totals	21	100	143	100	164	100
Chi-Square Test	df 1, X ² = 6.26 (> critical value (0.05) = 3.84)					

Table 7.39 reveals some important results of the study. **All the chi-square tests indicate that significant differences occur between the graduate entrepreneurs and the remainder of the group in relation to father's, mother's and sibling's employment status and the influence of the family environment.**

A family profile of respondents shows 71.4% (n=15) of graduate entrepreneurs with a self-employed father and 38% (n=8) with a self-employed mother compared with 45% (n=63) with a self-employed father and 15.9% (n=22) with a self-employed mother for the remainder of the group.

In addition, 47.6% (n=10) of graduate entrepreneurs report brother/s and/or sister/s involved in business ownership compared with 21.7% (n=30) in the remainder of the sample. According to Chell (1985) individuals who have observed a parent role model they perceive to be successful, develop a preference for an entrepreneurial career. When questioned on the influence of their social and family environment on their chosen career 57.1% (n=12) of entrepreneurs reported a positive effect as against 29.4% (n=41) of non-entrepreneurs. Several entrepreneurs stated that their parents' achievements, support and encouragement to be go-ahead, influenced their career decision as in the following statements;

"My father has been self-employed for thirty five years and there was never a question that I would work for anyone except myself. He was my biggest influence".

"The experience gained from an early age in the family business was very beneficial".

“My father showed me the benefits of self-employment”.

The evidence from the statistical tests in Table 7.39 suggests that the occupation of parents and siblings and the resulting influence are important determinants of entrepreneurship.

The concluding questions to the graduate entrepreneurs attempted to determine their motivation for starting a business, the problems they encountered, their advice to aspiring entrepreneurs and finally their future career plans were sought. Profitable opportunities, financial reward, independence and ambition to be self-employed were claimed to be the main motivating factors to business entry. Parental influence, frustration with existing job and control over one's life were also contributing factors. The biggest problems encountered were dealing with banks and bureaucratic organisations, who some of the entrepreneurs felt were more of a hindrance than a help. Legislation, legal problems, obtaining finance, difficulty in getting credibility, isolation and learning how to overcome rejection, were other problems cited. Advice to aspiring entrepreneurs included; be independent, go for it, be confident, don't take no for an answer, have adequate finance, a properly researched business plan and beware of professional vultures. As one entrepreneur stated:

“Have one hundred per cent belief in yourself and your idea. Do not be put off by rejection, narrow mindedness and other challenges you encounter. Instead, learn from them. The worst thing that can happen is that your business fails. That would be a great lesson for your next business”.

Sub-hypothesis 25 - Graduate entrepreneurs will perceive expansion and growth as the future direction of their enterprises.

Table 7.40: Future Career Plans of All Respondents

	Entrepreneurs P ₂		Remainder P ₂		Total P ₂	
	n	%	n	%	n	%
Expand business/exploit new opportunity	21	100	-	-	21	12.9
Aspire to self-employment	-	-	61	43.3	61	37.6
Promotion/Management	-	-	50	35.5	50	30.9
Education/Research	-	-	13	9.2	13	8.2
Travel	-	-	6	4.3	6	3.7
Return to Ireland	-	-	5	3.5	5	3.1
Gain Employment	-	-	2	1.4	2	1.2
Unsure	-	-	4	2.8	4	2.4
<i>Not Stated</i>	0	0	2	1.4	2	1.2
Totals	21	100	143	100	164	100

Finally, all respondents were asked to indicate their future career plans. The main objective here was to establish whether graduate entrepreneurs had ambitions for the growth of their businesses that in time would result in significant employment creation. Another objective was to establish the level in the non-entrepreneur graduate group who aspire to self-employment at some future point in time.

Responses were delineated into eight main categories as outlined in Table 7.40. All the graduate entrepreneurs stated that their career plan was to expand their business. To develop globally, to buy another company, to sell existing one and start all over again were additional aspirations of some of the entrepreneurs. It is interesting to note that of the remainder of the sample, the majority 43.3% (n=61) aspire to self-employment at some future date, while 35.5% (n=50) indicated that promotion or management was their main aspiration. A lesser amount of respondents cited education, research, travel, return to Ireland and

obtaining employment as their immediate priorities. It can be concluded from the findings presented in Table 7.40 that just under half of the graduates who responded to the survey have engaged in, or consider entrepreneurship as a viable career option.

7.5 SUMMARY OF KEY RESEARCH SURVEY FINDINGS

- In this study of 617 Irish graduates who participated in an enterprise initiative or programme during their third-level education, there was a 30.7 per cent (n=164) response rate.
- A high percentage of respondents, 78.7 per cent (n=129), were university graduates while the remainder were graduates of other institutions of higher education.
- 81 per cent (n=133) of respondents were business / commerce graduates and 29 per cent (n=31) were engineering / science graduates.
- The vast majority of respondents have to date selected a career in employment (82.4%, n=135), rather than self-employment, which suggests a strong attitudinal orientation towards employment.
- The findings show that the number of graduates entering self-employment has increased from 5 per cent in P₁ to 14.5 per cent in P₂.
- There is tentative evidence which suggests that within seven years of graduation, respondents who selected a multiple integrated entrepreneurship programme are entering business ownership at a higher rate (11 per cent)

than the national average (5.0 per cent) of graduates who participated in a one semester enterprise course.

- The number of persons with an entrepreneurship education entering business ownership is substantially higher than the national norm. In the <24 age group 5% v 1.3% and in the 25-34 age group 14.5% v 8.3%.
- There is strong evidence from both the 1991 and 1996 surveys that one third of graduates are employed in the small firm sector, that is, in companies with 50 employees or fewer.
- When questioned on their initial career goals, a sizeable proportion of respondents, 26.4 per cent (n=42), indicated that their first aspiration was to gain work experience and then at a later point in their career to move to business ownership.
- In general, the majority of respondents, 83.3 per cent (n=135), felt that their third-level qualifications were relevant to their career to date.
- Graduate entrepreneurs indicate an extremely high level of career satisfaction (4.33) compared to (3.89) in the remainder of the sample.
- On the issue of business ownership, 58.4 per cent (n=60) of respondents stated that this was their preferred career option.
- With regard to the effect of the entrepreneurship course on their career decision, the results indicate a statistical significant difference between graduate entrepreneurs and the remainder of the group. The graduate entrepreneurs stated that their entrepreneurship education had strongly influenced their career choice.

- A sizeable proportion of respondents, 48.4 per cent (n=78), reported that participation in the IDA/Forbairt Student Enterprise Award was a factor they considered helpful in obtaining employment.
- In terms of intention to become an entrepreneur, a statistically significant difference occurred between national graduates, whose enterprise initiative in general was part of their course work, and University of Limerick graduates who had selected entrepreneurship as a two year elective programme.
- Management and finance were identified as key areas requiring more emphasis on entrepreneurship courses.
- Respondents other than those self-employed report a score of 3.26 on a five point scale when questioned as to the extent of their motivation towards starting a business.
- 65 per cent (n=91) of respondents in employment report identification of business ideas and opportunities.
- Over half, 52.8 per cent (n=74) of respondents in employment, felt it “highly probable” or “probable” that they would *someday start a business*.
- The vast majority of respondents, 80.6 per cent (n=117) felt they had the skills necessary to start a business.
- 48.9 per cent (n=68) of graduates in employment report that their job involves enterprise activity.
- Lack of finance, lack of perceived opportunity and the importance of present job security appear to be the three main factors that militate against entrepreneurship.

- Involvement in part-time businesses was reported by 17.4 per cent (n=26) of respondents.
- 78.4 per cent (n=29) of graduates working abroad stated they would consider returning to Ireland to start a business when they had gained experience and if an opportunity arose.
- Graduate entrepreneurs (n=21) have found business opportunities mainly in the electronics, distribution, finance and manufacturing sectors.
- The majority of graduate company start-ups, 66.6 per cent (n=17) are incorporated entities.
- The majority of graduate companies (81 per cent, n=17) are located in Ireland.
- Mean start-up capital is £43,650.
- Mean turnover £625,000.
- Mean number of employees is seven.
- 61.9 per cent (n=13) of start-ups involved a partner or more than one partner.
- Mean age of graduates at start-up was 27 years.
- Approximate annual salary reported by graduate entrepreneurs is £25,500.
- Perception of a suitable business opportunity appears to be the single most important factor that encouraged start-ups.
- Graduate entrepreneurs were found to have slightly lower academic achievement levels than the rest of the sample.
- Birth order was found not to be a determinant of entrepreneurship in this study.
- A statistical significant difference occurred between the graduate entrepreneurs and the remainder of respondents when questioned on the

employment status of father, mother and siblings. A higher instance of parental and sibling self-employment was reported by the graduate entrepreneurs together with a higher instance of parental influence on the start-up decision.

- All graduate entrepreneurs report business expansion and exploitation of new opportunities as their career plan for the future.

The findings and overall conclusions of the propositions tested above are discussed in chapter ten. The results will be directly related to major hypotheses H₁, H₂, H₃, H₄ and H₅ of this study as outlined in section 5.2. Major hypotheses H₆ is tested in the next chapter, the longitudinal sub-study graduate survey.

Chapter Eight

Findings of the Longitudinal Sub-Study

Findings of the Longitudinal Sub-Study

8.1 INTRODUCTION

The foregoing chapter presented the overall results of the graduate surveys conducted in 1991 and 1996. It was now considered that a sub-study, in which only the respondents who replied to both surveys would be identified and their replies analysed separately. The justification for this investigation is that it ensures less bias in the responses and obtains greater validity of the results. In addition, it was anticipated that some important indicators may be determined by establishing the attitudes and opinions of graduate entrepreneurs before they actually started or knew they were going to start a business. The objective of this chapter is to present the results of this smaller but possibly more valuable study of *entrepreneurship education and graduate entrepreneurship*.

In order to obtain the information required for this sub-study, a closer examination of the returned questionnaires and their identification codes revealed that 55 graduates had responded in 1991 and again in 1996 (see Table 8.1).

Table 8.1: Graduates Responding to Both Surveys

Longitudinal Study					
Survey		Sample	Response	Response to Both Surveys	%
Cohort A	1991	417	121	55	13.2
Cohort A	1996	417	91	55	13.2

Using the SPSSX computer package the responses outlined in the 55 questionnaires were extracted from the main body of data supplied by both the 1991 and 1996 studies and appropriate analysis was performed. It should be noted that not all respondents replied to all questions.

8.2 GRADUATES' EDUCATION AND CAREER

The first section of the analysis reveals the respondents' educational details, personal profile, employment status, career to date and graduates' attitudes and views towards the entrepreneurship initiative they had taken while at college.

Table 8.2 presents a profile of respondents by type of higher-level institution attended, type of qualification/s received, type of specialism pursued and also personal details such as sex and marital status. The majority of respondents 63.6 per cent (n=35) were university graduates while the remainder were graduates of other institutions of higher education. A large proportion of the graduates, 47.4 per cent (n=36), had obtained an honours primary degree while the majority, 69 per cent (n=38) were business graduates, the remainder were engineering/science majors. The vast majority 72.7 per cent (n=40) were male and 27.3 per cent (n=15) were female.

Table 8.2: Profile of Respondents

	C _A P ₁		C _A P ₂	
	n	%	n	%
University Graduates	35	63.6	35	63.6
Regional Technical College	20	36.4	20	36.4
Totals	55	100	55	100
Degree	35	63.6	35	63.6
Diploma	14	25.5	14	25.5
Certificate	6	10.9	6	10.9
Totals	55	100	55	100
First Honours	2	3.6	2	3.6
Honours 2.1	10	18.3	10	18.3
Honours 2.2	14	25.5	14	25.5
Pass/Credit	24	43.6	24	43.6
Merit/Distinction	5	9.0	5	9.0
Totals	55	100	55	100
Business	38	69.0	38	69.0
Engineering	10	18.3	10	18.3
Science	7	12.7	7	12.7
Totals	55	100	55	100
Masters Degree	3	5.5	13	23.6
Other Qualification	10	18.2	21	38.2
Primary Degree	42	76.3	21	38.2
Totals	55	100	55	100
Male	40	72.7	40	72.7
Female	15	27.3	15	27.3
Totals	55	100	55	100
Single	46	83.6	26	47.3
Married	9	16.4	29	52.7
Totals	55	100	55	100

It is interesting to note that over time the number of respondents opting for further study has increased, with 23.6 per cent (n=13) of graduates having obtained a Masters degree in P₂ compared with 5.5 per cent (n=3) five years previous. The number of respondents who have obtained other post-graduate qualifications has also increased to 38.2 per cent (n=21) compared with 18.2 per cent (n=10) in 1991. Scarcity of job opportunities and generous EU funding for postgraduate study are the probable explanations for this

trend. As can be expected the number of respondents who have acquired marital status has moved from 16.4 per cent (n=9) in 1991 to 52.7 per cent (n=29) in 1996.

8.2.1 Testing of Hypotheses Concerning Graduates Career Paths and Movement Towards Entrepreneurship

The final set of sub-hypotheses, 26-32, as outlined in chapter five, are tested in this section of the findings. The results are presented in Tables 8.3-8.14.

Sub-hypothesis 26 - As graduates mature the incidence of business start-up will increase.

Table 8.3: Employment Status of Respondents

	C _A P ₁		C _A P ₂	
	n	%	n	%
Employed	52	94.6	48	87.3
Self-Employed	1	1.8	7	12.7
Studying	1	1.8	-	-
Unemployed	1	1.8	-	-
Totals	55	100	55	100

Chi-Square Test: C_AP₁ C_AP₂, df1, X²=1.76 (< critical value (0.05) = 3.84)

The results outlined in Table 8.3 indicate that only one of the six entrepreneurs in the 1991 survey replied to the 1996 survey (see Table 7.11). Six new start-ups are reported in the 1996 survey by the 55 respondents who replied to both surveys. This result supports the findings of the overall study outlined in the previous chapter. As indicated in the discussion of the results presented in Table 7.11 the Irish Labour Force Survey (1996) confirms that

the national percentage of persons with higher level education who run his/her own business in the age group < 24 years is 1.3% and in the age group 25-34 years is 8.3%. The findings show a 4.4 per cent above national average of business ownership (12.7 per cent versus 8.3 per cent) in the sample in P_2 and a shift of 10.9 per cent from P_1 to P_2 (1.8 per cent to 12.7 per cent). These results appear to suggest that an entrepreneurship education can influence graduate entrepreneurship. Although the chi-square test reports no significant difference occurring in the data, these tentative results indicate a positive trend towards entrepreneurship over time. As graduates age it is anticipated that many more will start a business as implied by the above findings.

Interestingly, all of the graduates in P_2 were in employment or self-employment. No respondent indicated they were unemployed, studying or between jobs.

Sub-hypothesis 27: As graduates mature the incidence of employment in small companies will increase

Table 8.4: Employment Size of Firm

	C_{AP_1}		C_{AP_2}	
	n	%	n	%
Employed in company > 50 employees	39	70.9	37	67.3
Employed in company < 50 employees	13	23.6	18	32.7
Not Applicable	3	5.5	-	-
Totals	55	100	55	100

Chi-Square Test: C_{AP_1} C_{AP_2} , $df=2$, $X^2=1.12$ (< critical value (0.05) = 5.99)

Though not statistically different, the number of respondents working in the small firm sector has increased over a five year period from 23.6 per cent (n=13) in 1991 to 32.7 per cent (n=18) in 1996. A possible explanation for this increase in graduates working in small businesses is, that included in the P₂ figure are the six respondents who started their own business during the period 1991-96. The finding that one third of graduates are employed in the small business sector supports several recent studies which report that employment opportunities are occurring in SMEs and micro enterprises (Hart et al. 1993; Daly, 1991).

Table 8.5: Number of Employment Positions Since Graduation

	C _{AP} P ₂		Ents P ₂	
	n	%	n	%
One	9	16.7	1	14.3
Two	16	29.0	1	14.3
Three	13	23.6	3	42.8
Four +	17	30.9	2	28.6
Totals	55	100	7	100

In terms of the number of employment positions held by respondents since graduation Table 8.5 indicates that the majority of respondents in the main sample have held four positions or more (30.9 per cent, n=17) while the majority of the graduate entrepreneurs 42.8 per cent (n=3) report three job positions before start-up. The majority of respondents cited the identification of a better employment/business opportunity or wider experience as their main reason for changing jobs while others expressed dissatisfaction, frustration and boredom as their reasons for change. To travel, to return to study and because of temporary employment were other reasons stated. The

graduate entrepreneurs changed jobs to gain experience in various areas before setting up their own enterprise.

Sub-hypothesis 28 - The influence of graduate entrepreneurship education will diminish with time

Whether the undergraduate enterprise initiative taken by the sample had an effect on graduates' subsequent career decision was also explored (Table 8.6).

Table 8.6: Influence of Entrepreneurship Course on Career Decision

	C _A P ₁		C _A P ₂		A. Ents P ₁ *		Ents P ₂	
	n	%	n	%	n	%	n	%
Very Important Effect	4	8.3	3	5.7	1	14.2	3	43.2
Important Effect	8	16.6	6	11.3	2	28.4	1	14.2
Fairly Important Effect	10	20.8	10	18.7	3	43.2	1	14.2
Little Effect	16	33.5	23	43.5	-	-	1	14.2
No Effect	10	20.8	11	20.8	1	14.2	1	14.2
<i>Not Stated</i>	7	12.7	2	3.6	0	0	0	0
Totals	55	100	55	100	7	100	7	100
Weighted Average Score	2.58		2.30		3.28		3.57	

Kolmogorov-Smirnov Test: C_AP₁ C_AP₂, D = .102 (<critical value (0.05) = .27)

* 1 Entrepreneur and 6 Aspiring Entrepreneurs

It appears that the main samples' attitude towards the effect of the entrepreneurship course diminished with time with a weighted average score of 2.30 in 1996 versus 2.58 in 1991. Interestingly, when considering the graduate entrepreneurs (six of whom were aspiring entrepreneurs in 1991) it appears that the impact of an exposure to entrepreneurship increases with time, 3.57 versus 3.28 weighted average score. This result may be attributed to the recognition by this group that enterprise concepts and skills were

required in the setting up and management of their business ventures. Responses from these seven entrepreneurs regarding the effect of the entrepreneurship course included the following statements:

“At the end of our business plan we knew a lot more about the business world than the average nineteen year old”.

“Being on the technical side the business angle was essential in helping to start my business”.

“I always felt the course was a big influence. It laid open the idea of starting my own business rather than having to rely on conventional employment”.

A more critical response was made by one of the entrepreneurs in relation to government policy and grant aid.

“The course was excellent. It totally illustrated why government grants will never succeed in small business. The reasons are simple - you must decide what you are doing and how you will spend the money before you get it._ Plans like this do not suit entrepreneurs as market forces and the plan change many times before you succeed. The grant aid, if received, will only waste valuable resources and time and will doom most small businesses to failure. The system needs to be radically changed.”

The entrepreneur who had started his business before 1991 stated:

“From the IDA scheme I gained no knowledge which has helped or hindered me in the setting up of what has been to date a very successful business”.

This statement suggests that participating in an entrepreneurship initiative had no influence and was quite irrelevant for this entrepreneur. It should be noted that sub-hypothesis 8 (Table 7.15) which stated - *graduate entrepreneurs' career decision will be affected positively by entrepreneurship education* is again evident in Table 8.6.

Sub-hypothesis 29 - As graduates mature career satisfaction will increase.

When questioned about their satisfaction with their career to date, a higher level of satisfaction appears evident as graduates mature, with a weighted average score moving from 3.8 in 1991 to 4.03 in 1996. It is suggested that the overall high level of career satisfaction in the main sample who responded may be attributable to the possibility that within the group are a number of future entrepreneurs comfortable in the knowledge that they are gaining the maturity and experience necessary to reach their ultimate goal of self-employment.

Table 8.7: Satisfaction with Career to Date

	C _A P ₁		C _A P ₂		A. Ents P ₁ *		Ents P ₂	
	n	%	n	%	n	%	n	%
Very Satisfied	14	25.5	18	32.7	1	14.3	4	57.1
Satisfied	20	36.3	23	41.9	5	71.4	3	42.5
Fairly Satisfied	17	30.9	12	21.8	1	14.3	-	-
Dissatisfied	4	7.3	2	3.6	-	-	-	-
Very Dissatisfied	-	-	-	-	-	-	-	-
Totals	55	100	55	100	7	100	7	100
Weighted Average Score	3.8		4.03		4.0		4.57	

Kolmogorov-Smirnov Test: C_AP₁ C_AP₂, D = .13 (<critical value (0.05) = .26)

* 1 Entrepreneur and 6 Aspiring Entrepreneurs

Both P₁ and P₂ graduate entrepreneurs indicated a higher level of satisfaction than their peers with an overall weighted score of 4.0 and 4.57 respectively. Overall the results show a high level of career satisfaction among this group. No statistical difference occurs over time in relation to career satisfaction as indicated by the Kolmogorov-Smirnov test.

Concerning career satisfaction one graduate commented

“Why do people like me who are excellent completer/finishers take so long to make the break and go-it-alone in our own enterprises. What steps us from making the initial break from a secure job in the short-term to a far more satisfying long-term situation.”

8.3 GRADUATES’ ATTITUDE TO ENTREPRENEURSHIP

While the first section of the findings in this longitudinal sub-study established graduates’ education, employment status and their perceptions and opinions with regard to their career and the entrepreneurship course taken, this section explores the attitudes and behaviour of graduates in employment towards starting a business. It also examines factors which respondents felt discourage entry into entrepreneurship.

Table 8.8: Probability of Running Own Business

	C _A P ₁		C _A P ₂		A. Ents P ₁	
	n	%	n	%	n	%
Highly Probable	16	30.2	12	25.0	4	66.6
Probable	14	26.4	10	20.8	1	16.7
Some Probability	15	28.3	17	35.5	1	16.7
Improbable	5	9.4	8	16.7	-	-
No Probability	3	5.7	1	2.0	-	-
<i>Not Stated</i>	2	3.6	7	12.7	0	0
Totals	55	100	55	100	6	100
Weighted Average Score	3.66		3.5		4.5	

Kolmogorov-Smirnov Test: C_AP₁ C_AP₂, D = .08 (<critical value (0.05) = .27)

The views of respondents regarding the probability of running their own business have only declined marginally over the 5 year period 1991-1996 from a weighted average score of 3.66 in P₁ to 3.5 in P₂ (Table 8.8) and are

not statistically different. A review of the data gathered in P₁ from the six graduates who subsequently started businesses indicates a score of 4.5 on a five point scale. It can be concluded that these graduates were already strongly contemplating business entry at this early stage. One entrepreneur commented on his 1991 questionnaire

"I am two years out of college and in about another two years I plan to set up my own business".

Another entrepreneur reported in 1991

"I have drawn up a detailed business plan showing all aspects of how my company will be run and what financial markets it will operate in. All I don't have yet is adequate finance".

The former of these two entrepreneurs now runs his own computer software company, is actively involved in new product development and has an annual turnover of £100,000. The latter entrepreneur runs a stockbroking/investment management company, employs seven people and claims a turnover of £300m per annum.

Graduates in employment gave several interesting statements when questioned on the probability of starting a business.

"I have a perception of limited career advancement and career mobility in Ireland. The taxation system would encourage me more towards self-employment than common employment".

"I still have a great interest in starting up a business but I feel I need a push start to make the time and effort needed".

"I feel that making it in a small private business is tough and the more experience you can get at someone else's cost the better before taking a chance. Of the two ventures I examined, public liability insurance was the single issue that made them unviable".

Sub-hypothesis 30 - As graduates mature the incidence of seeking a start-up business opportunity will increase.

Table 8.9: Actively Seeking Business Opportunity

	C_{AP1}		C_{AP2}		A. Ents P₁	
	n	%	n	%	n	%
Very Large Extent	2	3.8	1	2.0	2	33.2
Large Extent	7	13.2	5	10.4	1	16.7
Some Extent	16	30.2	18	37.5	1	16.7
Little Extent	16	30.2	17	35.5	1	16.7
No Extent	12	22.6	7	14.6	1	16.7
<i>Not Stated</i>	2	3.6	7	12.7	0	0
Totals	55	100	55	100	6	100
Weighted Average Score	2.45		2.50		3.33	

Kolmogorov-Smirnov Test: C_{AP1} C_{AP2}, D = .08 (<critical value (0.05) = .27)

Table 8.9 indicates that the number of respondents actively seeking a business opportunity has increased marginally over the five year period with a weighted average score of 2.50 versus 2.45. Here again the results show that two of the aspiring entrepreneurs in P₁ were already pursuing a business idea to a very large extent at this point in time. These results support the findings presented in Table 8.8. Overall the would-be entrepreneurs had a higher average weighted score in P₁ of 3.33 compared to the main sample at 2.45. This result suggests that the aspiring entrepreneurs were seeking, to a greater degree than the rest of the sample, a viable business idea for a new enterprise. No statistical difference occurs between C_{AP1} and C_{AP2} in terms of actively seeking a business opportunity.

A comment made by one respondent who is actively seeking a business opportunity reflects the feelings and fears of a potential entrepreneur:

"I have undertaken a specific plan of action to achieve my goal of independence. I always felt reluctant to confide in any agency of the many business ideas I have. I always felt apprehensive and a fear of failure. No one even took me to one side and said this is normal. There is life after failure. I've been lucky enough to find that out. That fact was never emphasised enough at college. Soon I hope to start something myself and I have done everything to make sure this doesn't fail and it will not".

Sub-hypothesis 31 - As graduates mature the incidence of part-time business activity will increase.

Table 8.10: Run a Business on a Part-Time Basis

	C _A P ₁		C _A P ₂		A. Ents P ₁	
	n	%	n	%	n	%
Yes	6	11.1	8	16.7	2	33.4
No	48	88.9	40	83.3	4	66.6
<i>Not Stated</i>	1	1.8	7	12.7	0	0
Totals	55	100	55	100	6	100

Chi-Square Test: C_AP₁ C_AP₂, df 1, X² = .62 (<critical value (0.05) = 3.84)

The number of graduates running a part-time business has increased from 11.1 per cent (n=6) in P₁ to 16.7 per cent (n=8) in P₂. Respondents report activities such as consultancy, education, computer/software, tourism and general services as areas they were involved in on a part-time basis. The findings reveal that two of the entrepreneurs were running part-time business before going into full-time business ownership. Comments from one 1991 questionnaire read

"I run a part-time business factoring jet engine spare parts. I intend to pursue this on a full time business when turnover allows".

This entrepreneur now owns a computer company selling data storage solutions and unix servers, employs two people and has an annual turnover of £500,000. The second entrepreneur reported in 1991

"I run a part-time business selling moving memory displays".

He now runs an electronics company selling electronic alarm products, computers and an electronic design service, employs two people and has an annual turnover of £100,000. A notable finding was that five of the seven entrepreneurs had been involved in a previous start-up albeit on a minor or temporary basis.

Sub-hypothesis 32 - As graduates mature the importance of job security will increase.

Table 8.11: Factors Militating Against Entrepreneurship

	C_aP₁	C_AP₂
	Weighted Average Score	
Importance of Job Security	3.07	3.69
Lack of Perceived Opportunity	3.02	3.66
Lack of Finance	3.42	3.58
Lack of Relevant Experience	3.47	3.37
Perceived Risk too High	3.02	3.15
Constraint of Family	1.50	2.66

The purpose of this question was to establish the views of respondents on the factors they consider discourage entry into entrepreneurship. It was expected that those who enjoyed good job security, satisfactory career progression and were to a degree constrained by family / mortgage commitments would be unlikely to change their present situation.

The results outlined in Table 8.11 suggest that as graduates mature they become more risk averse. Extrinsic factors such as job security, lack of perceived opportunity and family responsibilities appear to be the three factors that increase in importance over time. Job security moves from a

weighted average score of 3.07 in P₁ to 3.69 in P₂, while lack of perceived opportunity increases from 3.02 in P₁ to 3.66 in P₂ and constraint of family responsibilities shifts from 1.50 in P₁ to 2.66 in P₂. The only factor that decreases in importance is an intrinsic factor, lack of relevant experience, from 3.47 in P₁ to 3.15 in P₂. This result could be anticipated as respondents have five extra years' work experience in P₂.

Some examples of comments from respondents regarding what they feel are the constraints to entry into entrepreneurship are as follows:

"I have the confidence to put a proposal to a financier to obtain funding, that for me will never be the stumbling block (capital is not a problem even though I have none). The greatest obstacle is that I lack a networking structure through which I meet the right person/s with which to launch a business".

"Personally, I feel the tax system is the greatest hindrance to enterprise as the amount of time it takes to accumulate even modest savings introduces an undue amount of risk into any project for the average person. Further, the tax take has reduced average disposable incomes to such a low level that consumer demand is very weak. Obviously demand deficiency makes it harder for new enterprises to succeed".

"In my opinion the three main constraints on entrepreneurs in Ireland are (1) the lack of sources of funds; (2) the current tax system; and (3) the size of the domestic market. However, the current PAYE system also provides the greatest initiative to become an entrepreneur.

8.4 GRADUATE BUSINESS START-UPS

This section of the chapter provides information on the business ventures initiated by graduate entrepreneurs. It examines the type of business started, the operating details of the business and the factors that encouraged

respondents to start their ventures. Some personal family details together with the educational backgrounds of these entrepreneurs are also presented. Future career plans, advice to aspiring entrepreneurs and some general comments from the respondents are also included.

Table 8.12: Type of Business Start-Ups

Sector	Ent P ₁		Ent P ₂	
	n	%	n	%
Electronics			3	42.8
Financial Services			2	28.6
Manufacturing	1	100	2	28.6
Totals	1	100	7	100
Trading Internationally	-		4	
Average Employees	1		5	
Average Turnover	60,000		300,000	
Average Salary	-		20,000	
No. of years in Business	2.5 yrs		3.0 yrs	

The type of business start-ups in this sample of 55 graduates are outlined in Table 8.12. One graduate was in business in P₁ and was still operating in P₂. The other six entrepreneurs commenced their businesses between 1991 and 1996. The average turnover for six of the seven start-ups was £300,000. The seventh company, an investment company, claims a £300m annual turnover.

The findings in Table 8.12 suggest that the electronics, financial services and manufacturing sectors are the areas where graduate entrepreneurs are identifying and seizing business opportunities. These businesses were in operation for approximately three years, had five people employed and the entrepreneurs' salary was on average £20,000 per annum. Four businesses reported that they were trading internationally. Of the seven graduate start-

ups, three were in the manufacturing sector while four operated in the service area.

Table 8.13: Factors that Encouraged Entrepreneurs to Start Business

	C_AP₂
	Weighted Average Score
Perceived suitable opportunity	4.14
Availability of finance	4.00
Entrepreneurship course	3.57
Frustration with job	3.43
Low perceived risk	2.85
Discovery of partner	2.85
Influence parents/role models	2.00

When questioned on the factors that encouraged the entrepreneurs to start their business, the main reason appears to be the identification of a suitable business opportunity with a weighted average score of 4.14 on a five point scale. The availability of finance and the entrepreneurship course taken rank second and third with respective weightings of 4.0 and 3.57.

The investigation into why these graduates set up businesses was further explored with an open question. The following comments reveal a variety of reasons, the majority being positive.

“To make money” - (Industrial photography company).

“After contracting for a few years, I wanted to do some product development on some ideas I had” - (Computer software/design company).

“To be rewarded based on my skill, work and risk-taking - make money - achieve fulfilment” - (Computer software company).

“In 1990 I suffered from ME brought on by excess exposure to EM radiation. I resigned and set up my business to survive financially - the entrepreneurship course was an excellent help” - (Electronics company).

“To provide an opportunity for people to invest in stock exchange gilt companies at a low price - to promote share ownership and to advance the use of technology in finance” - (Investment company).

“Always had ambition since college and doing the entrepreneurship course. I changed jobs after qualifying as an accountant and went into a partnership” -(Financial services company).

“Opportunities existed in the marketplace which we knew we could capture given my partner’s work experience and contacts. My business background and financial resources allowed us to set up a limited company with low perceived risk” - (Engineering/manufacturing company).

Table 8.14: Personal Details of Graduate Entrepreneurs

	C_A Ents P₂
Sex of Respondents	
Male	5
Female	2
Marital Status	
Married	5
Single	2
Rank in Family	
First Born	1
Second Born +	6
Parents Self-Employed	
Father	3
Mother	2
Institution	
University	5
Other Institution	2
Specialism	
Business/Commerce	4
Science/Engineering	3
Qualification	
Degree	5
Diploma	1
Certificate	1

In terms of personal variables, graduate entrepreneurs were predominately, male, married and university educated. Four of the entrepreneurs held postgraduate qualifications, two of which were Masters degrees and two accounting qualifications. Only one entrepreneur was first-born which

appears to discount the theory of the first-born effect. However, the majority (n=6) had either a father or mother who was self-employed, strongly supporting the findings of the larger graduate survey reported in the previous chapter (Table 7.39).

In an open question, graduate entrepreneurs were asked what main advice would they give to an aspiring entrepreneur:

Advice to aspiring entrepreneurs

“Dip your feet before you paddle - find your customers and sell your product before you contemplate producing”.

“Get a good framework to your company, establish it legally and properly and pay yourself from day one”.

“First work for a few companies and gain diverse experience. When starting a business always have a revenue generating service in addition to long-term costly product development”.

“Don’t spend much time with state sponsored bodies if your idea involves internationally traded services and/or large amounts of finance”.

“Get business experience, save some money, over-estimate all expenses and underestimate sales”.

“Keep an eye out for opportunities and aim high”.

“Do your homework and give it a go”.

8.5 SUMMARY OF KEY LONGITUDINAL RESEARCH FINDINGS

- 55 graduates responded to both the 1991 and 1996 surveys.
- As graduates mature, the number obtaining postgraduate qualifications increased from 23.6 per cent in P₁ to 61.8 per cent in P₂.

- The number of graduates in self-employment increased from 1.8% in P_1 to 12.7% in P_2 .
- The number of graduates employed in the small firm sector increased from 23.6 per cent in P_1 to 32.7 per cent in P_2 .
- The majority of graduate entrepreneurs had three employment positions before start-up.
- The entrepreneurship course taken at the undergraduate level appears to have had a considerable positive effect on the graduate entrepreneurs. One the issue of its influence the entrepreneurs recorded a weighted average score 3.57 on a five point scale compared to 2.30 by the main sample.
- As graduates mature, the level of satisfaction with their career increases. Graduate entrepreneurs report a weighted average score of 4.57 as opposed to 4.03 in the group in general.
- In P_1 the majority of graduates (66.6 per cent) who were subsequently to form an enterprise, reported that it was "highly probable" they would do so.
- Aspiring entrepreneurs in P_1 recorded a score of 3.33 when questioned as to whether they were actively seeking a business opportunity as compared to 2.45 in the group in general.
- The number of graduates running a part-time business increased from 11.1 per cent in P_1 to 16.7 per cent in P_2 . Interestingly one third of graduate entrepreneurs ran a part-time business before going into full-time business ownership and 71.4 per cent were involved in a previous start-up.

- As graduates mature, they appear to be more risk averse. They report job security, lack of perceived opportunity and lack of finance as the biggest constraints to entrepreneurship.
- Electronics, financial services, manufacturing and industrial photography were the sectors where graduate entrepreneurs found business opportunities.
- The results indicate that graduates' businesses had a mean turnover of £300,000, were established for approximately three years and employed an average of five people.
- Key factors that encouraged graduate start-ups were; perceived suitable opportunity, the availability of finance and the entrepreneurship course taken while at college.
- Graduate entrepreneurs were predominantly male, married and university educated.
- A key finding was that the majority of graduate entrepreneurs (71.4 per cent) had a parent who was self-employed.

In summary, although the statistical findings of the sub-hypotheses indicate no significant difference in the variables tested in this longitudinal sub-study, nonetheless, the results presented provide tentative evidence that H_6 is true - **As graduates mature predisposition towards, and incidence of, entrepreneurship will increase.**

Chapter Nine

The Case Studies - The Evidence and the Analysis

THE CASE STUDIES - THE EVIDENCE AND THE ANALYSIS

9.1 INTRODUCTION

The primary objective of this case study research is to investigate how entrepreneurship can be aided by entrepreneurship education. The undisguised studies presented in this chapter outline the profile of eight entrepreneurs and their businesses and are included in this thesis in order to gain a better understanding of the entrepreneurial personality and the influences on the decision to start and run a new business. The case study research illuminates the concept of education for entrepreneurship and provides an insight into the factors that contribute to the entrepreneurial process. The chapter introduces eight entrepreneurs and documents the results of interviews conducted to establish their background, activities and personalities. Understanding who the entrepreneur is, looking at what the entrepreneur does and determining the social and educational background of the entrepreneur is the approach taken in the case studies presented here.

The case study analysis will:

- Examine the family and educational background of the entrepreneur in order to establish if the social, and in particular, the educational context of the individual, provide the link between the entrepreneur, the opportunity identified and the motivation to start a business.
- Investigate the origins of the business idea and give a description of the behaviour of the entrepreneur in the development of the business.
- Analyse the personality traits, characteristics and skills of the entrepreneur in the context of those aptitudes and competencies that are inherent in the individual and those that are developed through education, practice and experience.
- Investigate how entrepreneurship can be aided by entrepreneurship education.

Although the case study analysis presented in this chapter seeks to examine several aspects of the entrepreneurs and the entrepreneurial ventures under study as indicated above, an attempt to consolidate the ideas of Miner (1997) is made. Miner (1997) describes entrepreneurs in terms of certain psychological characteristics associated with entrepreneurship and entrepreneurial success. Because entrepreneurs come in many varieties, Miner (1997) proposes a typology theory in the development of an understanding of entrepreneurship. Typology theory itself was set forth by Smith (1967) who focused on the types of firms set up and two types of entrepreneurs, the opportunist and the craftsman. The opportunist was motivated by the desire to build an organisation whereas the craftsman was motivated by the desire to do the type of work he enjoyed.

Miner (1997) proposes a four-way psychological typology, the personal achiever type, the real manager type, the expert idea generator type and the supersalesperson type. Miner (1997) contends that it is also possible for multiple types to exist in the same person. Personal achievers are best described as traditional or classic entrepreneurs. They take on an entrepreneurial role because their talents will not be utilised fully in any other capacity. These people tend not to work well in formal work settings. They cherish the autonomy of working for themselves. The real manager type will generally have a number of years work experience before starting his/her enterprise. The move to entrepreneurship is prompted when an opportunity presents itself and the individual is confident that he/she has the experience and skills necessary to start a business. Expert idea generators are innovative people with new ideas. They pursue and develop new products, processes and services. Their ability to identify new demands, niche markets and new ways to pursue competitive advantage is their distinguishing feature. They may however not be strong on personal follow through of their ideas. The supersalesperson

type find sales and marketing at an early age and may be involved in money making activity before leaving formal education. They often progress their careers through marketing and sales positions in companies or may even start a venture directly after school or college. Developing a team to handle backup activities is particularly important to supersalespeople entrepreneurs. Miner (1997) contends that each individual type must follow their own particular route if they are to reach success. Complex entrepreneurs will often achieve success rapidly if they put all their talents to work at an early stage.

Figure 9.1: Dominant Attributes of the Four-Way Psychological Typology

TYPE 1 Personal Achiever	TYPE 2 Real Manager
Motivation for self-achievement Plan and set goals Desire for feedback Strong personal initiative Commitment to venture Desire to learn Internal locus of control	High supervisory ability Strong self-assurance Strong personal decisiveness Desire to compete Need for self-actualisation Desire to assert oneself
TYPE 3 Expert Idea Generator	TYPE 4 Supersalesperson
Desire to innovate High intelligence Belief in new product development Problem-solver High tolerance for ambiguity Need for independence	Interact with people Sociable Avoid conflict Desire to help others Sales activity of key importance Build teams

For the purpose of this study, extensive qualitative research interviews with both graduate and non-graduate entrepreneurs were conducted. Specifically, the

sample presented in this chapter consists of eight case studies; two personal-achiever type entrepreneurs, two real manager type entrepreneurs, two expert idea generator type entrepreneurs and two supersalesperson type entrepreneurs. These eight case studies attempt to support the four-way typology proposed by Miner (1997). Details are presented in Figure 9.2. These samples were drawn from a bank of eighteen face-to-face, semi-structured interviews undertaken in 1998. The purpose of these interviews was to obtain an overview of the entrepreneur and his/her business, allowing the identification of those subjects from whom pertinent information could be most usefully gained. Particular emphasis was placed on exploring the influence or non-influence of entrepreneurship education on the motivation and decision of the entrepreneurs to start their own business.

Figure 9.2: Typology of the Case Study Entrepreneurs

Type	Entrepreneur	Company	Industry
Personal Achiever	James Griffin	Virtual Celtic Gallery	Internet Services
	Mark Fleming	Fleming Medical	Healthcare Products
Real Manager	John McNamara	ICCI	Internet Training
	Stephen Egan	Solas Data Ltd.	Electronics / Software
Expert Idea Generator	Margaret Ryan	Margaret Ryan Knitwear	Knitwear
	Liam Ryan	BMS Ireland	Engineering
Supersalesperson	Aidan Foley	Foleys of Mallow	Retailing
	Sandra Marshall	Medi-Kleen Ltd.	Distribution

The first case study, Virtual Celtic Gallery, examines a classic entrepreneur and his venture. James Griffin, as is typical of personal achievers, commits himself completely to all aspects of his work. He is motivated towards self-achievement and has a strong desire to learn and to see his business succeed.

The second case study, Fleming Medical Ltd., investigates the motivation and career of a personal achiever type of entrepreneur, Mark Fleming, who at the age of 24 was running a successful manufacturing operation producing and distributing a range of single use disposable products for the healthcare sector. He exhibits many of the attributes and traits of the traditional entrepreneur.

The third case study, Internet Certification Institute International, illustrates the concept of the real manager type of entrepreneur. John McNamara has strong self-assurance and the desire to compete in the global information technology sector. He has moved into a managerial role in his expanding company.

The fourth case study, Solas Data Limited, describes the activities of a graduate entrepreneur, who having acquired relevant work experience in employment, identified a business opportunity in the high technology sector. Using the knowledge and skills gained from his entrepreneurship education, he subsequently went on to form his own successful contract consultancy and software development company.

The fifth case study, Margaret Ryan Knitwear outlines an entrepreneur that is particularly strong as an expert idea generator. As an ideas person she is constantly generating new designs and new fashions to meet changing market trends. She has a high desire to innovate and a strong belief in new product development.

The sixth case study, BMS Ireland, demonstrates the achievements of an entrepreneur, Liam Ryan, whose ability and skill in developing new ideas and new businesses has resulted in the formation of a group of companies in the engineering manufacturing and services industry.

The seventh case study, Foleys of Mallow, focuses on a graduate entrepreneur who through successful negotiating, networking and acquisition, has built over a seven year period, a top performing property and retail business in Ireland. He constantly caters to the needs of clients and customers and has a tremendous drive to succeed and grow his business, and so meets the criteria of the supersalesperson type of entrepreneur.

The eight and final case study, Medi-Kleen Ltd., focuses on a second generation entrepreneur, Sandra Marshall, and her company. Through specific sales growth strategies she has, over a ten year period, built the firm from a three-person to a 21-person employed venture. Sandra has devoted her talents to team building and the sales and marketing aspects of the business.

In order to understand fully the personality of these entrepreneurs it is necessary first to examine the entrepreneurs' background and career, the approach to setting up the business and afterwards to summarise the distinctive psychological traits and characteristics which have made these individuals successful entrepreneurs.

The overall aim of this chapter is to explore the process of entrepreneurship and its relationship to education for entrepreneurship in a real life context. To achieve this aim, the findings of the interviews will be discussed and analysed in the context of previous research and writings on the issue of entrepreneurship. Furthermore, the subjects' perceptions of themselves as entrepreneurs and their involvement in the entrepreneurial process will be focused upon in order to support or refute previous research findings.

9.2 PERSONAL ACHIEVER ENTREPRENEURS

Achievement motivation is the personality factor that research first established as part of the entrepreneurial character. Need achiever entrepreneurs are real personal achievers exhibiting a predominant achievement motivation. Managerial characteristics are at a minimum for those individuals according to Langan-Fox and Roth (1995). Personal achievers have a desire to take personal responsibility for decisions, prefer decisions involving moderate risk, are results oriented and have a dislike for routine, repetitive work (McClelland, 1961).

9.2.1 CASE 1 : VIRTUAL CELTIC GALLERY

Fact File	
The Entrepreneur	- James Griffin
Age	- 26 Years
Education	- University Graduate BBS
Business	- Internet Art Gallery
Position in Family	- Fourth born
Marital Status	- Married
Parental Influence	- Mother
Interests	- Art, Music, Films

Background and Education

James Griffin, a fourth born child, comes from a family where an artistic culture is dominant. His mother is an artist and has for many years made a modest income from the sale of her art works. His father is a secondary school teacher. This

background has given James first hand knowledge of many artists and craftspeople together with an insight into the many different aspects of the art world. In 1994 James completed a BBS degree majoring in Personnel Management and taking a minor option in entrepreneurship. As part of his degree programme James spent two work placement periods in industrial organisations. Through these two experiences he admits that he developed a very strong dislike for formal work settings. On completion of these placements he made a conscious decision not to work as an employee of an organisation ever again. He quickly realised that he was facing a dilemma. He states:

"I majored in Personnel Management so it was obvious that my future lay in an industrial setting and for me that just couldn't happen".

James continued with postgraduate studies and qualified in 1997 with an MBS degree. His area of study was an investigation and analysis of the art sector in Ireland. After graduation James admits

"I half heartedly went looking for a job. I completed a number of applications for a position as an Enterprise Officer with the Enterprise Boards but I wasn't putting my all into the interviews. I felt a bit dubious about working in an organisation. I eventually ended up doing some consultancy work for West Limerick Resources, setting up an arts programme".

At this point James made the decision to go into business for himself. He knew that this is what he had always wanted to do. His education, he states, gave him the springboard from which to make his dream a reality.

The Approach to Business Creation

The basic idea for his own business was generated while James was working on his Masters thesis. Through his extensive study of the arts sector he identified a number of market niche opportunities not yet filled. One of these opportunities was for the provision of an on-line Internet art gallery, selling original Irish art work internationally. James, through his personal interest in art, had been linked

to the art scene in Ireland for many years prior to setting up his business. He had an established network of contacts with artists and suppliers of artwork. He was also familiar with the personnel and work of the Arts Council of Ireland.

With regard to his business idea, James reports

"I was very aware of what to do and who to go to. I prepared a short succinct proposal document of my business idea and submitted it to Shannon Development. This knowledge came directly from the entrepreneurship course and the business plan I had prepared while at college".

The development agency were impressed with James's idea and his background knowledge of the industry. They felt that the concept of an on-line art gallery had considerable potential and as a result approved a £15,000 feasibility grant to progress the idea. Grant approval was given as the internationally traded service aspect of the idea was considered important for generating foreign revenue for Irish art works. In 1997 James set up his business Virtual Celtic Gallery at the Tait Centre in Limerick. This centre offers incubation units to budding entrepreneurs for businesses mainly in the service sector.

James sees his on-line gallery, which has an eight room portfolio of art works, as the flagship of his business. He can exhibit up to 100 pieces at any one time and rotates the pictures regularly. His skills in graphic design and HTML programming, which he has developed over time, have enabled him to plan and design the gallery concept with accuracy and precision. His Internet site is visited regularly by people from all over the world. His company, in a short period of time, has developed a high reputation for reliability and credibility. Sales are made through direct customer contact and revenue is generated on a commission basis from the artists whose works he exhibits and sells. James's business, along with the art gallery, has now expanded into related Internet activities such as web site development for companies, design, consultancy and training. Since the business started in 1997, two new Irish galleries have been

set up on the Internet, one in artwork and the other in craftwork. However, James is not fearful of the competition. He feels that being the first company in this area he has established a foothold in the market and has already gained a set of customers, mainly American, who purchase art pieces on a regular basis. He feels that in his local business dealings the best way to market his services is by having a web site that potential customers can visit. This has enabled him to win several contracts for consultancy design which has resulted in the growth and development of the business.

The Personality of the Entrepreneur

James visualises his strengths in relation to the business as his expertise in computer skills, graphic design, programming and business know-how. He considers his sense of determination and perseverance as a definite asset. He admits that he works well under pressure and enjoys setting goals and reaching deadlines. Although he started his business with a partner, a fellow graduate, he now operates the business on his own. Shortly after start-up, his partner found a suitable position in employment. James finds that working alone can be isolating and lonely. He feels that it would be useful to have a partner with complementary skills, with whom to “bounce ideas and discuss strategy”. He does not rule out the possibility of going into partnership again. He feels that he may work better and accomplish more in a group situation. The things James finds frustrating are, mundane and repetitive tasks and the discipline needed to accomplish small and often boring work routines.

James testifies that his most triumphant moment was his first big sale through the Internet gallery. Soon after he had set up his business, an email with an order for a number of art works arrived and this, he stated, was in his opinion, the most exciting experience of his business career. On the downside, the

financial aspects of his business have caused him most concern in terms of cashflow problems and at times inadequate bank facilities.

Although to many James would appear to be a rather “easy-going” individual, it is evident that he is an energetic and vibrant person when it comes to business acumen. He enjoys talking about his business and is proud of his achievements. He attributes his success to date to his personal satisfaction at achieving goals and his ability to create, design and sell products to his customers. In a sense he sees himself as a problem-solver to whom his customers can turn for advice, art works, design, consultancy and professional presentations. It is important to him that he provides an image of himself as a backable and reliable person to do business with. James is a person who constantly seeks to improve his knowledge and expertise. He has recently been awarded a scholarship to study for a doctoral degree. This he is doing on a part-time basis. He feels this additional qualification will benefit not only his personal development, but will also enhance his profile and standing in the artistic and business circles he moves in.

9.2.2 CASE STUDY 2: FLEMING MEDICAL LTD.

Fact File	
The Entrepreneur	Mark Fleming
Age	35 years
Education	Higher Level (not completed)
Business	Healthcare products
Position in Family	Firstborn
Marital Status	Married
Parental Influence	Father and Mother
Interests	Golf, Travel

Background and Education

Mark Fleming's evolution into a confident leader of a company that currently employs 17 people and has a sales turnover of £2m per annum has been typical of a traditional entrepreneur. Born in 1963 he spent his formative years in an agricultural setting with his parents and grandparents. This farming background conditioned him to the concept of independence and self-sufficiency. Mark credits a good deal of his success to date to the influence of parents, and in particular to his grandmother who instilled in him a certain work ethic;

"I developed a keen desire to work hard, work long hours and work with a certain amount of diligence".

During the early 1970s his father set up a business, operating a small distribution company from the family home. This company provided a range of healthcare products to the industrial market. Mark admits that the entrepreneurial family setting and parental influence had a major impact on his desire for autonomy and independence. During Mark's latter years in school he was already involved in part-time work and entrepreneurial activity. He found work short-term with McDonald's restaurant and ran a mobile carpet cleaning and laundry service and designed and built a commercial barbecue stand that enabled him to provide a fast food service at weekend outdoor concerts in the region. New ideas and new opportunities were pursued with vigour and determination.

After leaving school in 1980, Mark enrolled for a college engineering course but became quickly frustrated with the slow pace of learning he was experiencing. Within a year he had left college and taken up a Start Your Own Business course provided by the local training agency. The six month course provided him with the knowledge and impetus to evaluate a number of business ideas he had identified. Mark never completed higher level education. He claims the Start Your Own Business course was sufficient to start him on the road to entrepreneurial success.

Approach to Business Creation

The first business that Mark Fleming became involved in was the setting up of a company to manufacture a range of hygiene aerosol products. These products, which were widely distributed in Ireland, were up to this point all imported products. In 1982 government legislation was changed and VAT at point of entry was placed on imported goods. Rather than companies paying a large lump sum in advance of sales, Mark investigated the idea of manufacturing these products in Ireland. In 1983 Seamar Chemical and Aerosol Company was set up. Mark entered the venture with two partners and held a 25% shareholding. Although he states he gained great experience from this venture in a sales and marketing role, he became increasingly dissatisfied due to personality differences and lack of total independence.

In 1986 Mark began to look at other import substitution opportunities. He sold his shareholding in Seamar which by this time had grown to 8 employees and a

turnover of £300,000. He set up Fleming Medical, a small one-desk operation in a rented workspace unit and commenced research into the feasibility of manufacturing a range of surgical tapes and other single use disposable products for the hospital and pharmacy market. He prepared a feasibility study report which he submitted to Shannon Development. In 1987 Fleming Medical was incorporated having received £66,000 in grant aid for machinery, equipment and modification of a new factory unit to commence trading. This time around, Mark admits, he worked independent of partners. Due to his creative idea for product innovation and branding, the business quickly gained market share against stiff competition from large multi-national distribution companies. Mark testifies that his company has flourished in the healthcare sector due to quality product, competitive price, customer service, overnight delivery and in some instances, operating in niche markets which are of little interest to the larger supply companies.

Fleming Medical has developed and grown over the past twelve years. Expansion has occurred mainly by broadening the product and customer base. Today the company stocks over 1,500 products and has a customer base of 2,500 customers. It also has several agency agreements with overseas companies for distribution in the Irish market. The business now operates in four main markets: hospital, pharmacy, community care, and accident and emergency sectors. It has moved from rented premises to its own custom built, company owned, facility, in a prime location. Latest developments have been in the service area. Due to new health and safety legislation, opportunities for first aid and related training programmes are in high demand. Specialists have been

employed to deliver to this new lucrative market. The company at this point is poised for further growth and expansion. Mark states that his overall goal is:

“To be viewed as a company that is thoroughly professional in its approach, to be highly efficient and to provide a quality of service that is superior to that provided by any of our competitors and by doing so ensure that we always stay ahead as a premium provider of healthcare products”.

Personality of the Entrepreneur

Mark Fleming is strongly oriented toward personal accomplishment. He constantly looks for opportunities that he can exploit in some way. More than anything else he is a self-starter. He enjoys learning whatever is related to the success of his business and is fully committed to its growth and development.

The personal achiever pattern is manifest in his own statement;

“Everyone has the potential to make money. This potential becomes greater when one is self-employed. To be successful you need to be a self-starter, be prepared to make decisions yourself and not rely on other people to make them for you. The chances of success are greatly improved with good planning and preparation. It is essential to develop good working relationships with a variety of people and you must have physical and emotional drive strong enough to maintain your motivation”.

Mark admits that his greatest strength is his drive and determination to make his business succeed. Having identified a market niche he was quick to evaluate its potential and establish a company within an environment which enabled him to get government approval and backing for his idea. With this aid, combined with his natural entrepreneurial flair, he has developed his business into a recognised market challenger in the healthcare sector.

Mark's attitude towards the education of entrepreneurs is somewhat sceptical because of his own educational background. He does not believe an

entrepreneur can be trained, believing that he himself was born an entrepreneur. He fails to see how education has helped him in developing a business especially in the early days when survival was the key. He admits that he found formal education frustrating and 'too slow'. The Start Your Own Business course he feels, provided him with the framework for putting his business plan together and this he admits was helpful. The experience he gained in setting up Seamar Chemical and Aerosol Company was invaluable when it came to starting his own venture. He had a ready built network of contacts, advisers and in some instances suppliers and customers.

One of the main problems at the crucial start-up stage was lack of cash needed to acquire resources. When questioned on this aspect of the business, Mark admits, that in the early years pressure was *enormous as creditors pressed for payment* and there was a serious possibility that he was overtrading.

"At that time I felt the company controlled me. Now that things are easier and the company is quite profitable, I feel I control the company".

Like many entrepreneurs, Mark did not start his venture solely to make money. While it was important that the company made a profit, it was because it acted primarily as a feedback signal that the activities were sound and should be strengthened and expanded;

"It is hard work, but I have a good standard of living out of my business and a great sense of personal achievement. I believe you have to be determined, you have to have the will to succeed and if you put real effort into that you will be rewarded".

The advice Mark has to offer to new entrepreneurs is to really scrutinise the market, for although they are often not very obvious, there are many many niches in the market.

“If you look close enough and really put your mind to it, with the correct personal initiative and financial backing, most entrepreneurs can eventually become very successful”.

9.2.3 Case Analysis: Personal Achiever Type of Entrepreneur

McClelland (1961) stated that the achiever oriented person is attracted to tasks that involve skill. The individual prefers moderate risks and tends to be realistic. He/she likes to do a job well and plans and directs energies accordingly. The person has good practical intelligence, is able to think clearly under stress, has good product knowledge and an ability to be patient, determined and competitive. *These attributes are evident in James Griffin and Mark Fleming as one views their respective personalities and traits. Both entrepreneurs are highly motivated individuals. Their strengths are similar to those set out by Welsh and White (1981), such as vision, confidence, dedication, problem-solving and analytical skills.*

An examination of the factors that prompted each of these entrepreneurs to move to business ownership are quite similar and appear to indicate elements of the Kets de Vries (1977) type of entrepreneur. He describes entrepreneurs as misfits in a particular environment. This argument suggests that the entrepreneur is someone unable to fit comfortably into conventional organisational life. James Griffin felt he could not work in an industrial setting. Mark Fleming was totally dissatisfied working with partners in his first business.

Collins, Moore and Unwalla (1964) indicate that it is often the sense of stagnation and lack of power as well as the deterioration of job satisfaction that

can lead an individual to consider embarking on an entrepreneurial career. Each of these entrepreneurs moved from a dissatisfying environment in previous employment to a situation where they felt they were in control of their own destiny.

As regards education, these need achiever type of entrepreneurs have different views. James feels that his education has had an enormous impact on the career he has selected. He identified his business idea while working on his Master's thesis. On the other hand, Mark questions the relevance of formal education. He found the experience frustrating and slow. He stresses the importance of experience and on the job learning. It is questionable, however, whether Mark would have achieved the success he has achieved without a basic education and the Start Your Own Business Programme he undertook. It is interesting to note that when searching for competent staff he regards a formal qualification as a positive indicator of an applicant's ability.

The psychological profile of both the entrepreneurs discussed here indicates strength as self-starters, but it is the energy they put into their business and their work that comes through as most characteristic. They are highly motivated to achieve, set goals and plan for the future. Knowledge is important to them especially as it relates to their businesses. Work which permits a high degree of individual effort and accomplishment appears to be their strength. As personal achievers these entrepreneurs bring a tremendous amount of energy to everything they do. Miner's (1997) description of need achiever entrepreneurs

as individuals with strong personal initiative, an internal locus of control and total commitment to venture, appears well supported in the foregoing analysis.

9.3 REAL MANAGER ENTREPRENEURS

The real manager type entrepreneur is often prompted to move to entrepreneurship when a major opportunity presents itself. Generally the individual will have a number of years working in an organisation and the opportunity may be identified in the work environment, where skills and experience have been gained. The real manager will launch the venture, often as part of a team, and has the expertise to manage the business to reach substantial growth. Characteristics of the real manager type include a strong need for self-actualisation and occupational advancement, high supervisory ability and a desire to compete with others (Miner, 1997).

9.3.1 CASE 3: INTERNET CERTIFICATION INSTITUTE INTERNATIONAL

Fact File	
The Entrepreneur	John McNamara
Age	29
Education	University Graduate BBS
Business	Internet Training
Position in Family	Eldest
Marital Status	Single
Parental Influence	None
Interests	Gaelic Football

Background and Education

John McNamara graduated with a BBS degree from the University of Limerick in 1992. During the four year study programme he specialised in Personnel Management and selected a two year minor option in entrepreneurship. After graduating he went to the UK and spent two years completing a Management Training Programme with a major DIY retailer. He also spent time working in Germany and the US where he gained a valuable insight into the sales and marketing functions of business. When questioned on *his family background* and/or the existence of role models in his social environment, John states that his parents were not entrepreneurial. They worked in the medical profession and did not influence his career choice. However, he did feel from an early age that he had a flair to go into business and had an orientation “to do things for myself”. This motivated him to select the entrepreneurship stream of study as a minor option at college. He strongly agrees that this education equipped him with the knowledge and skills to go into business. He states “I was prepared for an opportunity”. While at college he was *involved in two key studies* which he feels impacted most, a business plan for a new sugar product and a consultancy study for the deer farming industry. John reports that it was not so much the ideas he investigated rather the methodology and process involved in these exercises that proved most beneficial. The practical approach was an important learning mechanism for him. It enabled him to later develop a comprehensive business proposal for funding approval when the opportunity arose.

In 1994 John returned to Ireland and registered for a Master's degree in Training and Development at University of Limerick. It was while conducting research for his thesis that various windows of opportunity began to appear. John's particular interest was companies who fulfilled the criteria for ISO 9000 certification. This is a certification acquired by companies who meet specified standards with regard to overall quality management operations. Management are required to present documentation pertaining to core operations for regular audit checks. Extensive research failed to access a database of companies certified by the International Standards Organisation (ISO). John felt it was "strange" that no data was collated and no organisation was keeping records of companies who had acquired ISO certification. On checking with the International ISO office in Geneva he was informed that they did not keep a register of certified companies as this was not in their mandate. At this point John, together with two fellow students, put forward a proposal that a register be established of companies approved and certified to ISO 9000.

The Approach to Business Creation

In early 1995, with the backing of Shannon Development, the local industrial promotion agency, John set about establishing a *campus enterprise company* at the Innovation Centre adjacent to the University. The aim of the company was to create a centralised global database of companies certified to international standards of management practices. However, it became apparent that this idea could prove difficult in generating a short-term revenue stream. Further research identified that many Irish companies were failing to maintain ISO standards. This

afforded John the opportunity to develop a software product which would help companies preserve their certification through organising and maintaining vital documentation. This effectively was the concept that propelled the business idea and in November 1995 Quality Software Systems (QSS) was formally established.

The company's initial capital structure was a £15,000 feasibility study grant provided by Shannon Development and £10,000 raised by three partners. This funding proved to be sufficient to support the company in its initial stages. *Operating and labour expenses were kept to a minimum while resources were funnelled into productive areas of research activity.* John states that he was keen to establish an array of quality products which the company could confidently promote. Awareness of the shortening product life cycles in the industry made it a priority that the company would develop highly functional products which could compete well in the marketplace and return a healthy cashflow which in turn would be invested in new product development. The product range included documentation management systems, software solutions for quality management systems, software for environmental quality management and final testing and inspection calibration software. QSS is unique in that it developed its innovative software using information from both ISO registered companies and quality consultants. This allowed QSS to develop software for the customer by collaborating with the customer. An important competitive advantage for the company was secured as each software package was tailor-made to suit the different needs and requirements of each customer, a feature not offered by competitors.

In order to keep abreast of rapid changes in the industry, John attended an ISO Conference in Geneva in January 1996. It was evident from discussions with the many experts and specialists in the field that the Internet and world wide web were going to have a major impact on the industry. John quickly identified a requirement for independent qualified Internet professionals in the workplace without restraints pertaining to the proprietary products of particular IT vendors. His idea was to establish a world wide web training institute. Realising that it would take too long to develop courseware for his idea, he began looking for a company who could provide the curriculum required. Six months later he found Net Guru Technologies, a small company based near Chicago, who specialised in curriculum development. John spent seven months convincing the company that he was the right partner to expand their business to Europe. A licence agreement was signed giving the Irish company exclusive rights to the European market.

Events progressed rapidly. Net Guru Technologies adopted the certification structure and titles proposed by QSS. The first major contracts came from IBM. The success of the alliance was noted by Prosoft-I-Net Solutions, a major player in the industry based in Austin, Texas. This company found that they had a requirement for high-level courseware. Negotiations commenced and culminated in the buy-out of Net Guru Technologies and QSS. A new company, Internet Certification Institute International (ICII), with its nucleus in Ireland, was formed from an alliance of the three companies. Its aim is to create the world's most comprehensive range of vendor independent Internet training and

certification programmes. The ICII courses are unique in that they cover hardware and software products from a wide range of vendors, Microsoft, Sun and Netscape and are based on real-world web problems and solutions. Also, the multi-tier certification programmes reflect the open systems, multi-platform approach to Internet concepts and skills. Certification exams are to be administered by the world's largest test body Sylvan Prometric which has more than 1,200 test centres throughout the world.

ICII, now with substantial resource backing is poised to capture the enormous opportunity that exists for professional training in the IT industry. Seven people, headed by John McNamara, are employed in the Irish subsidiary of the company. A successful business with a projected turnover of £1m in 1999 has been developed with very little resources. The company is only beginning to grow. John anticipates that it will take a number of years before the real benefits of success will be achieved. In the meantime he predicts that the only way to survive is to stay ahead in terms of product development and competitive edge. Concerning his Master's degree, John admits he has not yet completed his postgraduate studies for which he registered in 1994. However, it is his intention to continue his education and submit his thesis when time permits.

The Personality of the Entrepreneur

John McNamara cites his most important quality as perseverance. He feels that his ability to conceptualise opportunities and his determination and staying power to follow through his ideas are his greatest strength. He indicates that it is

also important to realise what one can do and what one cannot do. Hence, he has selected qualified partners and colleagues whose skills complement his own skills. John feels his own knowledge of the overall operations of the business have been the key to success. Initially he was unfamiliar with the nuances of the computer sector and accordingly set about reading widely on the IT industry. The knowledge he acquired enabled him to effectively promote and sell his product range. He testifies that without this knowledge his customers would lose confidence in the company as a whole to meet their needs and wants. A team approach to business that includes a confident attitude, responsibility and discipline are what he regards as critical success factors. Discipline, he explains, is crucial in his sector. An important lesson he learned has highlighted this need. When he first started QSS, customers when consulting about proposed software products for the companies were too vague. This proved costly as often products did not meet customer specifications forcing his programmer to re-design them. By being disciplined with customers at the design consulting stage a substantial cost to the company was spared.

John identifies his weaknesses as “black holes” in his expertise. Having set up his company practically straight from college, the lack of experience in certain areas caused problems along the way. Up to recently John felt he lacked skills

“in negotiating with larger companies and sharper practitioners than ourselves. We often came out at the wrong end of a deal even with legal advice, which if you consider, is only as good as the information you give them in the first place”.

Other problems occur when he ends up having to do mundane administration tasks because he admits he is the only one with all the information to complete them.

John feels that a strategic focused mindset is extremely important in his industry. He is very aware of the threat of competition and the shortening nature of product life cycles. He prioritises investment into new product development. The strategic nature of his move into the Internet training and certification business indicates his vision and constant search for new business opportunities. Choosing appropriate and profitable avenues for the future essentially requires an “entrepreneurial touch”. However, John feels that he is now entering a managerial phase. The priority is now establishing steady growth trends in the company and managing change effectively. Finally, he admits

“I wasn’t born with any special acumen for business. An aptitude for business aided by education has developed in my character”.

The popular notion that you cannot teach someone to start, run and effectively manage a business does not impress him. Taking his own experience in hand he feels that it is possible to learn the principles of effective ownership and management of a business entity. His advice to aspiring entrepreneurs is prepare before you start.

“I have my business plan here on the desk before me. This document helped me to negotiate the company’s present status. The investors said it was the most comprehensive formulated plan they had ever received”.

9.3.2 CASE 4 : SOLAS DATA LTD.

FACT FILE	
The Entrepreneur	- Stephen Egan
Age	- 30 Years
Education	- University Graduate (B.Tech)
Business	- Electronics/Software
Position in Family	- Third born
Parental Influence	- Father self-employed
Interests	- Squash, Shooting

Background and Education

Stephen Egan is the third in line of a family of four children. He grew up in an agricultural setting where a strong work ethic and self-discipline were values strongly emphasised by his parents. They endorsed high standards, pride in achievement and character development through education. From an early age, due to his farming background, Stephen considered factors such as self-sufficiency and independence very much the norm. Entrepreneurial role models were very much in evidence. His parents were farmers and two of his uncles owned and operated successful construction companies in the United States. In fact, from the age of sixteen Stephen spent each summer in America working on his uncles' building sites. These trips, Stephen confesses, were tremendously beneficial in terms of experience and independence. The effects of these early environmental influences impacted on Stephen as his career goal, determined in his teens, was to either go into farming or to work for himself.

Stephen completed his higher education at the University of Limerick graduating in 1989 with a Bachelor of Manufacturing Technology degree. As part of his final year of study he selected the Enterprise Development module as an elective subject of study. Stephen reports in correspondence with the author:

"It may be of interest to you that the structure of the business plan we drafted for the final report of the IDA/Forbairt student award scheme was used in our initial presentation to the banks and IDA when setting up my business.

Currently about 15% of our revenue comes from the exact same service that our student group submitted in IDA/Forbairt student award scheme back in 1989.

The IDA/Forbairt student award scheme was one of the most useful modules I did in college."

When questioned as to why as an engineering student he chose this option, he admitted that he had always "wanted to do something of my own". He felt an understanding of the entrepreneurial process would benefit him enormously. In fact, he admitted that the business plan he researched and developed for the IDA Student Enterprise Award was the model he subsequently used when applying to the bank for financial backing for his new venture. He estimates that he saved himself a considerable amount of money in consultancy fees because he was able to put together the component parts of the business plan and work out the cash flow and financial statement projections himself.

The Approach to Business Creation

In 1990 Stephen returned from the United States where he had spent some months since graduation working in his uncle's construction company. He obtained employment with a software consultancy company in Cork mainly servicing contract projects. Here he gained an appreciation of the broad background and operations of a high-technology business. He also had the opportunity to develop his communication, marketing, sales and finance skills. In

1992 a business opportunity was seized when, with a partner, he bought out a section of the company that employed him. Initially the new business operated from a 300 sq. ft. rented premises near Cork with one main product. The operations of the company were mainly contract programming and software development for the engineering industry. In 1994 Stephen with his partner purchased their own 2,300 sq. ft. premises at the Great Island Enterprise Park in Cork. Today the business is divided into two divisions, contract consultancy and software development.

Stephen confirms that the decision to start a new company appeared to be a natural progression from working as an employee of a company to actually buying out a section of the business. *At the time there was strong demand in the market for consultancy services and software development so the decision to start his own firm was obvious.* He was not concerned with failure, the opportunity presented itself and he had the motive to capture it, which to him seemed a professional progression.

For Stephen there were no 'barriers to entry' as such as he had acquired the knowledge, expertise and capability from both his education and his work experience. Together with his partner he submitted a detailed business plan to the bank and was approved the £15,000 necessary to cover start-up costs. He says that because of his preparation of information in the form of a business plan he had no problem with the bank in obtaining the finance required. In fact, since start-up he has remained with the same bank and claims that the relationship is excellent "provided I don't give them any surprises". Stephen also secured a £5,000 grant from the Cork Enterprise Board to facilitate prototype development and this he claims was of great benefit. Today the company has the support of the Irish Development Authority for its research and development activities.

Since the formation of Solas Data in 1992, the company has grown and expanded from a one desk operation to an incorporated entity employing fifteen people in 1997. Sales have developed both in the domestic and international markets with key accounts in the United States and Japan, bringing the annual turnover of the company to £1m. The break into the international scene came about by 'piggybacking' on larger indigenous and multi-national companies exporting from Ireland. Stephen admits that with his company's limited resources it would be impossible for him "to go it alone" with sourcing international contracts. The business is currently in transition from a mainly services company to a product based company with utility software being the main product. Due to buoyant markets, sales in 1997 will be generated at a ratio of 70% overseas and 30% domestically. During the five years of operations 1992-1997 Stephen confesses that the first three years were the most difficult with cash flow being one of the areas that caused most concern. However, the past two years have seen much of the pressure relieved and Stephen feels he now "runs the company rather than being driven". Stephen has a strong desire for excellence in the products and personal service he gives his customers. This is borne out by his success not alone in the Irish market but particularly in the overseas market, where quality of product and customer service are paramount for success.

The management team of Solas Data consists of Stephen, who is the managing director and his partner. Stephen emphasises the complementary nature of the team, with his own expertise in engineering and business and his partner's skills as a software developer. He admits that he also has very good staff, all with higher level qualifications, the majority being computer/science graduates. Stephen sees his role as bringing in and looking after large projects. His key strength is being able to bring a project in on time. He is careful not to over commit on work and he says he has a "good feel" for development time. He

admits that administration and record-keeping are areas he is glad to delegate. Regarding using professional advice he says he knows when to use it and where to find it. He claims he has an excellent accountant on whom he can "bounce ideas", receive sound advice, and obtain assistance with strategic planning.

As regards future plans, Stephen looks forward to a good return on his time and investment and anticipates that in time he may spin off part of the company. He has many new ideas for product development and software programming, and admits that he would have no problem taking in equity and relinquishing some control of the company. He says he would rather be "a small part of something big than a big part of something small". Stephen has listed a number of points he considers necessary to be successful. The first is hard work and commitment, he himself working 60 hours per week. He comments "if you really want to make it you will". Experience is also essential as the technical expertise is crucial. The final point is never take the business for granted as there is always something new waiting to happen.

The Personality of the Entrepreneur

In determining the entrepreneurial decision, the actual decision to set up his own company came from Stephen's entrepreneurship education, work experience, from the identification of a gap in the market, and from the availability of a partner. However, this combination of stimulants was underlined by an early conscious decision that working for someone else would not bring him satisfaction in terms of his own ability and the attainment of personal goals in life. Stephen's motivation for becoming an entrepreneur has a variety of roots as in most cases, but the main ones he confesses are to be independent and to make money. He dismisses employment in the PAYE sector because "its too hard to make a living as the tax system penalises the individual". He urges

aspiring entrepreneurs to leave behind well paid jobs and take the risk of business formation while still young with few commitments. He feels starting a business in one's mid-twenties is a huge advantage in terms of energy, vitality, enthusiasm and opportunity.

Possibly the most prominent and vital characteristic in Stephen's personality is his dedication to success which depicts the ability to overcome obstacles and setbacks. Stephen likens failures and mistakes to crashing a car, from which one can quickly recover. In his experience as an entrepreneur he views open-mindedness, determination, ambition and drive as key attributes necessary in order to start and run a successful business. Stephen possesses total commitment to his company and has had complete faith in his business idea since inception. He has the ability to motivate, develop, manage and reward the people who work with him and for him. He encourages the same commitment and contribution from his staff as he gives himself. He believes education is vital for the development of an entrepreneur. Knowledge of the entrepreneurial process, marketing issues, operations planning and financial forecasting are crucial to success. He stresses that good technical people need to have an understanding of entrepreneurship and the process involved in setting up a business. He views his company as very marketing oriented and states that the sales and contracts secured are the culmination of the marketing process.

Stephen agrees that stress accompanies any entrepreneurial activity, however, he feels having control over one's own time and the actual business and its development offsets quite a lot of the stress factor. Unlike other 'pressure jobs' he is working towards meeting his own goals and targets under his own conditions. He feels that his business is still in its early growth stage and although he has numerous ideas for the future, his emphasis for the moment must be on meeting shorter term goals. His satisfaction derives from a variety of

factors including new challenges, discovery, ownership and control of the business, profit, growth and being his own boss. Stephen's talent for innovation is clearly evident from additions and changes made to his company since it was formed. For the future he has two main goals: the first is to continue to be successful and to be recognised as a reputable high-technology company. The second is to provide his customers with a reliable quality product and service.

9.3.3 CASE ANALYSIS: REAL MANAGER ENTREPRENEURS

The purpose of this section is to highlight some of the more conceptual observations relating to real manager type of entrepreneurs from the works of other writers and to apply these concepts to the two selected samples - John McNamara and Stephen Egan. The term real manager entrepreneur itself derives from Luthans et al. (1988). Miner (1997) argues that real manager entrepreneurs are different from corporate managers in that they have at least one other characteristic or pattern that is at a high level in addition to being real managers. This characteristic in the two entrepreneurs discussed above would appear to be the ability to identify a viable business opportunity and progress the idea from concept to start-up.

In the exploration of John McNamara's and Stephen Egan's background, role models are only evident in Stephen's childhood environment. It can be assumed that his close family influenced his future entrepreneurial behaviour. The connection between role models, especially family members, and entrepreneurial aspirations has been well documented (Cooper and Dunkelberg, 1984; Timmons et al., 1986). On the other hand, John declares that there were no such influences for him. His parents were dedicated medical professionals who worked in a large bureaucratic institution and were as he describes "no way entrepreneurial". In the instance of the real manager entrepreneur the parental

entrepreneurial influence theory is not supported in this research. This finding is consistent with Roberts (1991) conclusion that for high-technology entrepreneurs family background has no impact on entrepreneurial success.

An interesting point to note is that education has always been highly viewed in both the entrepreneurs households as the key to self-improvement. Ryle (1963) points to the importance of education in terms of results and behaviour in particular in reinforcing innovation and creativity to respond to widely different situations. Stephen and John feel that in their cases, education and in particular their university education, placed them in a position where they could clearly exercise these qualities. Both put considerable emphasis on the entrepreneurship course they completed at college as being pivotal in the decision to start their own company. The experience they both gained at college in the research and formulation of a business plan proved invaluable when faced with the situation of presenting their ideas for negotiation and funding. McMullan (1985) argues that entrepreneurship education can have some unusual benefits not typically found in other forms of higher education, the most significant benefit being that entrepreneurship education is an integral component of new economic strategies for fostering job creation. This argument can be typically applied to both entrepreneurs discussed here who subsequently went on to form high-technology companies creating between them employment for 22 people to date.

Stephen Egan and John McNamara both display many of the features which according to the literature are common to real manager entrepreneurs (Ghiselli, 1971). These include attributes such as strong self-assurance, high supervisory ability, strong desire to compete with others and the need for self-actualisation. Stephen lists his own strengths in terms of the business as his optimism and confidence which initially provoked him into starting the venture and believing it would work. He feels he has developed high managerial skills and is in control

of the situation. These qualities have served him well throughout the development and growth of his business. John emphasises the importance of leadership, problem-solving and decision-making abilities. Critical success factors, he claims, include people who work together for a common goal and a strong competitive element built into the ethos of the business. Each of the entrepreneurs exhibit strong locus-of-control as purported by Rotter (1966) and Borland (1975). This allows them to face challenges with the belief that they can ultimately determine the outcome of events. Jovanovic (1982) contends that entrepreneurs only become aware of their true ability to manage in the given environment once their enterprise is established. The examples discussed in this analysis would appear to support this argument.

Mitton (1989) in his study of the behaviour of entrepreneurs, argues that it is the entrepreneur's broad thinking that reveals that the environment is abundant with opportunity. The entrepreneur's particular trait is knowing how to capitalise on opportunities which may present themselves. This argument is certainly true in these two entrepreneurs' approach to business creation. Having identified a viable business opportunity, both carefully evaluated the feasibility of the idea before proceeding to set up the business. According to Drucker (1985) the entrepreneur always searches for change, responds to it and exploits it as an opportunity. Both Stephen and John appear to fit this mould. They are very astute at anticipating new market niches and the future needs of their customers, as seen by Garfield (1986) in his belief that entrepreneurs are those who better anticipate the future demands of the market. Kirzner (1973) saw entrepreneurs as those with the ability to perceive opportunities which others have not yet noticed. Both of the practitioners discussed here are attentive to changes in the IT industry, they are willing to learn new things and to manage their companies in such a way as to be continually ready for change.

In summary, all of the findings in this case analysis are consistent with previous research on the real manager type of entrepreneur. According to this viewpoint, entrepreneurship is a series of learned activities derived from education, training and experience. These activities include analysing opportunities, developing business plans, acquiring resources and working towards goals (Bird, 1988). The characteristics, behaviour and skills of Stephen Egan and John McNamara would appear to support this view.

9.4 EXPERT IDEA GENERATOR ENTREPRENEURS

According to Miner (1997) the distinguishing characteristic of expert idea generators is that they are experts at something. Formal education is an important factor as these individuals are educated to a point of being an expert. As they become experts they look for ways to put this expertise to work in novel and creative ways. Because they are experts in their particular area, they know where the boundaries of knowledge are located in their particular specialism. They are able to anticipate ahead, design and produce new products, services and processes. Characteristics of expert idea generators include the desire to innovate, high intelligence and belief in new product development.

9.4.1 CASE 5 : MARGARET RYAN KNITWEAR

Fact File	
The Entrepreneur	- Margaret Ryan
Age	- 26 Years
Education	- BSc Fashion Design
Business	- Knitwear Manufacture
Position in Family	- Third Born
Marital Status	- Married
Parental Influence	- Father
Interests	- Films, Reading

Background and Education

Margaret Ryan graduated from the Limerick College of Art and Design in 1996. She qualified with a degree in Fashion and Design. Born the third child of a self-employed plumbing and heating specialist, her childhood environment was one where independence and self-sufficiency was the norm. Margaret states that her father was the biggest influence on her decision to opt for business ownership as a career choice. After leaving school, Margaret completed one year of a four year marketing course before deciding that her future career lay in the fashion industry. She reports that she always had an interest in fashion and knitwear since as a child she watched her aunt make garments on a knitting machine. Margaret decided to change from marketing studies and enrolled on a degree course in fashion and design. This course involved a one-year placement with a knitwear company where she learned necessary design and knitting skills. As part of her degree programme Margaret had the opportunity to exhibit her original designs and innovative garments at a local fashion show. She states that the reaction towards her work was tremendous and gave her great satisfaction.

After graduation, Margaret spent a short period with two other knitwear companies where she gained production, make-up and finishing skills. At this point Margaret knew that she wanted to start her own business.

"I wanted my own label and my designs worn by the rich and famous. I reckoned that if I could do it for someone else, why not do it for myself".

Margaret quickly realised that she did not have the business skills to run her own business. The fashion and design course did not include business subjects and her knowledge of how to start a business was limited. She decided to return to

college for a one-year postgraduate programme in computer aided design and computer aided manufacturing. Training on the CAD/CAM system greatly enhanced her technical skills. Enterprise development and understanding the entrepreneurial process was part of this course and the formulation of a business plan was a requirement for assessment. The programme, Margaret states, provided her with the knowledge and support she needed to carry out her research and bring her idea from concept to start-up. She sourced a considerable amount of information on the knitwear industry, fashion trends and new designs. She obtained many different varieties of yarns and shades from Italy and France. She also built up a network of contacts, retailers and players in the fashion world. Margaret brought her degree collection of garments to a number of buyers to get feedback and to seek their valued opinion. From this initial research she noted the qualities that buyers felt were essential to guarantee sales in the Irish designer market. Over the next few months Margaret developed her collection further and succeeded to mount a display at the Design Centre in Dublin. During this time she received an award from the Enterprise Board for the most enterprising business idea of the year which was her range of knitted evening wear in luxurious fine yarns.

Approach to Business Creation

On completion of the CAD/CAM programme, Margaret Ryan submitted her business plan to the Limerick City Enterprise Board for funding approval. A £5,000 employment grant was sanctioned. This enabled Margaret to set up her business as a sole trader in a small workspace unit in September 1997. Her products are a range of special occasion knitwear aimed at the designer knitwear market. The range includes creative original garments produced on the CAD/CAM system. The collection consists of twenty one styles including tunics, cardigans, skirts, scarves and wraps in luxurious yarns such as silk and viscose.

The products are aimed at the 35-45 age group. An additional novel idea is a range of glamorous evening wear with versatile necklines and delightful strap details, aimed at the 25-35 age group. The unique selling point of the label is the combination of innovative stitch structures and an emphasis on detail. Garments are seamless, fully fashioned and linked together rather than cut and overlapped. All garments can be ordered to size and prices range from £70 to £400 per item.

Margaret's collection is designed following extensive research from forecast magazines and visits to yarn trade fairs such as Expofil in Paris and Pitti Filati in Florence. The yarns used in the production of these garments are polyamide, silk and viscose blends. These fibres are a new development in the sector, the potential of which Margaret has identified and is availing of in the design and manufacture of her collection. Margaret has the opportunity of renting time on the Art College CAD/CAM and knitting machine system which substantially reduces the overheads she incurs. The new designs are programmed on the CAD/CAM system and the disk is used to knit a garment unattended in about 40 minutes. The garment is then pressed and linked together without seams, a superior finish which Margaret feels is an important selling point of her range. Unique individual orders, which so far have proved very successful, are produced by Margaret herself, while production of standard garments are contracted to a knitwear company. The products are currently being test-marketed in seven retail outlets countrywide.

Over the past year while designing her new collection, Margaret became aware of a potential novel new product, swatching designs. Swatching consists of the design of new ideas in the form of mini garments to suggest stitch structures and placement of same. It is a by-product of the design process. To date this new product has achieved sales for Margaret in America, Italy, France and Ireland.

The products are sold through an agent in London and directly to Irish knitwear companies. The target market for swatching ideas is top international designers and private label companies who constantly seek quick ways of developing new collections and do not have the time to do the swatching themselves. This very exciting and new concept promises very real rewards for Margaret Ryan Knitwear in the future.

In her first year of trading Margaret has recorded a modest turnover of £20,000. Her start-up capital was her employment grant. Margaret admits that she is now at the point where she needs to take on an employee to assist in the manufacturing process. She has been offered an additional £5,000 by the Enterprise Board to create this new job. Margaret's greatest problem at the moment is keeping up with new orders. She is already planning her next Autumn/Winter collection and plans to travel to Paris in the near future to familiarise with predictions in fashion for Spring 2000.

The Personality of the Entrepreneur

Margaret Ryan is an ideas person. This is her key strength. In a very competitive market her innovative knitwear ideas and creations are the mainstay of her business. She is determined to make her business succeed. Her average working day is between 12-14 hours. She states her most valuable assets are her knowledge and skills. She has excellent knowledge of the knitwear industry and her technical skills are extremely good as well. She shows initiative in making use of information and facilities available. She admits to achieving great self-fulfilment from "doing my own thing". During her period at college while on placement with a knitwear factory, the main designer in the company told Margaret that she would never be able to have her own label and run her own company. This remark, Margaret confesses, really motivated her to prove the

designer wrong and started her on the path to setting up her own business. The designer is now one of her main competitors.

When questioned on her weaknesses, Margaret admits to setbacks in the early days of trading. She contracted out the manufacture of garments to a local knitwear factory. This she says, was a big mistake. The company was inexperienced in working with the particular yarns being used and most of the finished stock was not fit for sale. In total, the endeavour cost the business £11,500. Margaret has learned from this experience:

“You only make that sort of mistake once”.

Margaret has made substantial use of publicity in the promotion of her business. She has won several awards and competitions for her knitwear designs. In 1996 she was nominated “Young Designer of the Year”. She has made several appearances on television and her collection has been featured in many fashion shows, magazines and newspaper articles.

Customer service and prompt delivery are key aspects of Margaret’s business. Garments are customised with special orders to fit size and shape. Each day Margaret works towards deadlines where orders must be delivered on time. She has engaged an accountant to look after the financial side of her business and admits to sustained support from her husband. Although she is alone in the business, she plans to take on an employee in the near future to help with the manufacturing side of the business. Margaret feels it is most important for her as the designer of the knitwear to do the selling to retailer and customers. Her plans for the future are to expand her business and become a recognised name in the international market for designer knitwear garments.

9.4.2 Case Study 6: BMS Ireland

Fact File	
The Entrepreneur	- Liam Ryan
Age	- 45 Years
Education	- Second Level (returned to education as a mature student BBS University Degree)
Business	- Diversified Businesses
Position in Family	- Second Born
Marital Status	- Married
Parental Influence	- Father and Mother
Interests	- Football, Hurling, Golf

Background and Education

Liam Ryan fits the profile of an expert idea generator entrepreneur. During his twenty five years in business he has developed a series of profitable ventures which currently employ over 90 people. He has achieved business growth through a phased approach to corporate development and the implementation of several original and innovative ideas. The current organisation has moved from small beginnings in the 1970s to its standing today as an international export company with businesses ranging from manufacturing, services, tourism and leisure activities.

Liam Ryan was brought up in the small rural townland of Ballyneety in County Limerick. He is one of a family of seven children and admits that family life has

always been important to him. He emphasises the influence his parents have had on him in terms of the drive and dedication he has developed in his working and business life. Second to family, he remembers the influence of school life where he was very much involved in sporting activities. Sporting life meant having to perform as a team and Liam contends that team spirit and the desire to win, breeds the determination and commitment necessary to be successful in business. Liam never remembers not having a job. In the early days he worked for a local farmer which he feels helped to build his character and exposed him to areas of responsibility and accountability.

Liam Ryan did not attend higher level education until the early 1990s. He left school in the late 1960s and through a local training programme gained technical experience in the engineering field. He found employment with an engineering company where he progressed from storeman to distribution manager. During this time he attended a number of business courses but felt somewhat dissatisfied in employment and began to look at opportunities that would enable him to be independent and make the move to business ownership.

The Approach to Business Creation

Through the knowledge and experience Liam Ryan had gained from employment he identified an opportunity that was to set him on the path of growth and expansion in his own business. In 1973 he founded Euro Equipment Ltd. as a supplier of a range of engineering products and tools for the industrial market. The company expanded rapidly by focusing on a diverse range of suppliers and customers. A key aspect of the business was a customer focus thus meeting the needs of the marketplace. Always looking for new ideas and new opportunities, Liam identified further potential for supplying his customers with a range of protective and safety equipment. To provide this service he set up another

company, Genweld Services, in 1977. This new venture complemented his existing business activities by selling compatible products to the industrial market. In keeping with the idea generator type of entrepreneur, Liam also identified another opportunity of providing a high street retail outlet for his products. Euro Tools was established in 1980. The company provides a range of off the shelf products to the DIY, agricultural, industrial and consumer markets.

In 1980 further opportunity for expansion was presented, this time in the manufacturing sector. This Liam accomplished mainly by entering licensing agreements with overseas companies to produce products in Ireland. Liam admits that he always, from a young age, had an interest in inventing and manufacturing products. He enjoys taking products apart to see how they work and how they could be made. Through technology transfer agreements with an Italian and an American company, he initially produced a range of compressors and generators for the Irish and export markets.

During the late 1980s a large scale research and development programme was undertaken by BMS as a direct result of these licensing contracts. One of the key developments was a range of innovative electronic engineering products for the international market. BMS were funded and supported by Shannon Development, the local industrial promotion agency. In 1987, BMS acquired a small Limerick based company that specialised in a range of superabrasive products and the product range was introduced under the BMS label.

In 1988 Ballyneety Manufacturing Services and Euro Equipment Ltd. were amalgamated, forming a new company BMS Ireland. The company has developed a range of electronic torque tools using the latest technology in mechanical and electronic design. These products were launched on the European and American markets in the early 1990s and are recognised as

leading technology products in their field. BMS Ireland is now recognised as a major player in the international market for precision hand-measuring tools. The Limerick products are today considered superior to any other known digital torque products on the market.

In tandem with his manufacturing, service and retail companies Liam Ryan has pursued opportunities in the tourism and leisure sector. In 1991, in association with two partners, he developed the concept of establishing the Limerick County Golf and Country Club in Ballyneety, his home townland. Purchase of large tracks of land for a golf course, leisure and accommodation facilities were made. In 1994 the project reached completion with an eighteen hole golf course, a driving range, club house, and holiday homes providing for a substantial target market of corporate, industrial and holiday clientele. Liam Ryan has grown his enterprise from humble beginnings to a range of diverse, profitable businesses providing over 90 jobs to the local economy. As an aggressive and dynamic organisation, Liam sees a future of continued growth in the expansion of both the domestic and export markets.

The Personality of the Entrepreneur

Liam Ryan fits the profile of an expert ideas generator type of entrepreneur. He is creative, innovative, possesses business know-how and management skills. He provides employment, increases income levels and stimulates economic growth. He is, it could be argued, typical of the growth-minded or elite entrepreneur, a man who possesses commercial insight and market awareness. It is interesting to note that for the majority of Liam Ryan's business life he operated without a higher level education. He completed many short courses and programmes in engineering, electronics and business over the years. However, it was some two decades after he had successfully launched and

developed his business he decided to return to higher level education. Over the period of his organisation's expansion he recognised his shortcomings in relation to formal education and decided to enrol on the BBS Evening Degree Programme at the University of Limerick. In 1994, some 25 years after leaving school he graduated with a university degree. He states that his main motivation for returning to education as a mature student was to gain a better knowledge and deeper understanding of the management, marketing and financial aspects of his business. He admits that in his business life and dealings with professionals he always considered the absence of a formal qualification a drawback. When the opportunity arose to study for a degree he readily set about rectifying the situation. Liam testifies that the entrepreneurship module on the course, though somewhat theoretical in parts, was realistic and reflected real life issues in the practical exercises applied for assessment.

Liam Ryan is a man of ideas and action. One who accurately depicts an entrepreneur with stamina and staying power, with an ability to work persistently and autonomously. Active is an understatement when describing his personality and lifestyle. Keeping fit may appear to be a small part of his life but he admits;

"To lead such a full life you need energy and you need to feel good about your well being".

Liam lives by a strict regime, running three miles before work and swimming half a mile after work. His approach to business is flexible and he claims that being organised and structured coincides with the amount of time and effort one puts into the business. Being an entrepreneur is not a sole venture and Liam attributes a lot of his achievement to his staff and the people around him. He gives credit to the team who hold the fabric of the organisation together while he develops overall plans and strategy. Liam has evolved from the type of person who initially had firm individual control of his business, to a more democratic

leadership style, delegating responsibility and inspiring colleagues and workers alike.

9.4.3 Case Analysis: Expert Idea Generator Type of Entrepreneur

This case analysis presents evidence of two expert idea generator type of entrepreneurs, Margaret Ryan and Liam Ryan. Each of these entrepreneurs as is shown in the case study narrative is particularly strong in generating innovative ideas and products. Miner (1997) suggests that these type of individuals need a substantial amount of training for the purpose of bringing them to expert status. The training can be formal or informal. It is evident in each case that a combination of approaches was used. Margaret Ryan reached expert status as a result of her Art and Design degree course, on the job training and work experience. Likewise, Liam Ryan relied on an apprenticeship, training programmes, various jobs and personal study to prepare him as an expert in the engineering and technology field. Clearly, both individuals have drawn upon many sources for their learning and ideas. Achieving mastery, according to Lessem (1986) is an active process. It can be consciously developed, both inwardly - through self-development as well as outwardly - through business development. Personal and business development he suggests, go hand in hand. In the analysis of Margaret's and Liam's mastery both the inward and outward journeys are clearly evident.

Both entrepreneurs confirm that in addition to their vision, energy and persistence to *make things happen*, the role of education and the skills development was critical to their success. The ability to communicate clearly and effectively is also considered important. Each must work closely with others and their success often depends on the reactions they evoke from people. Margaret and Liam do not allow progress and technology to get ahead of them. They are

familiar with modern day techniques and practices in their relevant industries. They are proactive and adapt readily to the fast changing business world.

Neither of the entrepreneurs interviewed studied entrepreneurship prior to embarking on their business venture, although each recognised the need to understand the process of business formation. Through a postgraduate programme of study Margaret Ryan became familiar with business concepts at an early stage of her business development. While, on the other hand, Liam Ryan was exposed to what Collins, Moore and Unwalla (1964) termed “the school of entrepreneurs”, that is education not found in the formal system. His subsequent achievement of a business degree twenty five years after starting his business suggests that formal methods of education are far more critical in today’s modern competitive environment.

It is interesting to note that both Margaret and Liam’s description of themselves are modest, seeing themselves as ordinary individuals who just wanted to get things done. However, the research conducted highlighted several dominant characteristics which appear to conform with those typically associated with the “idea generator” type of entrepreneur. For instance, attitude appears to have everything to do with success in business. Both entrepreneurs display a healthy self-confidence and an overtly positive attitude to life, seeing only opportunity, always willing to learn and implement new ideas. This finding confirms Steinhoff’s (1978) argument of the entrepreneur as an individual of seemingly endless energy and great intuition, pointing out that “innovative thinking is one of the major keys to success in any entrepreneurial venture”.

Another attribute evident in the entrepreneurs studied is the importance they ascribe to technical knowledge and experience. They both believe that it is necessary to work for someone else in the industry concerned, make mistakes,

learn from them and only then start one's own business. This supports the findings of Eisenberg (1986) who states that entrepreneurs will typically use their years of experience as employees to gain knowledge about the industry they plan to enter.

The above analysis of Margaret Ryan's and Liam Ryan's personality and behaviour appears to support Miner's (1997) typology of an expert idea generator entrepreneur. They are both highly innovative, believe in new product development, have a high tolerance for ambiguity and a strong need for independence.

9.5 SUPERSALESPEOPLE TYPE OF ENTREPRENEURS

Supersalespeople type of entrepreneurs enjoy social interaction, they have a desire to help others, they develop teams and tend to avoid conflict (Miner, 1997). These individuals may start their career in a junior sales position or as in the case of family businesses work their way up through sales and marketing positions within the firm. On the other hand, supersalespeople may start a venture directly after leaving education, starting small before developing and expanding the business. These individuals are successful because they attend to customer needs and have unique persuasion and selling skills.

9.5.1 CASE 7 : FOLEYS OF MALLOW

Fact File	
The Entrepreneur	- Aidan Foley
Age	- 29 Years
Education	- University Graduate (BBS)
Business	- Retailing / Property Development
Position in Family	- Firstborn
Marital Status	- Single
Parental Influence	- Mother self-employed
Interests	- Antiques, Horseriding

Background and Education

As the eldest child of a family of seven, Aidan Foley was born in Mallow in County Cork to a working class family. The dominant figure in his early life was his mother. He describes her as a very supportive woman who constantly encouraged him to 'try new things'. Also, Aidan recalls that his mother, despite her already heavy workload, managed to run a busy catering business in the local sugar factory. Aidan admits his father had no influence on the way his career progressed, while his mother "who has a great head for business" was a major influence on his decision to become an entrepreneur.

After completing secondary school, Aidan pursued a business degree, specialising in marketing and entrepreneurship at the University of Limerick. His choice of study was appropriate given that since the age of seven he was frequently involved in some kind of money-making initiative, from chopping and

selling timber for firewood to collecting, washing and returning empty bottles. Despite Aidan's full-time occupation of studying for a degree he admits to becoming self-employed before he left University. In fact he was running three night-clubs during his final year of study, one in Limerick, one twenty miles away in Ennis and the other sixty miles away in Portlaoise. Also, as a result of his involvement in a marketing project he was assigned at college, he obtained a contract to assist a local fashion shop with an advertising and promotional campaign. This work he continued for a period after graduating from University in 1989. Aidan confirms that he has always been self-employed and has not worked as an employee for anyone else.

When questioned on his education and the impact of the entrepreneurship programme he had taken at University, Aidan confirmed that the course was a significant influence on his subsequent career decision.

In his own words:

"You will be glad to hear that the entrepreneurship stream was my favourite option during my four years. It has not let me down as I now control thirteen companies involved in retail, wholesale, property development and manufacturing. The entrepreneurship option was excellent but it lacked a little reality. I took marketing and entrepreneurship and found that I lacked financial expertise in the start-up of my business, and therefore became vulnerable to "professional vultures" (accountants, solicitors etc. who got fees without doing work)."

It is interesting to note that Aidan; who recognised his weakness in financial skills, decided in 1994, four years after setting up his business, to take a Certified Diploma in Accounting and Finance to acquire as he says "a better grasp of what I should know".

The Approach to Business Creation

To step back a few years, Aidan spent his six month employment placement education, which occurs at the end of the third year of study, working in a grocery cash and carry outlet in Mallow. During this period he gained relatively good experience and knowledge of the grocery trade in the town. In April 1990, some ten months after leaving college he spotted a retail shop for sale in an advertisement in the local newspaper. Immediately he telephoned his mother for advice. This was a shop they knew quite well as his sisters had worked there part-time during weekends and holidays. The owner was an elderly widow, and her son, a dairy science graduate, *had no interest in the business.* Without hesitation Aidan, with his savings from his night-club activities together with some investment from his mother, managed to raise a loan to secure the £250,000 required to buy the business. The shop at the time was old fashioned, quite run down and only opened from 9.00 am to 6.00 pm, closing for a half-day on Wednesdays and also at weekends. Within a short period of time Aidan had turned the shop around commercially in terms of stock, decor, opening hours and convenience shopping. Turnover increased from £3,000 to £25,000 per week.

Subsequent to this success, in November 1990 Aidan purchased a second retail outlet in Mallow where sales increased from £4,000 to £12,000 per week. In 1991 he acquired a third investment, another retail shop, where sales increased from £7,000 to £14,000 per week. Aidan employed some family members in each of these businesses. The businesses were incorporated as Foleys of Mallow Ltd. This rapid series of acquisitions was followed by the purchase of a public house which he leased to a fellow graduate. However, the selected lessee proved to be "somewhat of a disaster" when it came to business acumen and stability. After two years of the leasing arrangement Aidan was forced to replace the lessee with a competent person reporting directly to himself.

In 1992 the interest rate crisis spiralled and Aidan found himself in a serious situation. With high borrowings, high trade credit and banks clamouring for audited accounts he claims that "he nearly went to the wall". 1993, he claims, was a really tough year. Aidan freely admits that administration is one of his weaker points. The accountant he engaged initially proved to be totally inadequate, failing to produce the required documentation for the banks while not hesitating to send a large demand for fees. At this point another accountant was recommended to the business who proved to be excellent. Aidan remarks "he puts pressure on me rather than me on him". The outcome was that by January 1994 Aidan still possessed all the property and businesses he had acquired. At this point he made a decision to rent the three retail shops to a brother and two of his sisters. This has worked out well as each takes total responsibility for their operation and loans are repaid from rental income with adequate profit going direct to Aidan.

In 1995 Aidan continued on his acquisition trail by purchasing another property, a public house, which he has rented and has also converted some of the space into three apartments. The other public house he purchased in 1992 he sold early in 1997. Aidan's business today consists of looking after his properties, running a wholesale and drinks business, dealing in antiques (a hobby turned into business), organising mortgages and restructuring loans for business people. He has recently acquired an auctioneer's licence and describes himself as a property consultant/auctioneer. In total he has created 18 jobs in Mallow town while his business has an annual turnover of £2.5 million. Prospects for further business development appear inevitable.

The Personality of the Entrepreneur

Aidan Foley was reluctant to identify what characteristics he possesses that have enabled him to become an entrepreneur. In general terms his belief is that certain types of people are more likely to become entrepreneurs as they are risk takers who have a desire to work for themselves whereas non-entrepreneurs would seek a safer route of job security and the knowledge that their remuneration is guaranteed. Aidan believes that an individual must possess a "vision" if success in one's own business venture is going to be achieved and not be put off by setbacks. He himself encountered many obstacles in the setting up and development of his business. These have been to a large degree of a financial nature, but he was not in any way discouraged or hindered by these setbacks nor did he succumb to the notion that the success of his venture is outside of his control and in the hands of others.

When questioned on his weaknesses Aidan admits that administration and paperwork are his greatest failings. Since leasing his various businesses he feels he has kept this aspect of his business to a minimum. He stresses the importance of having relevant information available at all times, information such as audited accounts, *cash flow projections and tax clearance certificates*, as these are crucial to quick decision-making when negotiating with banks. His advice to aspiring entrepreneurs is to beware of "professional vultures" as there are no friends in business and "such people just make money out of you". Aidan also confesses to having many more ideas for business from innovative new product ideas to a range of franchising opportunities.

When questioned on his propensity to take moderate risks, Aidan gives a very good example of a calculated risk he took some years ago. On Good Friday he purchased an "enormous amount" of Easter eggs from two regional grocery

wholesale outlets at a very cheap price. At that time chocolate companies tended to be over optimistic regarding demand and over-produced these products resulting in an over-supply in the marketplace. Aidan stacked to ceiling level 500 sq. ft. of his 2,000 sq. ft. outlet with the acquired stock with just two days to Easter. With the aid of his marketing expertise he managed to sell every last Easter egg before Easter Monday, when of course they would be considered worthless. He even muses over the fact that he sold some of the stock back to his original suppliers at a profit. Since this episode people return to his retail outlet every year to purchase a last minute bargain. Aidan admits that he got a "real buzz" from accomplishing this trading success. It is obvious from the pattern of events in Aidan's career that he has a very healthy attitude towards risk and risk management.

9.5.2 CASE 8 : MEDI-KLEEN LTD.

Fact File	
The Entrepreneur	- Sandra Marshall
Age	- 28 Years
Education	- Diploma Business Studies
Business	- Distribution of Hygiene & Safety Products
Position in Family	- Third Born
Marital Status	- Married
Parental Influence	- Father
Interests	- Reading

Background and Education

Sandra Marshall was brought up in an entrepreneurial environment. Her father operated a small distribution company from home, selling mainly into the industrial first aid and hygiene products market. The business provided an adequate income for the family and remained small for fifteen years until 1988 when Sandra, the third born child, decided to join the family firm and bring her ideas for growth and expansion into being. She had already seen her eldest brother successfully initiate and launch a manufacturing company in the healthcare sector. This provided her with the role model that she proposed to emulate. At school her favourite subject was Business Organisation for which she consistently received A grades. During holiday periods she gained experience working in both her father's and brother's businesses. After leaving school she took up employment in Medi-Kleen and enrolled in a two-year part-time Diploma in Business Studies course. At this point she was not clear which direction her career would take. At college she gained a good understanding of business subjects but, she admits, that at no point during the period of her studies did she undertake an entrepreneurial course.

Sandra's first position in Medi-Kleen consisted mainly of book-keeping duties. However, within six months she decided to purchase a car and took up a sales position calling on customers and booking orders. This exposure to the market made Sandra quickly realise the enormous potential for increased turnover. New Health and Safety regulations had increased the demand for first aid and safety products and opportunities to meet these needs were considerable. A second salesperson was employed and the business moved from home to a centrally-located rented premises in Limerick. Over the next few years Sandra gained experience in reception, office, packing, delivery, buying and selling activities. Sandra recognised her skills deficiencies and took courses in computing and marketing. She admits that most of her knowledge has been learned by experience rather than education.

The Approach to Business Expansion

In 1990 the legal status of the company moved from a sole trader to a limited company. Sandra was appointed a director with a 25% shareholding. Sandra explains:

“Even though I joined a company that was 15 years in existence, it was like a new company when I started because we restructured the whole thing and started all over again. It has taken eight to ten years to get it up, going and profitable”.

The principal activity of Medi-Kleen is the distribution of First Aid and Safety products to both the consumer and industrial markets throughout Ireland. The company, over the past ten years since Sandra became involved, has established itself as a leading supplier in the industry. This growth has involved diversification into many related product ranges such as emergency equipment, paper, rubber, protective and maintenance products. The product range has expanded to over 2,000 products and the customer base has 2,500 active accounts. Twenty one people are employed in the company with projections for an additional five jobs next year. The main focus of the company, which is now managed by Sandra and assisted by her husband, is growth through market penetration and market development. Ten salespeople cover allocated territories throughout the country and turnover has reached £2.2 million in 1998. In 1997 the business moved to its own 10,000 square foot custom-built facility which has been purchased outright. A retail outlet “The Safety Centre” has been opened at the new premises. There are plans for the opening of similar centres in Dublin and Cork next year.

The Personality of the Entrepreneur

A major characteristic of Sandra's personality is her desire to interact with people, both inside and outside the business. She places great emphasis on building relationships with customers, suppliers and employees. At work she encourages an ‘open door’ policy where communication and interaction are of

prime importance. She is spontaneous and persuasive and has a desire to help others. Money, she claims, is not a motivator but rather the satisfaction achieved comes from providing employment for so many people. Her strengths she sees as the work, long hours and dedication she has put in to see the business succeed. Her main weakness, she admits, is her inability to confront staff if mistakes or problems arise. This she finds difficult especially with the office staff with whom she works closely. When questioned on her most triumphant moment she cites the securing of a first aid contract from the Electricity Supply Board. Sandra spent four years tendering for and negotiating this contract, worth £100,000 a year, before finally securing it when turnover in the company was just £500,000 per annum.

Although Sandra has always had a good relationship with her bank, she did experience cash flow problems for quite some time. During these periods she felt that the bank was in control. She states:

“Now the clock has completely turned. The banks are telephoning us asking us - do we want this and do we want that? Now that we have a track record and are successful the bank’s attitude has radically changed.”

Outside professional advice comes from the company’s accountant. There has been no formal written business plan for development although Sandra did prepare a business document when applying for a £20,000 employment grant for four new staff positions. This grant she admits, has resulted in nine new jobs within the company. Customer service is a priority for Sandra. The company has obtained the ISO 9002 quality standard. Staff training and development is also given key attention. Customer care, sales techniques, debt collection and stores management are examples of courses taken by Sandra and her employees. Sandra’s management style is democratic with emphasis on team work and team building. The structure of the company is still quite informal and needs to be formalised in the near future. Finally, Sandra’s advice to aspiring entrepreneurs, is:

“Be prepared to work hard. You really need to put it in for quite a long time”.

9.5.3 CASE ANALYSIS: SUPERSALESPEOPLE TYPE OF ENTREPRENEURS

This discussion aims to put into context a number of issues and findings in the case study research of the two selected entrepreneurs, Aidan Foley and Sandra Marshall, and relate them to supersalespeople type of entrepreneurs as identified by Miner (1997). Throughout this case analysis Aidan and Sandra's experience and personality is also contrasted with various schools of thought on entrepreneurial influences and factors contributing to entrepreneurial success.

According to Miner (1997) supersalespeople are individuals who identify marketing and sales opportunities, build their businesses from small beginnings, focus on customer needs and have unique persuasion and selling skills. This profile certainly appears true in both Aidan and Sandra's situation as one explores their background, behaviour and motivation in their entrepreneurial endeavours. An analysis of both entrepreneurs' backgrounds reveals several factors that are supported in the literature. There is strong evidence to suggest that parents of an entrepreneur have a significant influence on the individual (Scherer et al., 1991). Hisrich and Peters (1995) state that the overall parental relationship, regardless of whether they are entrepreneurs, is perhaps the most important aspect of the childhood family environment in establishing the desirability of entrepreneurial activity for the entrepreneur. McClelland (1961) stressed the significance of parental influence in developing the need for achievement and in particular he emphasised the importance of following standards of excellence, self-reliance training, low father dominance and a crucial role for the mother-son relationship. Clearly, this can be applied to Aidan Foley's situation in that his mother was a role model of him, encouraging him to develop business skills and achieve success. In Sandra Marshall's case where her father was a strong parental influence and a strong father-daughter relationship exists, the same argument can be said to hold.

Although the importance of education has been questioned by some as a precursor to becoming an entrepreneur (Vesper, 1980), both Aidan and Sandra note that their education was important in terms of providing them with the knowledge and skills to run successful companies. It can be argued that education provides a basis for intellectual development which the entrepreneur requires to run a business successfully and that higher levels of education provide the entrepreneur with greater levels of confidence when negotiating with banks, customers and suppliers. Hisrich and Peters (1995) point out that education is important in the upbringing of an entrepreneur. Its importance is reflected not only in the level of education obtained, but in the fact that it continues to play a major role in helping to cope with problems that entrepreneurs confront.

Aidan Foley states that his entrepreneurship education was pivotal in his move into business ownership. He emphasises that he found the practical side of the entrepreneurship and marketing projects he completed while at college extremely beneficial. It is interesting to note the remark made by Aidan that the entrepreneurship course he took “lacked a little reality”. When confronted with real life problems such as an incompetent accountant and “professional vultures” Aidan was unprepared for the resulting pressures. Naivety appears to be the cause of this distress. The question must be asked can educators prepare students for situations like this? The answer may be to make students more aware that the business world is constituted of different people with different values, attitudes and behaviour, some good and some not so good. The interesting outcome of Aidan’s experience with these “professional vultures” was his return to education in order to gain a better understanding of the financial side of his business. It can be argued that the higher educated person has high income expectations, and as the earnings from business are related to business

size, this would imply that well educated people are more likely to form businesses that grow larger than businesses started by less educated individuals. This is certainly true in Aidan's situation as one explores his subsequent career pattern of business development and growth.

Unlike Aidan Foley, Sandra Marshall did not study entrepreneurship while at college. Her entrepreneurial and business skills were developed through experience and on-the-job training. She states that participation in management training and development programmes has also benefited her enormously. Admittedly, she did not start the business, therefore, the question arises did she have the ability to initiate a new venture at the point she entered the business? When questioned on this issue her response is that she is not quite sure. The skills needed to start a business are different from those needed to manage and grow a business (Swayne and Tucker, 1973). It is clear however, that her motivation and entrepreneurial personality thoroughly pervade the business today.

Miner (1997) proposes a number of personality attributes of supersalespeople entrepreneurs. After interviewing Aidan and Sandra the author would concur that each appears to possess these characteristics such as opportunity orientation, positive social interaction with others, taking initiative and total commitment to the business. Perhaps the most striking trait of both Aidan and Sandra is their drive and determination to increase turnover in sales and achieve success. They both demonstrate high levels of motivation, perseverance, reliability and self-confidence, all of which agree with the dominant characteristics noted by Cromie and Johns (1983) in their study of Irish entrepreneurs.

Aidan and Sandra are pivotal figures around which their companies revolve. They are intelligent, quick thinking and proactive individuals who believe their

education and experience are important in their development as successful business people. Both believe they can influence the course of events in their personal and working life which would agree with Rotter's (1971) internal locus of control theory.

The analysis of Aidan Foley's and Sandra Marshall's personality and behaviour has proven to be consistent with the supersalesperson type entrepreneur. They both are sociable people who have demonstrated a strong desire to help others by creating employment opportunities for family members and others. They have expanded their businesses by focusing on increased sales turnover through constant review and updating of marketing activities and availing of opportunities that have presented themselves.

9.5.4 CROSS CASE DISCUSSION AND CONCLUSIONS

The foregoing case studies examine the results of in-depth interviews with eight entrepreneurs for the purpose of understanding why entrepreneurs behave as they do and how they made their decision to start their own business. To accomplish this, the findings investigate the various background and educational influences, the approach to business creation and the personalities of the entrepreneurs concerned. In particular, the analysis focuses on the influence of education for entrepreneurship which has been discussed earlier in this study in the relevant literature review.

In analysing the transcripts of the interviews conducted, an attempt was also made to consolidate Miner's (1997) views on a psychological typology of successful entrepreneurs. The findings reveal that there are indeed different types of entrepreneurs and support Miner's contention that personal achievers, real managers, expert idea generators and supersalespeople type of

entrepreneurs exist. The dominant attributes of each typology are evident in the findings. Need achiever type of entrepreneurs possess a high motivation for self achievement, strong personal initiative and a strong desire to learn. Real manager type of entrepreneurs are characterised by strong self-assurance, high supervisory ability and desire to compete. Expert idea generator type of entrepreneurs emphasise a belief in new product development, desire to innovate and their capacity to solve problems. Supersalespeople type of entrepreneurs are evidenced by their ability to interact with people, build teams and stimulate sales activity.

A primary purpose of this study is to explore the relationship between entrepreneurship education and new venture formation. Overall, the case analysis provides preliminary support for the hypothesis proposed. The tentative results, to a great extent, support the contention that entrepreneurship education can be an important determinant of graduate entrepreneurship. The study reveals that an entrepreneurship initiative taken by six of these individuals was a key influence on their decision to become entrepreneurs. It is also evident that the knowledge and skills acquired from the programme assisted them to a considerable degree in the subsequent setting up of and running of their businesses. The results also suggest that awareness of market opportunities was heightened as a result of involvement in practical activities, such as idea generation, market research and preparing business plans. On the other hand, the analysis also shows that the other two entrepreneurs interviewed placed more emphasis on previous work experience and the skills acquired rather than education as key determinants of start-up. Other factors such as parental influence, need for independence and job frustration were also considered important. It can be argued from the evidence presented, that exposure to entrepreneurship concepts and involvement in practical entrepreneurship activities raises the level of awareness of entrepreneurship as a career option

and in some instances, as is evident in the cases of the six entrepreneurs who undertook an entrepreneurship programme of study, assists the process of entrepreneurship.

Expanding the discussion to consider other aspects of the findings, two widely used frameworks within which researchers try to analyse the entrepreneur are the trait approach and the behavioural approach (Gartner, 1989). The former identifies the entrepreneur in terms of personality characteristics, while the latter places more emphasis on the response of individuals to their environment as the impetus for their actions. The findings suggest that these entrepreneurs possess many of the personality characteristics discussed in the literature such as need for achievement, risk-taking propensity and locus of control. The results also indicate that parental and family role models affected both the personality development and the career attitudes of these individuals. A summary of the findings of the case analyses is presented in Figure 9.3

From the analysis of the information gathered in the interviews with the sample of entrepreneurs, it is clear that the various theories examined in the literature review, have their merits in attempting to evaluate the concept of the entrepreneur and entrepreneurship. Standing alone none of the theories provide the definitive answer. However, when they are analysed in conjunction with each other we are provided with a greater and more developed profile of the different aspects which comprise entrepreneurs and the entrepreneurial process. The case study analyses provides a means of understanding entrepreneurship by viewing entrepreneurs and their ventures not as a homogeneous group but rather as a population where complexity and variation abound in the process of new venture creation.

Figure 9.3: Cross Case Analysis Summary – Influences on Entrepreneurship

Theoretical Variable	Entrepreneur	Entrepreneurship Education	Psychological Traits	Family Influences	Work Experience / Skills	Environmental Factors
Personal Achiever	James Griffin	Formal Yes	Desire for autonomy Achievement motivation	Mother	Computer / Graphic Design	Dissatisfying work environment
	Mark Fleming	Informal SYOB Course Yes	Strong personal initiative Results oriented	Parents / Grandparents	Marketing / Sales	Job frustration Adolescent money-making activity
Real Manager	John McNamara	Formal Yes	Need for self-actualisation Competitive nature	None	Software Development	Opportunity identified through postgraduate research
	Stephen Egan	Formal Yes	Strong self-assurance Problem-solver	Parents and uncles	Contract Programming	Business idea from previous work experience
Expert Idea Generator	Margaret Ryan	Postgraduate Entrepreneurship Course Yes	Innovative Perseverance	Father and grandmother	Design Skills Marketing / Sales	Market niche identified from College course
	Liam Ryan	Informal No	Inner control / Discipline Visionary	Father / Mother	Technical Expertise New Product Development	Business idea from previous work experience
Supersales-person	Aidan Foley	Formal Yes	Risk-taking propensity Persistent	Mother and Siblings	Marketing / Sales	Adolescent money-making activity
	Sandra Marshall	Informal No	Determination Interpersonal strengths	Father and Brother	Marketing / Sales On-the-job learning	Second generation entrepreneur Opportunity for business expansion

In summary, this study highlights the need to create within the education system an enterprise culture which will encourage and foster greater initiative and entrepreneurial activity. A considerable challenge faces educators to devise programmes which are appropriate for preparation for the world outside and in particular for those young people who aspire to be the business owners of tomorrow. Measures such as education for entrepreneurship are already in place in many colleges and universities to encourage entrepreneurship. Perhaps the most important factor to be considered is the promotion of entrepreneurship, to help change the way students perceive entrepreneurship and their own capacity to engage in it.

Young people need to be educated to think in terms of venture creation and working for oneself and substitute this for traditional views on sources of employment. Rather than seeking only employment, graduates need to look on entrepreneurship as one of the options available as a career path. To complement this, supports such as advice, access to financial aid, and training programmes to enhance business and management skills need to be developed to a greater extent to meet the growing demands of those who select the route of business ownership.

PART THREE

DISCUSSION, CONCLUSIONS AND IMPLICATIONS OF THE RESEARCH

Chapter Ten draws together the theoretical concepts outlined in Part One and the exploratory evidence reported in Part Two. The major issues that emerge from the study are discussed and a theory of higher level entrepreneurship education is proposed.

General conclusions are set out, recommendations are made, and finally, selected areas are highlighted which are of special concern and interest for further research.

Chapter Ten

Discussion, Conclusions and Implications of the Research

Discussion, Conclusions and Implications of the Research

10.1 INTRODUCTION

This concluding chapter aims to summarise the key issues and research findings that underpin this thesis, which in turn, may have an influence on the nature and direction of further studies in the field of entrepreneurship. The overall purpose of this investigation is to contribute to and expand the existing body of theory on entrepreneurship and entrepreneurship education. Hopefully, this study will also assist in developing and broadening the scope of any future studies in this area. The discussion, the theory proposed, the conclusions and recommendations in this chapter are tentatively concerned with increasing researchers' understanding of the broad concepts of entrepreneurship and also with ways to improve practice in the field.

Part One of this thesis describes the research aims, objectives and the rationale for selecting the research topic. It gives a detailed overview of existing literature on the entrepreneur, entrepreneurship education and graduate entrepreneurship. A conceptual model (Figure 5.1) is introduced which explores the various influences on graduate new venture creation. The model identifies key variables such as education and skill development, career preference, work experience, motivation, role models and identification of a business opportunity as the triggering factors for graduates moving into business ownership. An outline of the research design and the key methodological features are also presented.

Part two provides a comprehensive analysis of all the major findings of the study. This includes the results of both quantitative and qualitative methods of research. To address the main research question, the findings of a survey of 619 graduates are reported and eight case studies are presented that examine the propositions made. Part Three, the last section, draws together the conclusions of the study, the theoretical concepts outlined in Part One, the exploratory evidence reported in Part Two and suggests a theory of higher level entrepreneurship education. The implications and limitations of the research are discussed and areas for further research are highlighted.

This evaluation study focuses on a key question in the entrepreneurship literature, "do undergraduate courses in entrepreneurship aid in new venture creation?". It appears vital that research into entrepreneurship education should understand its impact on a graduate population. This research is, therefore, an attempt to gain a better knowledge of the effects of entrepreneurship education based on an investigation of an Irish graduate population who, during their university/college education, were exposed to entrepreneurship concepts and practice. The research seeks to;

- Explore the career paths of graduates who have taken entrepreneurship courses at the undergraduate level with particular focus on the influence of these programmes in determining career choice;
- Provide more precise knowledge and understanding of entrepreneurship with particular emphasis on the factors that contribute toward, and militate against, graduate entrepreneurship;
- Obtain a profile of the graduate entrepreneur.

In order to achieve these three objectives, the research uses a multi-stage research approach. Each stage has its own purpose and method. The first stage reviews the literature on the topic for the purpose of understanding the existing theory of entrepreneurship and entrepreneurship education. The second stage involves a mail survey of 619 graduates of Irish universities and institutions of higher education to gather descriptive data on the outcomes of entrepreneurship education. The third and final stage consists of in-depth personal interviews with 8 entrepreneurs to identify who the entrepreneur is and what he/she does. In particular, the research focuses on the factors, including education, that influenced their decision to start a business.

10.2 DISCUSSION OF MAJOR FINDINGS

It is evident from the literature review carried out and the primary research conducted, that entrepreneurship has become a widely taught subject in many universities and business schools, and it appears that the area as an academic discipline is expanding throughout the majority of developed economies. This research represents a step towards understanding the role of education in stimulating entrepreneurship. Bechard and Toulouse (1996) emphasise that a main research question in entrepreneurship is the extent to which entrepreneurship is a function of people with definitive personality traits or whether entrepreneurship concerns knowledge and skills which can be developed through education. Hopefully, the results of this study provide an insight into this question by demonstrating that a tentative relationship exists

between entrepreneurship education and new venture creation. The findings address the need identified in the entrepreneurship literature for results-oriented measures of entrepreneurship education (Vesper, 1985).

10.2.1 The Quantitative Research

The principal findings of the research can be summarised in terms of the major hypotheses proposed;

H₁ Graduates who are introduced to entrepreneurship concepts and the practical experience of preparing a business plan for a new start-up venture at the undergraduate level will consider entrepreneurship as a viable career option.

The findings of the graduate survey presented in this thesis support this hypothesis. One of the most notable findings of this study is the very strong orientation among the graduates surveyed towards business ownership. For those who had started businesses this predisposition had already been acted upon and for those in employment it was considered a likely probability at some future date for a sizeable proportion of the respondents. When questioned on their initial career goals, 23 per cent of graduates indicated that their first aspiration was to gain business experience and then at a later point in their career to move to business ownership. When given a free selection of five alternative career situations, 52.6 per cent stated that a business of their own was their preferred career choice.

One key factor that emerged from the results to support the above hypothesis is the very high level of career satisfaction attained by the graduate entrepreneurs. In the graduate survey they report a weighting level of 4.31 on a five point scale as opposed to a 3.81 weighted level for those in employment. A similar difference occurs in the longitudinal sub-study. An interesting finding is that recent graduates in employment are somewhat less satisfied with their careers than their older peers. A statistical difference occurs between these two cohorts. This may be attributed to less opportunities in the job market or another possible explanation is that among the younger group are aspiring entrepreneurs who have not yet achieved their goal of business ownership.

H₂ Graduates who participate in multiple integrated programmes on entrepreneurship while at college will be found to have a higher level of entrepreneurial orientation than those who participate in single supplemented courses at college.

This study provides tentative evidence which suggests that respondents who select a multiple integrated entrepreneurship programme are entering business ownership at a higher rate (11 per cent) than the national average (5.9 per cent) of graduates who participate in a single enterprise course/initiative. In terms of intention to become an entrepreneur, a statistically significant difference occurs between those who selected a multiple programme and a single course. The vast majority, 83 per cent of

the former, took the programme with the intention of becoming an entrepreneur while only 47.4 per cent of the latter had this intention. The results also indicate that a statistical difference occurs between these two groups in terms of actively seeking a business opportunity. The former group report a greater extent of activity in pursuing business ideas.

H₃ Graduates who participate in an undergraduate entrepreneurship course will have entrepreneurial intentions.

On a separate probe of entrepreneurial intentions, 52.1 per cent of respondents indicate that it is “highly probable” or “probable” that they will someday start a business. According to Ajzen (1991), employment status preferences or behavioural choice intentions are the best predictors of actual employment status choice. Behavioural intentions, in turn, are determined by attitudes, subjective norms and *perceived behavioural control*. Dyer (1994) argues that education in entrepreneurship may influence these factors through socialisation into entrepreneurship as a possible career path.

The results indicate that as graduates mature, the number of graduates creating new businesses increases by ten percentage points over a five year period. This aggregate net change is a finding of both the main survey and also of the longitudinal sub-study.

H₄ Graduates' ability to initiate and develop new ventures is affected positively by entrepreneurship education.

This hypothesis makes the assumption that graduates have the pertinent knowledge, skills and abilities to accomplish the task of business formation and business management. It appears from the findings of this study that for the majority of respondents, 75.5 per cent, H_4 is true. With regard to the effect an entrepreneurship education actually has on graduate start-ups, the results indicate that the incidence of business ownership is considerably higher than the national average of start-ups by individuals with higher level education. The Labour Force Survey (1996) indicates a 1.3% business ownership rate in the < 25 year age group as opposed to 5.9% in this study, and an 8.3% in the 25-34 year age group as opposed to 14.5% in this study. This evidence appears to suggest that entrepreneurship education has a positive effect on graduate entrepreneurship. An interesting finding is, that though the graduate entrepreneurs stressed the importance of entrepreneurship education, their overall academic achievement level is marginally lower than the overall sample.

General measures of ability such as the number of years of education and the number of years of work experience are investigated and clearly a substantial proportion (75.5%) of the graduates who responded to the survey feel they have the appropriate marketing, operational and financial skills required to partake in an entrepreneurial endeavour. It should be noted that as graduates mature, confidence in their business skills increases as indicated by 84% of respondents - $C_A P_2$ (see Table 7.23).

H₅ Graduates' ability to initiate and develop new ventures is affected positively by parental role-models.

The influence of self-employed parents was considered a key triggering factor for graduates who enter business ownership. The results indicate that a statistically significant difference occurs between the employment status of graduate entrepreneurs and graduate non-entrepreneurs when H₅ is tested. Overall 65.5% (n=19) of graduate entrepreneurs report a self-employed father and 27.6% (n=8) a self-employed mother, compared with the non-entrepreneur group who report 45.1% (n=121) with a self-employed father and 15.8% (n=42) with a self-employed mother. Parents as role-models affecting career preferences have been extensively studied (Palmer and Cochran, 1988; Robinson and Hunt, 1992). Factors such as parents' occupation, social status and the relationship with parents have been found to be determinants of entrepreneurship. The findings of this study suggest this proposition is true.

H₆ As graduates mature, predisposition towards, and incidence of, entrepreneurship increase.

To test the above hypothesis a longitudinal study was conducted. The results reported in chapter seven and chapter eight suggest this hypothesis is true. The most important trend emerging from the longitudinal study is, that as graduates mature, the proportion entering business ownership increases. Other factors such as ownership of part-time businesses, incidence of

graduates actively seeking business opportunities and employment in small companies also increase over time in this study. Though not statistically different, the variables tested indicate that as graduates mature, their predisposition towards entrepreneurship increases.

10.2.2 The Qualitative Research

A primary purpose of this study was to explore the relationship between entrepreneurship education and new venture formation. Overall, the case study interview findings provide preliminary support for the hypothesis proposed. The tentative results, to some extent, support the contention that entrepreneurship education can influence and assist graduate entrepreneurship. The study reveals that for the majority of entrepreneurs interviewed, their exposure to the concepts and practice of entrepreneurship, at the undergraduate level was one of the key influences on their decision to enter business ownership. The findings also reveal that the non-graduate entrepreneurs interviewed who were not exposed to entrepreneurship education before the start-up stage of their enterprises were not convinced that entrepreneurs needed an entrepreneurship education to acquire the impetus to start a business. It can be concluded that entrepreneurship education is viewed in a very positive light by those entrepreneurs who have been exposed to it prior to start-up and it is considered an unimportant factor for those entrepreneurs who have not experienced it. The study further reveals that all the non-graduate entrepreneurs participated in various development programmes after their businesses were launched.

In order to gain a better understanding of the entrepreneur and the entrepreneurial process, an attempt to consolidate the ideas of Miner (1997) was made. The in-depth interviews reveal that different types of entrepreneurs exist. This contention is supported in the literature. Typology theory itself was set forth by Smith (1967) who focused on the types of firms set up by two types of entrepreneurs; the craftsman and the opportunist. Birch (1987) posited two types; the 'income substitutor' and the 'builder'. Chell and Haworth (1992) identified the 'prototypical' and the 'quasi-entrepreneur' and Drucker (1974) identified the managerial type of entrepreneur.

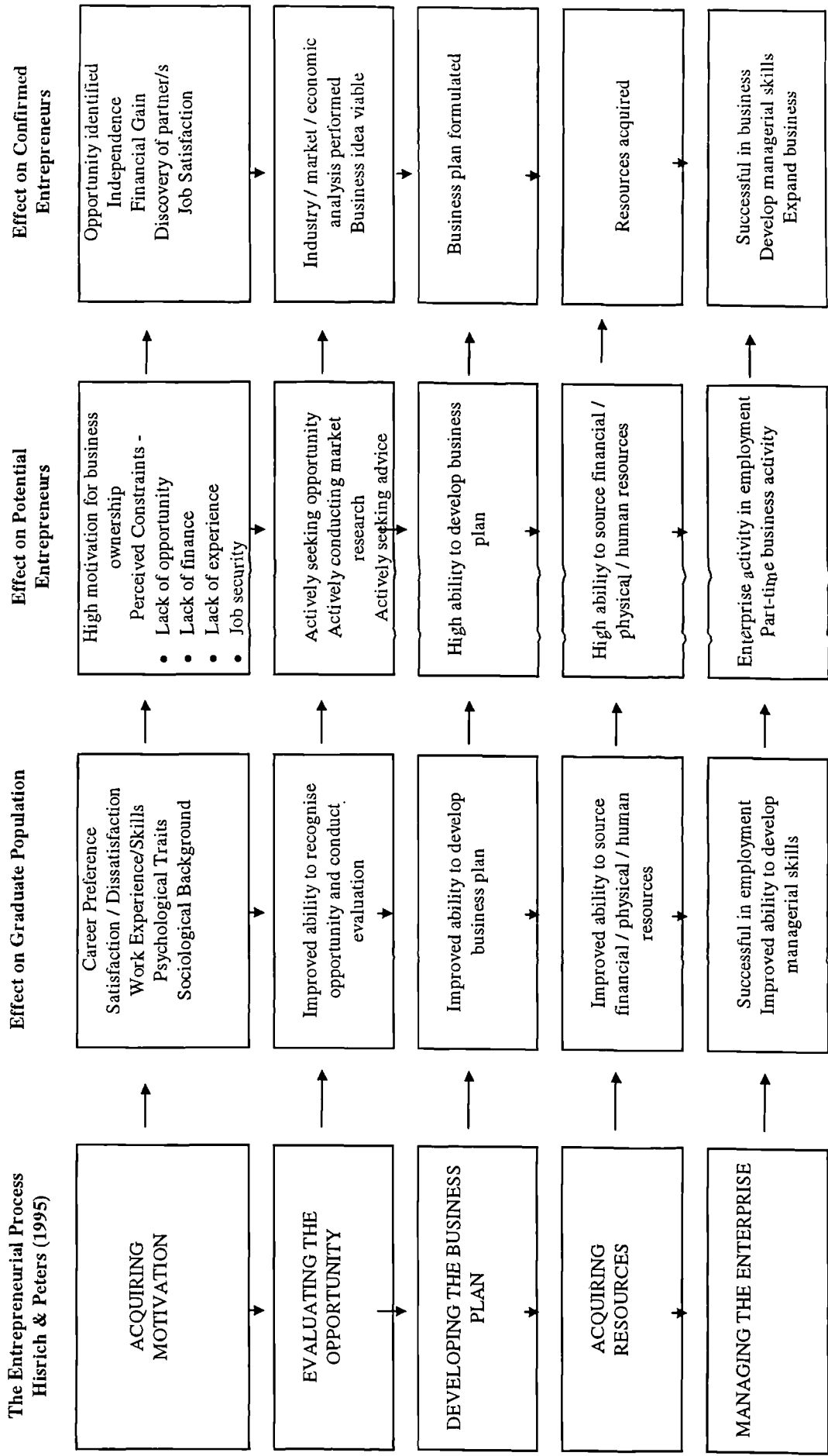
The finding of the qualitative research (of which 8 cases are discussed in depth in chapter nine) support, to a great extent, Miner's proposed four-way typology of successful entrepreneurs; personal achievers, real managers, expert idea generators and supersalespeople type of entrepreneurs, each with their distinctive traits and characteristics. From the results of the in-depth interviews it is clear that the various theories examined in the literature review (Collins, Moore and Unwalla, 1964; McClelland, 1961; Kets de Vries, 1977; Brockhaus, 1982; Lessem, 1986; Swanson and Webster, 1992) have their merits in attempting to evaluate the concept of the entrepreneur and entrepreneurship. Alone, none of the theories provide a definitive concept of the entrepreneur. When analysed in conjunction with one another, a more developed profile emerges of the various typologies that exist.

10.3 A PROPOSED THEORY OF HIGHER LEVEL ENTREPRENEURSHIP EDUCATION

In order to further an understanding of the entrepreneurial process and the effect of higher level entrepreneurship education on a graduate population, a theory of higher level entrepreneurship education is proposed. This theory, presented in diagrammatic form (Figure 10.1) integrates the research findings of this study with insights from other researchers on entrepreneurship and entrepreneurship education. The theory considers entrepreneurship education and its relationship to the entrepreneurial process model.

Hisrich and Peters (1995) contend that the decision to start a business is best considered in light of an understanding of the entrepreneurial process. The actual process itself involves five distinct phases; 1) acquiring motivation, 2) evaluating the opportunity, 3) developing the business plan, 4) acquiring the resources, 5) managing the enterprise. Each of these phases proceed progressively but work in one phase will overlap with work being done in another phase. Each step is closely related to the others. The theory proposed (Figure 10.1) outlines the impact of entrepreneurship education on the graduate population, the potential entrepreneur and the confirmed entrepreneur at each step of the entrepreneurial process.

Figure 10.1: A Theory of Higher Level Entrepreneurship Education



10.3.1 Acquiring Motivation

The research results seem to indicate that, for the vast majority of the graduate population, participating in an entrepreneurship initiative at the undergraduate level is a positive learning experience. This type of education, it appears, has many beneficial effects (McMullan and Long, 1987). It improves knowledge and understanding of the entrepreneur and the birth and development of enterprises (Kuratko and Hodgetts, 1982). It enables individuals to assess their own entrepreneurial abilities. The practical nature of the course(s) assists in skill development and conceptual learning (Guskin, 1994). The research shows that the career path a graduate selects, is mainly influenced by college degree and career preference. The vast majority will seek a career in employment (Rosa and McAlpine, 1991).

The longitudinal nature of the research reveals that for potential and confirmed entrepreneurs, the motivation to start a business is influenced by several factors (Scott and Twomey, 1988). The key influences the research identifies are, parental examples and role models, personality factors and work experience (Scott and Twomey, 1988). Identification of a business opportunity and the entrepreneurship course taken while at college are also seen as key triggering influences for those graduates who started businesses. A high motivation to enter business ownership exists among aspiring entrepreneurs. Perceived constraints are lack of opportunity, lack of finance, lack of experience and present job security. For confirmed entrepreneurs, independence, ambition, financial gain, the challenge, to be in

control of one's life, discovery of a partner/s and availability of finance are additional factors identified. Dissatisfaction, frustration with previous employment are other contributing factors to graduates' decision to become entrepreneurs (Shapero, 1975). The research indicates that entrepreneurship develops when it is perceived as the best career alternative. It involves background, personal and situational circumstances (Huuskonen, 1993).

10.3.2 Evaluating the Opportunity

The research reveals that business ideas result from an individual being alert to possibilities in the marketplace and from establishing networks and mechanisms to source potential opportunities (Timmons et al. 1990). The findings show that graduate business opportunities are mainly identified through research work or while working on other projects, through new market niche demands, through work experience or by developing a talent or skill graduates possess (Hisrich and Peters, 1995). The research indicates that an entrepreneurship course/s improves graduates' ability to conceptualise and recognise potential business possibilities. Evaluating the opportunity is the most critical element of the entrepreneurial process. Graduates, it seems, possess the capabilities and skills to assess the viability of an opportunity, its real and perceived value, its risks and returns and its competitive advantage (Hills, 1988).

Aspiring or potential entrepreneurs view the possibility of starting and operating their own business a viable alternative to being employed in an established organisation (Jackson and Vitberg, 1987). Many actively seek opportunities, conduct market research and look for advice. The longitudinal research indicates that graduates that become entrepreneurs will often work for someone else without anticipating an entrepreneurial career as a major life goal (Ronstadt, 1985). For confirmed entrepreneurs the business idea is thoroughly evaluated in terms of industry, market and economic analysis and consequently deemed viable. In many instances the business idea is also evaluated externally by development agencies and receives government approval and funding to assist it through the initial and growth stages of development. The findings also reveal that graduate entrepreneurs have the advantage of having their first experience of the idea evaluation process when they develop the business idea during their entrepreneurship programme at college. This experience for the confirmed entrepreneur, the research shows, is a major source of learning.

10.3.3 Developing the Business Plan

A good business plan must be developed in order to exploit the opportunity defined. This is the phase of the entrepreneurial process where the entrepreneur integrates, into written format, all the relevant external and internal elements involved in starting a new venture (Bygrave, 1994). The research reveals that all the respondents to the study were involved in the preparation of a business plan for a manufacturing or internationally-traded

service idea. Formulation of the document, to a great extent, involved teams of three/four students, often multi-disciplinary in nature. For the graduate population this endeavour, it appears, is viewed in a very positive light. The findings reveal that the benefits of this type of an entrepreneurial exercise, where an idea is brought from concept to start-up, are substantial. Individuals develop skills in brain-storming techniques, market research methods, business planning, team-building, networking etc. (Kuratko and Hodgetts, 1992). For the potential and confirmed entrepreneurs the process of business planning for a new venture idea is actively pursued by the former or has been completed by the latter. The research shows that confirmed graduate entrepreneurs prepare their own business plans and are quite familiar with the component parts of this integrated document.

10.3.4 Acquiring the Resources

The fourth stage of the entrepreneurial process is acquiring the resources needed to start the venture. This includes financial, physical and human resources. The study suggests that entrepreneurship education assists the graduate population to gain a better knowledge and understanding of how resources can be identified, assessed and acquired. It is important to understand the various sources of capital available to new ventures (Hisrich and Peters, 1995). Graduates acquire an improved ability to source items such as plant, equipment, premises and personnel such as staff, suppliers and customers. The research identifies that potential entrepreneurs are seeking information and advice on sources of funding, market research data

and potential customers and clients (Webb et al. 1982). For the confirmed entrepreneur, the findings indicate many seek bank loans, government grants and equity through a partner/s and acquire the resources to commence business through seeking advice from professionals, making contacts and developing networks (O'Kane, 1995).

10.3.5 Managing the Enterprise

Highly developed management capabilities are not always needed during the initial stages of an entrepreneurial small business. However, as the firm expands and reaches the rapid growth stage, management talents become crucial (De Carlo and Lyons, 1979). This study suggests that entrepreneurship education improves graduates' abilities to develop managerial skills. Education in entrepreneurship covers the entire scope of business administration, marketing, finance, operations and management. Graduates, whether successful in employment or successful in their own business, report that entrepreneurship education, which takes a broad, integrative and rational approach to business is, to a great extent, beneficial to those who aspire to be managers and top executives, as well as entrepreneurs (McMullan and Long, 1987).

The research indicates that a high proportion of graduates in employment are involved in enterprise activity in the workplace, activities such as new product development, market opportunity identification, research and development (Kanter, 1983). The study also suggests that a number of aspiring or

potential entrepreneurs are running part-time business activities. Confirmed entrepreneurs, the research shows, make adjustments in company structure and key personnel as the company grows (Boyle and Desai, 1991). The future career plans of the majority of entrepreneurs is to expand their businesses according to this study.

10.4 CONCLUSIONS

This thesis is concerned with the influence of entrepreneurship education in developing graduate entrepreneurs. The study is an evaluation of the impact of enterprise programmes and initiatives introduced during higher level education. *This evaluation is a process whereby relevant data was collected from a sample of the graduate population and transformed into information to assist educators in decision-making and to improve educational practices.* This evaluation sheds light on the knowledge and qualities learned by those exposed to an entrepreneurship education. The findings suggest that entrepreneurship is to some extent a function of factors which can be influenced through education.

This research represents a step towards understanding the impact and productivity of enterprise initiatives and courses taken at the undergraduate level. Sexton and Bowman-Upton (1988) contend that the effectiveness of an entrepreneurship course lies in the number of graduates that participate in an entrepreneurial endeavour and this determination of effectiveness lies in a longitudinal study. The study shows that although the majority of the

respondents to date have chosen a career in employment, there is evidence that the enterprise initiative taken by the graduates surveyed, had an affect on the graduates' subsequent career aspirations, and for over a third of the sample, influenced in some way their career decision.

Overall, the study lends support to the argument that entrepreneurship can be taught. The evidence of this research shows that initiatives like the Forbairt Student Enterprise Award are a powerful mechanism for developing entrepreneurial skills amongst graduates. It is clear, that as graduates enter the workplace, whether self-employed or working for others, they develop a deep appreciation for the need for an education that takes a broad, integrative and rational approach to business and business start-ups. The research indicates that graduates have an important role to play in the small firm sector. This role is clearly of an entrepreneurial nature with graduates creating their own business and small firms employing graduates to develop new innovative products and processes.

The evidence of this research shows that an entrepreneurship education provides the necessary skills required both for working in small business and for encouraging graduates to start their own enterprises on leaving higher education. In addition, it appears that the high proportion of venture start-ups amongst graduates compared to the national norm is, at least, partly explained by the education process. The findings also suggest that multiple integrated entrepreneurship programmes result in higher levels of start-ups than single courses taken by students. It is interesting to note that lack of

finance, lack of experience and lack of opportunity are perceived as the three major barriers to starting a business amongst graduates. The research also appears to support the argument that those with entrepreneurial parents are more likely to choose self-employment than those without such a background.

It is believed that the evidence presented in this thesis should be sufficiently impressive to convince educators of the need to continue and expand entrepreneurship education. There is a need to build a comprehensive academic framework for entrepreneurial studies and activities as has been built up for other business subjects. Initiatives aimed at stimulating entrepreneurship should be organised on a genuinely interdisciplinary basis. The success of such programmes depends on the ability of educators to attract self-confident, imaginative, highly motivated and enterprising students.

The case study findings add further weight to the argument that entrepreneurship education is an important component and determinant of entrepreneurship. The results reveal that the entrepreneurship course taken by the graduates who attended college was one of the key influences on their motivation and decision to enter business ownership. It can also be concluded that the knowledge and skills acquired from the programme assisted them to a considerable degree in the setting up, development and growth of their businesses. On the other hand, the qualitative research reveals that for those entrepreneurs not exposed to entrepreneurship education, this factor was considered unimportant in their motivation and decision to start their own business.

The resolve to carry out the particular research described in this thesis evolved from a belief that entrepreneurship initiatives and programmes introduced during higher level education stimulate entrepreneurship. The tentative evidence from this study suggests that this hypothesis is well-founded. The overall pattern emerging from the results indicate that for a large proportion of graduates who are exposed to entrepreneurship concepts and to the practical experience of preparing a business plan for a start-up venture, entrepreneurial intentions and a predisposition towards entrepreneurship exists. It appears from the findings presented in this study that, behaviourally and attitudinally, individuals are encouraged to undertake and enlarge business ideas as a result of a course in entrepreneurship. Kruegar and Carsrud (1993) argue that intentions are the best predictor of planned behaviour. For those graduates in employment who aspire to setting up their own business, it must be recognised that they are in the early stages of their careers and although they preclude business ownership today, they may well be the entrepreneurs of tomorrow.

10.5 IMPLICATIONS OF THE RESEARCH

The results presented in this study have both theoretical and applied implications. Drawing on past research on entrepreneurship, a conceptual model (Figure 5.1) of graduate venture creation was developed. This model hypothesises that the decision to initiate a new venture is a function of the interactions among a number of factors, including entrepreneurship

education, the individual's motivation, psychological and sociological influences, career preference and situational factors. This model assists in our understanding of the new venture creation process.

The longitudinal study approach taken in this thesis, that is, tracking a cohort of graduates over an extended period, is one of the first attempts, as far as the author is aware, to build and advance entrepreneurship education theory. The need for research on the impact of entrepreneurship education is well documented. The proposed theory of higher level entrepreneurship education and the approach taken in this study is valuable, as it shows that it is one of the possible ways to overcome the gap that exists in the literature.

Another important theoretical implication of this study is that the old argument of whether entrepreneurs are born or made may be nearer to being answered. The findings, to some extent, support the theory that entrepreneurs are made. It appears that creating an awareness of the enterprising process and developing and transferring knowledge about business formation can stimulate graduate entrepreneurship.

This research is an exploratory study and clearly the question must be asked, do "entrepreneurial students" self select the entrepreneurship options and programmes while at college? Are entrepreneurial attributes the *cause* of a favourable disposition towards these courses? On the other hand, can entrepreneurship really be taught? Is graduate entrepreneurial activity the *effect* or result of these programmes. Given that courses in entrepreneurship

are more likely to attract students favourably predisposed towards the topic, the findings in this study suggest that entrepreneurship courses do little to discourage these favourable attitudes and, in fact, probably encourage the individuals' commitment to new venture creation.

On the practical side, this study has implications for education in higher level institutions. Entrepreneurship education should benefit from a better understanding of students' motivations and intentions and how the "learning by doing" approach to enterprise education results in high achievement motivation and a high propensity towards entrepreneurship. Because of rapid technological change and increasing global competition, the indications from the research conducted in this study are, that it is important to foster the spirit of entrepreneurship that is necessary for the continued competitiveness, success and prosperity of society. This can be done through the education system. Entrepreneurs create and develop enterprises thus making a valuable contribution to the creation of jobs. Enlarging the supply of entrepreneurs can provide the impetus needed to establish a dynamic pattern of employment generation and a more vigorous process of development in countries like Ireland. To support the emergence of new entrepreneurs an appropriate enabling environment and educational and training programmes are essential to motivate them and help them launch and develop their business ventures.

10.5.1 Recommendations

In order to increase the future supply of highly qualified entrepreneurs, a number of specific recommendations are made;

- There is a need to increase the level of awareness and develop an insight into entrepreneurship and the benefits of business ownership within the education process. Educators can assist this process through helping empower potential entrepreneurs to enable them to seize opportunities when the environment presents them.
- The education system has a major role to play in presenting entrepreneurship as a viable career option. The career aspirations of students need to be influenced to explore the possibility of creating, rather than seeking, employment as graduates gain experience and maturity.
- The option of an enterprise skills development programme, where students are introduced to the concepts of entrepreneurship and the practical experience of developing a business plan, should be available to every undergraduate student irrespective of discipline.
- Curricula developed for entrepreneurship should emphasise the processes of entrepreneurial behaviour, rather than the act of entrepreneurship. Prime emphasis should be placed on the creative process, the innovation process, the decision process and the process of individual and interpersonal behaviour.
- Students can be helped to shape and shift their career aspirations through contact and work with the small business sector. Role model exposure to entrepreneurs and programmes to assist would-be entrepreneurs' transition to self-employment are other approaches to be considered.

- It is evident from this study that the annual Forbairt Student Enterprise Award has had a significant impact on student aspirations towards, and in many cases decision, to become, entrepreneurs. Forbairt should maintain and if possible expand the promotion of this scheme throughout the universities and colleges of higher education in Ireland. Consideration should be given to an annual Forbairt post-graduate award to encourage participation of the many students taking Graduate Diploma's and Masters degrees in business, computers, engineering and entrepreneurship.

Developing a positive psychological predisposition towards entrepreneurship through education seems to constitute a key *determinant of the intention* to become an entrepreneur.

10.5.2 Limitations of the Research

Due to the exploratory nature of this study, there are limitations and weaknesses within the research conducted. As a result of the diversity of concepts and theories within the field of entrepreneurship, any model proposed to study the determinants of entrepreneurial behaviour will not comprehensively cover all the issues raised by the different arguments. Entrepreneurship education is the dimension under investigation in this study. Other criteria such as personality traits, behavioural, sociological and economic factors or a combination of these aspects could have been more closely examined as determinants of entrepreneurial endeavour.

Nonetheless, the findings presented in this thesis appear to support the hypothesised relationship between entrepreneurial education and graduate entrepreneurship. However, as with most research designs, it is important to be aware of limitations when interpreting results. The decision to include a quantitative research method was made as it was felt that this was the most appropriate way to gather the information to achieve the objectives of this study. However, quantitative data analysis techniques such as regression, multiple regression and various other parametric statistical techniques were not used. It was considered that most of these techniques are built on assumptions of linear relationships and continuous variables, neither of which is generally applied to determinants of entrepreneurship. The analysis techniques used in this study were what is termed "pattern recognition" non-parametric statistical testing, an approach which can be considered subjective. The qualitative research conducted provided an opportunity to investigate the issue of entrepreneurship in more depth. However, this approach is not without its limitations, such as lack of rigour, little basis for scientific generalisation and the generation of significant amounts of irrelevant information.

In this study, only the Irish dimension was analysed in terms of entrepreneurship education and initiatives and may be considered favoured towards achievement of national economic goals and objectives. Another limitation inherent in this study concerns the varying perceptions used by the respondents in answering the questions posed. Factors such as opinions, attitudes and perceptions are subjective and difficult to measure in a reliable

and valid manner. A further limitation placed upon this study was the response rate to the survey. While a 29 per cent response rate produced an adequate sample for statistical investigation, a higher percentage of respondents would have ensured that the data were more accurately representative of the graduate population. The results must be viewed and interpreted with this limitation in mind. Because of the time-lag since college, especially for Cohort A, it can be assumed that many graduates had changed address and were not contactable. Respondents' memory of college programmes of study would also, it can be expected, have diminished with time.

The whole question of whether aspiring or potential entrepreneurs self-select entrepreneurship courses while at college is an important consideration when assessing the results of this study. It is known that *completing an entrepreneurship course and submitting a business plan for the Forbairt annual awards is mandatory in many of the Irish university and college participants.* Clarification of whether the course taken was mandatory or elective would enable stratification of respondents, useful comparisons to be made and greater insight gained. The mandatory courses include both aspiring entrepreneurs and non-entrepreneurs. These courses present students with enough useful background information of the entrepreneurial way of life to make an intelligent decision whether to start or not to start a new business. For those students who do self-select entrepreneurship courses, these courses provide an appreciation of entrepreneurship and

gives them a channel for the development of entrepreneurial skills and the progression of their ideas.

10.5.3 Areas for Further Study

The absence of research on the results of entrepreneurship education is noticeable even though entrepreneurship education has shown considerable expansion over the past number of years. Other research on the entrepreneur and small business has expanded rapidly in parallel with the increasing recognition of the importance of the entrepreneur and small business in modern economies. However, research on entrepreneurship education has shown no comparable expansion over this period. A suggested reason is that educators, because of the pressure of time and commitments, rarely research their own activities. Assessment of the results of entrepreneurship education should be a major area for future work.

This author believes there is substantial scope for both empirical and theoretical work in the field of education for enterprise. As stated above, despite the large research focus on the issue of entrepreneurship in recent years, only a small number of studies has investigated the effect of entrepreneurship education. The research being conducted is generating more questions, and more issues are arising than answers. It seems appropriate to continue to expand theory and concept building efforts through quantitative and qualitative research methods

Additional research is needed to substantiate the relationships investigated in this study. For example, a replication of this study in five years time using the same cohorts as a sample frame is recommended. In this way, additional knowledge of entrepreneurial intentions and careers will be made available to add to the existing body of research on entrepreneurship. Further study is also needed to determine which aspects of entrepreneurship courses play the greatest role in affecting student attitudes and entrepreneurial behaviour. Factors such as instruction, motivation and awareness need investigation.

The validity and reliability of the research needs to be established by extending this study to other institutions offering programmes of study on entrepreneurship. Observation of the impact of these initiatives on graduate entrepreneurship needs to be monitored through further longitudinal studies. Such an extension would be a step towards meeting the need identified in the literature for results-oriented measures of entrepreneurship education.

The current results suggest that an important consideration in future research would be the effect of environmental and social influences such as parents, role models and education, on stimulating entrepreneurial career selection. These variables might include family experiences, educational experiences, availability of resources and business opportunity identification.

In conclusion, further research is required to develop a deeper understanding of the variety of factors that influence graduate entrepreneurship. More

detailed, intensive *research* is needed to identify causal connections between entrepreneurship education and graduate entrepreneurship.

REFERENCES AND BIBLIOGRAPHY

- Aitken, H.G.J. (1963), *The Future of Entrepreneurial Research*, *Explorations in Entrepreneurial History*, 2nd Series, 1 (1), 3-9.
- Ajzen, I. (1991), *The Theory of Planned Behaviour*, *Organisational Behaviour and Human Decision Processes*, 50, 179-211.
- Alkin, M.C. & Assoc. (1985) *A Guide for Evaluation Decision Makers*, Beverly Hills, Sage Publications.
- Ambrose, D.M. (1986), *Enterprise Development as an Academic Discipline*, in *Education for Enterprise - an Irish Perspective*, Eds. Murray, J.A. and White, A. NCEA and IDA, Dublin, March, 10-17.
- Anderson, R.D. et al. (1971) *An Analysis and Interpretation of Tasks and Competencies Required of Personnel Conducting Exemplary Research and Research-Related Activities in Education*, (Tech. Paper No. 52) Washington D.C. AERA Task Force on Research Training.
- Arensberg, C. and Kimball, S. (1968) *Family and Community in Ireland*, Harvard University Press, Cambridge, Mass.
- Atkinson, R.L., Atkinson, R.C. and Hilgard, E.R. (1983), *Introduction to Psychology*, 8th Ed., Harcourt, Brace, Jovanovich.
- Babbie, E.R. (1973), *Survey Research Methods*, Belmont, Wadsworth.
- Bannock, G. and Alback, A. (1991), *Small Business Policy in Europe*, Graham Bannock and Partners, London.
- Bandura, A. (1986), *Social Foundations of Thought and Action*, Englewood Cliffs, NJ, Prentice Hall.
- Bechard, J.P. and Toulouse, J.M. (1996), *Validation of a Didactic Model for the Analysis of Training Objectives in Entrepreneurship*, Paper presented at the 6th Global Conference on Entrepreneurship Research, Imperial College, London, July.
- Begley, T.M. and Boyd, D.P. (1986), *Psychological Characteristics Associated with Entrepreneurial Performance*, Paper presented at the Babson Entrepreneurship Research Conference, Wellesley, MA, Babson College.
- Birch, D.L. (1979), *The Job Generation Process - Full Report MIT*, Cambridge, Mass.
- Birch, D.L. (1987), *Job Creation in America: How Our Smallest Companies Put The Most People to Work*, New York, Free Press.
- Bird, B. (1988), *Implementing Entrepreneurial Ideas: The Case of Intention*, *Academy of Management Review*, 13, 442-453.
- Birley, S. and Westhead, P. (1990), *Longitudinal Analysis of Self-Employment Follow Through*, *Entrepreneurship and Regional Development*, 2 (1).
- Boberg, A.L. and Kiecker, P. (1988), *Changing Patterns of Demand; Entrepreneurship Education for Entrepreneurs*, *Frontiers of Entrepreneurship Research*, Kirchoff, G.A. et al. Eds. Wellesley, Mass, Babson College, 600-661.
- Bolton, J.E. (1971), *Report of the Committee of Inquiry on Small Firms*, CMND 4811, London, HMSO.

- Borland, C.M. (1975), Locus of Control: Need for Achievement and Entrepreneurship, Unpublished Doctoral Dissertation, University of Texas at Austin.
- Bowen, D.D. and Hisrich, R.D. (1986), The Female Entrepreneur: A Career Development Perspective, *Academy of Management Review*, 11, 393-407.
- Boyd, H.W., Westfall, R. and Stasch, S.F. (1981) *Marketing Research, Text and Cases*, Irwin.
- Boyle, R.D. and Desai, H.B. (1991), Turnaround Strategies for Small Firms, *Journal of Small Business Management*, 29 (3) 33-42.
- Brady, D.L., Long, P.R., and Slaughter, M.E. (1985), The Small Business Course: What Executives Want and What Educators Teach. *Journal of Business Education*, April, 304-309.
- Brenner, O.C., Pringle, C.D. and Greenhaus, J.H. (1991), Perceived Fulfillment of Organisational Employment versus Entrepreneurship; Work Values and Career Intentions of Business College Graduates, *Journal of Small Business Management*, 29 (3) 62-74.
- Brockhaus, R.H. and Nord, W.R. (1979), An Exploration of Factors Affecting the Entrepreneur: Personal Characteristics vs Environmental Conditions, Proceedings of the Annual Meeting of the Academy of Management.
- Brockhaus, R.H. (1980), Risktaking Propensity of Entrepreneurs, *Academy of Management Journal* 23(3), 509-520.
- Brockhaus, R.H. (1980), "Psychological and Environmental Factors which Distinguish the Successful from the Unsuccessful Entrepreneur: A Longitudinal Study" Proceedings of the Fortieth Annual Meeting of the Academy of Management, August, pp. 368-372.
- Brockhaus, R.H. (1982), The Psychology of the Entrepreneur, in Kent, C.A. Sexton, D.L. and Vesper, K.H. Eds, *Encyclopaedia of Entrepreneurship*, Englewood Cliffs, 25-45.
- Brockhaus, R.H. and Horowitz, P.S. (1986), The Psychology of the Entrepreneur, in *The Art and Science of Entrepreneurship*, Sexton, D.L. and Smilor, R.W. Eds, Cambridge, Mass: Ballinger Publishing Company, 25-48.
- Brockhaus, R.H. (1987), Entrepreneurial Folklore, *Journal of Small Business Management*, 25, 1-6.
- Brown, R. (1990), Encouraging Enterprise; Britain's Graduate Enterprise Program, *Journal of Small Business Management*, 28 (4), 71-77.
- Bygrave, W.D. (1994), *The Portable MBA in Entrepreneurship*, John Wiley and Sons, New York.
- Campbell, D.T. (1984) Can we be Scientific in Applied Social Science? *Evaluation Studies Review Annual*, Vol. 9, Beverly Hills, Sage Publications.
- Campbell, D.T. and Stanley, J.C. (1963) Experimental and Quasi-Experimental Designs for Research and Teaching, in N.L. Gage (Ed.) *Handbook of Research on Teaching*, Chicago, Rand McNally.
- Cantillon, R. (1755), *Essai sur la Nature de Commerce en General*, translated by Higgs, H. (1931), Macmillan, London.
- Carland, J.W. (1982), Entrepreneurship in a Small Business Setting: An Exploratory Study, Unpublished Dissertation, University of Georgia.

- Carland, J.W., Hoy, F., Boyton, W. and Carland, J. (1984), Differentiating Entrepreneurs from Small Business Owners: A Conceptualisation, *Academy of Management Review*, 9 (2), 345-359.
- Carland, J.W., Hoy, F. and Carland, W. (1988), Who is an Entrepreneur? Is a Question Worth Asking, *American Journal of Small Business*, Spring 33-39.
- Carr, P. (1997) "Understanding Enterprise Culture, Faisneis, NCEA News Letter 10 (3).
- Carson, D., Cromie, S., McGowan, P. and Hill, J. (1995) *Marketing and Entrepreneurship in SMEs, An Innovative Approach*. Prentice Hall.
- Carsrud, A.L., Olm, K. and Eddy, G. (1986), Entrepreneurship: Research in Quest for a Paradigm, In Sexton, D. and Smilor, R. Eds. *The Art and Science of Entrepreneurship*, Cambridge, MA, Ballinger.
- Carsrud, A.L. (1991), Entrepreneurship and Enterprise Formation: A Brief Perspective on the Infrastructure in Europe, *Entrepreneurship Theory and Practice* 15 (3), 69-75.
- Casson, M.C. (1982), *The Entrepreneur: An Economic Theory*, Martin Robertson, Oxford.
- Chandler, A.D. and Redlich, F. (1964), Recent Developments in American Business Administration and their Conceptualisation, *Business History Review*, XXXV, 1-27.
- Chandler, A.D., (1977), *The Visible Hand; The Managerial Revolution in American Business*, Belknap Press of Harvard, University Press, Cambridge, Mass.
- Charting Our Education Future (1995) White Paper on Education, Government Publications, Dublin.
- Chickering, A.W. and Gamson, Z. (1991), Seven Principles for Good Practices in Undergraduate Education.
- Chell, E. (1985) , The Entrepreneurial Personality: A Few Ghosts Laid to Rest, *International Small Business Journal*, 3(3), 43-54.
- Chell, E. and Haworth, J. (1992) A Typology of Business Owners and Their Orientations Towards Growth, in Caley, K. et al. (Eds), *Small Enterprise Development Policy and Practice in Action*, London, Chapman.
- Churchill, N. and Lewis, C. (1983), The Five Stages of Small Business Growth, *Harvard Business Review*, May-June 1983, 30-50.
- Clouse, V.G.H. (1990), A Controlled Experiment Relating Entrepreneurial Education to Student Start-up Decisions, *Journal of Small Business Management*, 28 (2), 45-53.
- Cole, A.H. (1959), *Business Enterprise in its Social Setting*, Harvard University Press, Cambridge, Mass.
- Cole, A.H. (1969), Definitions of Entrepreneurship, in. Komives, J.L and Bostrom, K.A., Eds, *Seminar in the Study of Enterprise*, Milwaukee, Centre for Venture Management, 10-22.
- Collins, O.F., Moore, D.G. and Umwalla, D.B. (1964), *The Enterprising Man*, Michigan State, University Press.
- Collins, O.F. and Moore, D.G. (1970), *The Organisation Makers*, Appleton Century Crofts.
- Colton, R.M. and Udell, G.G. (1976), The National Science Foundation Innovation Centres - An Experiment in Training Potential Entrepreneurs.

- Conger, J.A. (1989), Leadership; The Art of Empowering Others, *The Academy of Management, Executive*, 3(1), 17-24.
- Conniffe, D. and Kennedy, K.A. (1984), Eds. *Employment and Unemployment Policy for Ireland*, Economic and Social Research Institute, Dublin.
- Cook, T.D. and Reichart, C.S. (1979) *Qualitative and Quantitative Methods in Evaluation Research*, Beverly Hills, Sage Publications.
- Cooley, W.W. and Lohnes, P.R. (1976) *Evaluation Research in Education*, Irvington Publishers Inc., New York.
- Cooper, A.C. (1971), Spin-offs and Technical Entrepreneurship; *IEEE Transactions of Engineering Management, EM* 18, (1), February.
- Cooper, A.C. (1973), Spin-offs and Technical Entrepreneurship; What Do We Know? *Research and Development Management*, 3(2), 50-65.
- Cooper, A.C. (1980), Entrepreneurship; Small Business Interface, in Proceedings of the Conference of Research and Education in Entrepreneurship; Baylor University, March.
- Cooper, A.C. and Dunkelberg, W. (1987), Entrepreneurial Research, Old Questions, New Answers and Methodological Issues, *American Journal of Small Business*, 11 (3).
- Cornwall, J.R. and Perlman, B. (1990), *Organisational Entrepreneurship*, Irwin.
- Cotton, J. (1990), Enterprise Education Experience, *Education and Training*, 33 (4), 6-13.
- Cromie, S. and Johns, S. (1983), Irish Entrepreneurs: Some Personal Characteristics, *Journal of Occupational Behaviour*, 4, 317-324.
- Cromie, S. and Hayes, J. (1991), Business Ownership as a Means of Overcoming Job Dissatisfaction, *Personnel Review*, 20(1), 19-24.
- Cronbach, L.J. and Suppes, P. (1969) *Research for Tomorrow's Schools: Disciplined Inquiry for Education*, New York, Macmillan.
- Cronbach, L.J. (1982) *Designing Evaluations of Educational and Social Programs*, San Francisco, Jossey-Bass.
- Crotty, R. (1986), *Ireland in Crisis: A Study in Capitalist Colonial Underdevelopment*, Dingle, Brandon Books.
- Culliton, J. (1992), A Time for Change: Industrial Policy in the 1990s, Report of the Industrial Policy Review Group, Dublin, The Stationery Office.
- Cunningham, J.B. and Lischeron, J. (1991), *Journal of Small Business Management*, 29 (1), 45-61.
- Curle, A. (1970) *Educational Strategy for Developing Societies: A Study of Educational and Social Factors in Relation to Economic Growth*, Tavistock Publications.
- Curran, J. (1988), Training and Research Strategies for Small Firms, *Journal of General Management*, 13 (3), 24-37.
- Daly, M., Campell, M., Robson, G. and Gallagher, C. (1991), Job Creation 1987-89; Preliminary Analysis by Sector, *Employment Gazette*, August, 387-92.
- De Carlo, J.F. and Lyons, P.R. (1979), Toward a Contingency Theory of Entrepreneurship, *Journal of Small Business Management*, 17 (10), 22-29.

De Carlo, J.F. and Lyons, P.R. (1981), Curriculum Determinants for Entrepreneurship Training, in *Entrepreneurship Education*, Eds. Sexton, D. and Van Auken, P., WACO, Tx. Baylor, University Press.

Dewey, J. (1916) *Democracy and Education*, New York, Collier-Macmillan.

Dineen, D.A. and Banks, J. (1991), Enterprise Training - Buzz-Word or Reality, Petra Annual Report.

Donkels, R. and Dupont, P. (1987), New Entrepreneurship in Belgium, Paper presented at the Workshop on Recent Research on Entrepreneurship in Europe, EIASM, Brussels, May.

Drucker, P.F. (1974) *Management Tasks, Responsibilities, Practices*, New York, Harper and Row.

Drucker, P. (1985), *Innovation and Entrepreneurship*, Heinemann, London.

Drudy, P.J. (1995), From Protectionism to Enterprise: A Review of Irish Industrial Policy, in *Enterprise and the Irish Economy*, Ed. Burke A.E., Oak Tree Press, Dublin, 1995.

Duffy, P.B. and Stevenson, H.H. (1984), Entrepreneurship and Self-Employment: Understanding the Distinctions, *Frontiers Of Entrepreneurship Research*, 461-477.

Dyer, W.G. (1994), Toward A Theory Of Entrepreneurial Careers, *Entrepreneurship Theory and Practice*, 18 (4), 7-21.

Easterby-Smith, M., Thorpe, R. and Low, A. (1991), *Management Research: An Introduction*, Sage, London.

Ellis, R.J. and Taylor, N.T. (1988), Success and Failure in Internal Venture Strategy; An Exploration Study, *Frontiers of Entrepreneurship Research*, Kirchoff, B.A. et al., Eds., Wellesley, Mass, Babson College.

European Observatory for SMEs (1993), *First Annual Report*, Brussels, European Observatory for SMEs.

Faulconer, J.E. and Williams, R.N. (1985), Temporality in Human Action; An Alternative to Positivism and Historicism, *American Psychologist*, 40, 1179-1188.

Filstead, W.J. (1979) Qualitative Methods: A Needed Perspective in Evaluation Research, in Cook, T.D. & Reichardt, *Qualitative and Quantitative Methods in Evaluation Research*, Beverly Hills, Sage Publications.

Flamholz, E.G. (1986), *How to Make the Transition from an Entrepreneurship to a Professionally Managed Firm*, San Francisco, Jossey Bass.

Fleming, P. and O'Conneide, B. (1990) Shaping Entrepreneurial Thinking in a Resurgent Europe, USASBE Conference Paper, Orlando, October.

Fleming, P. (1992) The Role of a Structured Intervention in Shaping Graduate Entrepreneurship, Unpublished Thesis, University of Limerick.

Fleming, P. (1996), Entrepreneurship Education in Ireland: A Longitudinal Survey, *Academy of Entrepreneurship Journal*, Vol. 2, No. 1, pp. 95-119.

Fleming, W.J. (1979), The Cultural Determinants of Entrepreneurship and Economic Development: A Case Study of Mendoza Province 1861-1914, *Journal of Economic History*, XXXIX (1) March.

- Gage, N.L. and Berliner, D.C. (1984), *Educational Psychology*, Boston, Mass., Houghton-Mifflin.
- Galbraith, (1967), *The New Industrial State*, Houghton-Mifflin.
- Garavan, T., Costine, P. and Heraty, N. (1995), *Training and Development in Ireland, Context, Policy and Practice*, Oak Tree Press.
- Garfield, C. (1986) *Peak Performers: The New Heroes of American Business*, New York, Avon Books.
- Gartner, W.B. (1985), "A Framework for Describing the Phenomenon of New Venture Creation", *Academy of Management Review*, 10, 696-706.
- Gartner, W.B. (1989), Who is an Entrepreneur? Is the Wrong Question *Entrepreneurship Theory and Practice*, (13) 3, 47-67.
- Gartner, W.B. (1990), What Are We Talking About When We Talk About Entrepreneurship? *Journal of Business Venturing*, 5, 15-28.
- Gartner, W.B., Shaver, K.G., Gatewood, E. and Katz, J.A. (1994), Finding the Entrepreneur in Entrepreneurship, *Entrepreneurship Theory and Practice*, Spring 5-8, 5-9.
- Gasse, Y. (1990), An Experience in Training in the Area of Entrepreneurship and Starting a Business in Quebec; the Project "Become an Entrepreneur" in *New Findings and Perspectives in Entrepreneurship*, Eds., Donckels, R. and Miettinen, A. Billing and Son, Worcester.
- Gergen, K.J. (1985), The Social Constructionist Movement in Modern Psychology, *American Psychologist*, 40, 266-275.
- Ghiselli, E.E. (1971) *Explorations in Management Talent*, Pacific palisades, CA, Goodyear.
- Gibb, A.A. and Ritchie, J. (1982), Understanding the Process of Starting Small Businesses, *European Small Business Journal*, 1 (1), 26-45.
- Gibb, A.A. (1987), Enterprise Culture - Its Meaning and Implications for Education and Training, *Journal of European Industrial Training*, 11 (2), 3-38.
- Gibb, A.A. (1993), The Enterprise Culture and Education: Understanding Enterprise Education and its Links with Small Business Goals, *International Small Business Journal*, 11(3), 11-34.
- Gnyawali, D.R. and Fogel, D.S. (1994), Environments for Entrepreneurship Development; Key Dimensions and Research Implications, *Entrepreneurship Theory and Practice*, Summer, 43-62.
- Grant, B. (1986), Capability, Enterprise and Entrepreneurship, *The Vocational Aspect of Education*, 38(100).
- Greenberger, D.B. and Sexton, D.L. (1988), An Interactive Model of New Venture Initiation, *Journal of Small Business Management*, 26 (3), 1-7.
- Greenfield, S. and Strickon, A. (1986), *Entrepreneurship and Social Change*, New York, University Press of America.
- Greenwood, E. (1957), Attitudes of a Profession, *Social Work*, 2 (2), 45-55.
- Guba, E.G. and Lincoln, Y.S. (1981) *Effective Evaluation*, San Francisco, Jossey-Bass.

- Guba, E. (1985), The Context of Emergent Paradigm Research, *Organisation Theory and Inquiry: The Paradigm Revolution*, Ed. Lincoln, V., Sage, Beverly Hills.
- Gundy, L.K. (1989), Creating Catalysts, Entrepreneurs and Visionaries, Our Focus on Small Organisational Settings in *Management Education*. Proceedings of the Mid West Academy of Management, Columbus, Ohio, 217-221.
- Guskin, A.E. (1994), Reducing Student Costs and Enhancing Student Learning, Part 1, Restructuring the Administration, *Change*, July/August, 23-29.
- Guskin, A.E. (1994), Reducing Student Costs and Enhancing Student Learning, Part 11, Restructuring the Role of Faculty, *Change*, September/October, 16-28.
- Hagen, E.E. (1962), *On the Theory of Social Change*, Homewood, Illinois, Irwin.
- Hall, R.H. (1968), Professionalisation and Bureaucratisation, *American Sociological Review*, 33(1).
- Harrison, R. and Hart, M. (1989), Factors Influencing New Business Formation: A Case Study of Northern Ireland, *Environment and Planning*, 15(10).
- Harwitz, K. (1977), How to Breed Entrepreneurs, *Director*, 30 (2), 62-62.
- Haskins, G. and Williams, R. (1987), *Intrapreneurship in Practice*, The Economist Intelligence Unit.
- Hawkes, M. (1981), Graduate Entrepreneurship in Ireland with Particular Reference to MBA Graduates, Unpublished Thesis, University College Dublin.
- Hebert, R.F. and Link, A.N. (1982), *The Entrepreneur, Mainstream Views and Radical Critique*, Praeger, New York.
- Herriott, R.E. and Firestone, W.A. (1983), Multisite Qualitative Policy Research, Optimizing Description and Generalizability, *Educational Research*, 12, 14-19.
- Higgins, T. (1986), Entrepreneurial Studies - An Economic Viewpoint, in *Education for Enterprise*, Eds. Murray, J.A. and White, A. NCEA, IDA, Dublin, 18-21.
- Hills, G.E. (1988), Variations in University Entrepreneurship Education: An Empirical Study of an Evolving Field, *Journal of Business Venturing*, 3 (1), 109-122.
- Hills, G.E. and Welsch, H.P. (1986), *Entrepreneurship Behavioural Intentions and Student Independence*, *Frontiers of Entrepreneurship Research*, Eds. Ronstadt, R. et al. Wellesley, Mass, Babson College.
- Hisrich, R.D. and Brush, C.G. (1986), *The Woman Entrepreneur, Starting, Financing and Managing a Successful New Business*, Lexington Books.
- Hisrich, R.D. (1988), The Entrepreneur in Northern Ireland: Characteristics, Problems and Recommendations for the Future, *Journal of Small Business Management*, 26(3).
- Hisrich, R.D. and Peters, M.P. (1995), *Entrepreneurship, Starting, Developing and Managing a New Enterprise*, Irwin.
- Hofer, C.W. and Charan, R. (1984), The Transition to Professional Management: Mission Impossible, *American Journal of Small Business*, 3, Summer.
- Hollingsworth, T.A. and Hand, H.H. (1979), *A Guide to Small Business Management*, Text and Cases, Philadelphia, W.B. Saunders, 9-10.

- Hopkins, K.D. and Stanley, J.C. (1981) *Educational and Psychological Measurement and Evaluation*, Englewood Cliffs, New York, Prentice Hall.
- House, E.R. (1976) Justice in Evaluation, In G.V. Glass (Ed.) *Evaluation Studies Review Annual*, Vol. 1, Beverly Hills, Sage Publications.
- House, E.R. (1980) *Evaluating with Validity*, Beverly Hills, Sage Publications.
- Hornaday, J.A. and Aboud, J. (1971), Characteristics of Successful Entrepreneurs, *Personnel Psychology*, 24, 141-153.
- Hornaday, J.A. and Bunker, G.S. (1970), The Nature of the Entrepreneur, *Personnel Psychology*, 23, 47-54.
- Hornaday, J.A. (1982), Research about Living Entrepreneurs, In Kent, C.A. et al, Eds., *Encyclopaedia of Entrepreneurship*, N. J., Prentice Hall.
- Hornaday, J.A. (1987), Small Business Management Types and Financial Performance, Further Evaluation of the Fillay and Aldag Instrument, Paper presented at the 1987 National Academy of Management Meeting August, New Orleans, LA.
- Hornaday, R.W. (1992), Thinking about Entrepreneurship, a Fuzzy Set Approach, *Journal of Small Business Management*, 30 (4), 12-23.
- Hoselitz, B.F. (1957), Economic Growth and Development - Non-Economic Factors in Economic Development, *American Economic Review*, 47, 28-41.
- Hull, D., Bosley, J.J. and Udell, G. (1980), Renewing the Hunt for Heffalump: Identifying Potential Entrepreneurs by Personality Characteristics, *Journal of Small Business Management*, 18 (1), 11-18.
- Huuskonen, V. (1993), The Process of Becoming an Entrepreneur: A Theoretical Framework of Factors Influencing Entrepreneurs' Start-up Decisions, in *Entrepreneurship and Business Development*, Ed. Klandt, H. Avebury.
- Jackson, T. and Vitberg, A. (1987), Career Development, Part 1: Careers and Entrepreneurship, *Personnel*, 64 (2), 12-17.
- Jacobowitz, A. and Vidler, D. (1982), Characteristics of Entrepreneurs, Implications of Vocational Guidance, *The Vocational Guidance Quarterly*, 30 (3).
- Johnson, D. (1993), Driver Behaviour and Business Outcomes: An Alternative Approach to the Psychology of the Owner-Manager, *Entrepreneurship and Regional Development*, 5, 369-383.
- Johnson, D., Pere-Verge, L. and Hanage, R. (1993), Graduate Retention and the Regional Economy, *Entrepreneurship and Regional Development*, 5, 85-97.
- Jencks, L.H. (1950), Approaches to Entrepreneurial Personality, *Explorations in Entrepreneurial History*, 111 (2), 91-99.
- Julien, P. (1989), The Entrepreneur and Economic Thought, *International Small Business Journal*, 7 (3).
- Kanter, R.M. (1983), *The Change Masters*, Simon and Schuster, New York.
- Karr, A.R. (1988), Labour Letter, *The Wall Street Journal*, 1, November.

- Katz, J.A. (1991), The Institution and Infrastructure of Entrepreneurship, *Entrepreneurship Theory and Practice*, 15 (3), 85-102.
- Keating, W. and Keane, T. (1989), Irish Industrial Structure 1979-1985, A Longitudinal Analysis, *Journal of Statistical and Social Inquiry*, Society of Ireland, 26(1), 181-234.
- Kennedy, K.A. (1995), Irish Enterprise in the 20th Century, in *Enterprise and the Irish Economy*, Ed. Burke, A.E., Oak Tree Press, Dublin 1995.
- Kets de Vries, M.F.R. (1977), The Entrepreneurial Personality: A Person at the Crossroads, *Journal of Management Studies*, Vol. 14, 1, 35-57.
- Keynes, J.M. (1936), *General Theory of Employment, Interest and Money*, Macmillan.
- Kilby, P. (1971), *Entrepreneurship and Economic Development*, Free Press, New York.
- Kirby, D.A. (1990), Management Education and Small Business Development: An Exploratory Study of Small Firms in the UK., *Journal of Small Business Management*, 28 (4), 78-87.
- Kirby, D.A. (1992), Developing Graduate Entrepreneurs: The U.K. Graduate Enterprise Programme, *Entrepreneurship, Innovation and Change*, 1 (2), 165-175.
- Kirchhoff, B.A. (1994), Entrepreneurship Economics, in *The Portable MBA in Entrepreneurship*, Bygrave, W.D., Ed., John Wiley and Sons.
- Kirzner, I.M. (1973), *Competition and Entrepreneurship*, University of Chicago Press, Chicago.
- Klein, B.H. (1977), *Dynamic Economics*, Harvard University Press.
- Klinger, E (1966), Fantasy Need Achievement as a Motivational Construct, *Psychological Bulletin*, 66, 291-308.
- Knight, F.H. (1921), *Risk Uncertainty and Profit*, Houghton Mifflin, New York.
- Kourilsky, M. (1977), The Kinder-Economy; A Case Study of Kindergarten Pupils' Acquisition of Economy Concepts, *The Elementary School Journal*, 77 (3), 182-191.
- Kruegar, Jr. N.F. and Brazeal, D.V. (1994), Entrepreneurial Potential and Potential Entrepreneurs, *Entrepreneurship Theory and Practice*, 18 (1) 91-104.
- Kruegar, N. and Carsrud, A. (1993), Entrepreneurial Intentions: Applying the Theory of Planned Behaviour, *Entrepreneurship and Regional Development*, 5, 315-330.
- Kuratko, D.F. and Hodgetts, R.M., (1992), *Entrepreneurship, A Contemporary Approach*, Harcourt Brace Jovanovich.
- Labour Force Survey (1996)*, Central Statistics Office, Dublin.
- Langan-Fox, J. and Roth, S. (1995) Achievement Motivation and Female Entrepreneurs, *Journal of Occupational and Organisational Psychology*, Vol. 68, 3, 209-218.
- Lee, J. (1989), *Ireland 1912-1985: Politics and Society*, Cambridge, Cambridge University Press.
- Leibenstein, H. (1968), Entrepreneurship and Development, *American Economic Review, Papers and Proceedings*, 58, 72-83.

- Leibenstein, H. (1979), *General X-Efficiency Theory and Economic Development*, Oxford University Press, New York.
- Lessem, R., (1986), *Enterprise Development*, Gower, Aldershot.
- Liles, R.P. (1974), *New Business Ventures and the Entrepreneur*, Homewood, 111, Irwin.
- Litvak, I.A. and Maule, G.J. (1974), *Canadian Entrepreneurship, A Study of Entrepreneurship in Small Newly Established Firms*, Ottawa, Department of Industry, Trade and Commerce.
- Loasby, B.J. (1988), *Entrepreneurship: Routines and Networks*, University of Stirling, MSc in Entrepreneurial Studies.
- Luthans, F., Hodgetts, R.M. and Rosenkrantz, (1988), *Real Managers*, Cambridge, MA, Ballinger.
- McClelland, D.C., Alkinson, J.W., Clark, R.A. and Lowell, L. (1953), *The Achievement Motive*, New York, Appleton Century Crofts.
- McClelland, D.C. (1961), *The Achieving Society*, Van Nostrand, Princeton, New Jersey.
- McClelland, D.C. (1965), Achievement Motivation Can be Developed, *Harvard Business Review*, Nov-Dec. 6-24.
- McClelland, D.C. (1969), Entrepreneurs are Made not Born, *Forbes*, 103 (11), 53-54.
- McClelland, D.C. (1987), Characteristics of Successful Entrepreneurs, *Journal of Creative Behaviour*, 21 (3), 219-233.
- McCluskey, M. (1992), Employment Grants and Industrial Policy, Dublin Economic Workshop Conference, October, 16-18.
- McMullan, W.E. (1985), The Economics of Entrepreneurship Education, The First International Technological, Innovation and Entrepreneurship Conference, Salt Lake City, Utah.
- McMullan, W.E. and Long, W.A. (1987), Entrepreneurship Education in the Nineties, *Journal of Business Venturing*, 2(3), 261-275.
- Macrae, N. (1976), *The Economist*.
- Maidique, M.A. (1980), Entrepreneurs, Champions and Technical Innovation, *Sloan Management Review*, 21(2), 59-76.
- Mancuso, J.R. (1975), *Entrepreneurship and Venture Management*, Englewood Cliffs, Prentice Hall.
- Marris, P. and Somerset, A. (1971), *The African Entrepreneur, A Study of Entrepreneurship and Development in Kenya*, Africana, New York.
- Marshall, A. (1920), *Principles of Economics*, Macmillan, London.
- Martin, A. (1982), Additional Aspects of Entrepreneurial History, in *Encyclopaedia of Entrepreneurship*, Kent, C.A. et al., Eds., N.J., Prentice Hall.
- Meenan, J.F. (1970), Measured Effectiveness of Client-Sponsored Consulting Projects in the Marketing Research Course, *Journal of Marketing Education*, 9, Spring, 24-30.

- Menger, C. (1871), *Deutsche Verfassungsgeschichte der Neuzeit, Grundiagen 2, Principles of Economics*, Translated by Dingwall, J. and Hoselitz, B.F., Free Press, Illinois.
- Mill, J.S. (1848), *Principles of Political Economy with Some of Their Applications to Social Philosophy*, Longmans, London.
- Miner, J.B. (1997) *A Psychological Typology of Successful Entrepreneurs*, Quorum Books, London.
- Mises, L. (1949), *Human Action, A Treatise of Economics*, Yale University Press, New Haven.
- Mitton, D. (1989), The Complete Entrepreneur, *Entrepreneurship Theory and Practice*, 13 (1), 1989.
- Morris, J.L. and Faragher, K. (1974), Achievement Drive and Creativity as Correlates of Success in Small Business, *Australian Journal of Psychology*, 26, 217-222.
- Murray, J.A. (1982), Curriculum Development for Education in Entrepreneurship, *Business Education*, Sweet and Maxwell, Autumn, 144-153.
- Murray, J.A. and White, A. (1986), *Education for Enterprise - An Irish Perspective*, NCEA and IDA, Dublin.
- Naisbitt, J. (1993) *The Global Paradox*, William Morrow and Company Inc.
- Nielsen, R.P., Peters, M.P. and Hisrich, R.D. (1985), Intrapreneurship Strategy for Internal Markets - Corporate, Non-Profit and Government Institution Cases, *Strategic Management Journal*, 6, 181-189.
- Norman, D. (1993), Things that Make us Smart: Defining Human Attributes, in *The Age of the Machine*, Mass: Addison-Wesley.
- Norris, N. (1990) *Understanding Educational Evaluation*, Kogan Page.
- O'Conneide, B. (1986), Programming, Structuring and the Development of Teaching Materials, in *Education for Enterprise*, Eds. Murray, J.A. and White, A., NCEA, IDA, Dublin, 40-42.
- O'Conneide, B. and Lankford, C. (1994), Recent Findings from a Long-term Study into Entrepreneurship, Paper presented at the Rent VIII Research in Entrepreneurship 8th Workshop, Tampere, Finland.
- O'Farrell, P. (1986), *Entrepreneurs and Industrial Change*, Irish Management Institute.
- O'Kane, B. (1995) *Starting a Business in Ireland*, Oakwood Tree Press.
- Olson, P.D. (1990), Choices for Innovation Minded Corporations, *Journal of Business Strategy*, Jan-Feb.
- Palmer, M. (1971), The Application of Psychological Testing to Entrepreneurial Potential, *California Management Review*, 13 (3), 32-38.
- Palmer, S. and Cochran, L. (1988), Parents as Agents of Career Development, *Journal of Counselling Psychology*, 35.
- Pandey, J. and Tewary, N.B. (1979), Locus of Control and Achievement Values of Entrepreneurs, *Journal of Occupational Psychology*, 52, 107-111.

- Parlett, M. and Hamilton, D. (1976) *Evaluation and Illumination: A New Approach to the Study of Innovative Progress*, in G.V. Glass (Ed.) *Evaluation Studies Review Annual*, Vol. 1, Beverly Hills, Sage Publications.
- Patell, P. and Avitt, K. (1989), *European Technological Performance: Results and Prospects*, *European Affairs*, Summer.
- Patton, M.Q. (1981) *Creative Evaluation*, Beverly Hills, Sage Publications.
- Pauline, W.L., Coffey, R.E. and Spaulding, M.E. (1982), *Entrepreneurship Research, Methods and Directions*, in Kent et al. (Eds) *Encyclopaedia of Entrepreneurship*, Englewood Cliffs, NJ, Prentice Hall.
- Perry, C. (1980), *A Small Business Model for Australian Policy Makers*, Queensland Institute of Technology, in Ray, G.H. and Hutchinson, P.J. (1983), *The Financing and Financial Control of Small Enterprise Development*, Gower, Farnborough.
- Peters, T.J. and Waterman, R.J. (1982), *In Search of Excellence*, New York, Harper and Row.
- Peters, T.J. (1987), *Thriving on Chaos*, New York, Harper and Row.
- Petrof, J.V. (1981), *Entrepreneurial Profile: A Discriminant Analysis*, *Journal of Small Business Management*, 19 (4), 13-17.
- Pinchott, G. (1985), *Intrapreneuring*, New York, Harper and Row.
- Platt, J. (1992a), *Case Study in American Methodological Thought*, *Current Sociology*, 40, 17-48.
- Plaschka, G.R. and Welsch, H.P. (1990), *Emerging Structures in Entrepreneurship Education*, *Entrepreneurship Theory and Practice*, 14 (3), 55-71.
- Porter, L.W. and McKibben, L.E. (1988), *Management Education and Development; Drift or Thrust into the 21st Century*, McGraw Hill.
- Ray, D.M. (1986), *Perceptions of Risk and New Enterprise Formation in Singapore*, *Frontiers of Entrepreneurship Research*, Wellesley, Mass., Babson College.
- Ray, D.M. (1993), *Understanding the Entrepreneur; Entrepreneurial Attitudes, Experience and Skills*, *Entrepreneurship and Regional Development*, 5 (4), 345-357.
- Reich, R.B. (1987), *The Team as Hero*, *Harvard Business Review*, May-June.
- Reynolds, P.D. (1992), *Sociology and Entrepreneurship: Concepts and Contributions*, *Entrepreneurship Theory and Practice*, 16 (2), 47-70.
- Roberts, E.B. (1991a) *High Stakes for High-Tech Entrepreneurs: Understanding Venture Capital Decision-Making*, *Sloan Management Review*, Vol. 32, 2, 9-20.
- Roberts, M. (1987), *Making the Transition from Entrepreneurial to Professional Management*, *Frontiers Of Entrepreneurship Research*, Wellesley, Mass, Babson College.
- Robinson, P. and Haynes, M. (1991), *Entrepreneurship Education in America's Major Universities*, *Entrepreneurship Theory and Practice*, Baylor University, 15 (3), 41-52.
- Robinson, P.B. and Hunt, H. K. (1992), *Entrepreneurship and Birth Order - Fact or Folklore*, *Entrepreneurship and Regional Development*, 4, 287-298.

- Ronstadt, R. (1985), The Educated Entrepreneurs: A New Era of Entrepreneurship Education is Beginning, *American Journal of Small Business*, 10 (1).
- Rosa, P. and McAlpine, A. (1991), A Career Orientation towards Enterprise, *Recent Research in Entrepreneurship*, Davies, L.G. and Gibb, A.A. Eds., Avebury, Gower.
- Rosa, P., Scott, M. and Klandt, H. (1996) *Educating Entrepreneurs in Modernising Economies*, Avebury, Ipswich Book Co., Ipswich, Suffolk.
- Rothwell, R. and Zegveld, W. (1982), *Innovation and the Small and Medium-Sized Firm*, London, Francis Pinter.
- Rothwell, R. and Zegveld, W. (1985), *Reindustrialization and Technology*, London, Longman.
- Rotter, J.B. (1966), Generalised Expectancies for Internal versus External Control of Reinforcement, *Psychological Monographs*, 80.
- Rothery, B. (1977), *Men of Enterprise*, Industrial Institute of Research and Standards, Dublin.
- Rychlak, J.F. (1981), *Introduction to Personality and Psychotherapy: A Theory Construction Approach*, 2nd Ed., Boston, Houghton Mifflin.
- Sandberg, W.R. and Gatewood, E.J. (1991), A Profile of Entrepreneurship Research Centres, Orientations, Interests, Activities and Resources, *Entrepreneurship Theory and Practice*, 15 (3), 11-24.
- Sanders, J.R. and Sonnad, S.R. (1982) Research on the Impact of Think About (Vol. I-V), Bloomington, IN: Agency for Instructional Television.
- Sandholtz, K. (1990), MBA Attitudes, *The College Edition of the National Business Employment Weekly*, Spring, 14-15.
- Sax, G. (1980) *Principles of Educational and Psychological Measurement and Evaluation*, Belmont, C.A. Wadsworth.
- Say, J.B. (1845), *A Treatise on Political Economy*, Grigg and Elliot, Philadelphia.
- Scanlon, T.J. (1986), Education for Entrepreneurship - Promoting Skills in the Classroom, in *Education for Enterprise - An Irish Perspective*, Eds. Murray, J.A. and White, A., NCEA and IDA, Dublin, 36-39.
- Schatz, S.P. (1971), Achievement and Economic Growth: A Critical Appraisal, in Kilby, P., *Entrepreneurship and Economic Development*, The Free Press, New York, 183 - 190.
- Scherer, R.T., Brodzinski, J.D. and Weibe, F.A. (1991), Examining the Relationship between Personality and Entrepreneurial Career Preference, *Entrepreneurship and Regional Development*, 3, 195-206.
- Schofield, J.W. and Anderson, K.M. (1984) Combining Quantitative and Qualitative Methods in Research on Ethnic Identity and Intergroup Relations, *Society for Research*, Los Angeles.
- Schrage, H. (1965), The R&D Entrepreneur: Profile of Success, *Harvard Business Review*, 43 (6), 56-69.
- Schumpeter, J.A. (1934), *The Theory of Economic Development*, Harvard University Press, Cambridge, Mass.
- Schumpeter, J.A. (1939), *Business Cycles; A Theoretical Historical and Statistical Analysis of the Capitalist Process*, McGraw-Hill, New York.

Science, Technology and Innovation Advisory Council (1995), *Making Knowledge Work for Us: A Strategy View of Science, Technology and Innovation in Ireland*, Dublin, Stationery Office.

Scott, M. (1980), Independence and the Flight from Large Scale: Some Sociological Factors, in the *Founding Process*, in Gibb, A.A. and Webb, T., Eds., *Policy Issues in Small Business Research*, Saxon House, Farnborough.

Scott, M.G. and Twomey, D.G. (1988), The Long-Term Supply of Entrepreneurs; Students' Career Aspirations in Relation to Entrepreneurship, *Journal of Small Business Management*, 26 (4), 5-13.

Scriven, M. (1967) The Methodology of Evaluation, in R.E. Stake (Ed.), *Curriculum Evaluation*, American Educational Research Association Monograph Series of Evaluation, No. 1, Chicago, Rand McNally.

Scriven, M. (1973) The Methodology of Evaluation, in Worthen, B.R. and Sanders, J.R. (Eds.) *Educational Evaluation, Theory and Practice*, Belmont, CA, Wadsworth, 60-104.

Selltiz, C., Jahoda, M., Deutsch, M. and Cook, S. (1974), *Research Methods in Social Relations*, Methuen & Co. Ltd., London.

Sexton, D.L. and Bowman, N.B. (1983), Comparative Entrepreneurship Characteristics of Students; Preliminary Results, *Frontiers of Entrepreneurship Research*, Hornaday, J.A. et al., Eds., Wellesley, MASS, Babson College.

Sexton, D.L. and Bowman, N.B. (1984), Entrepreneurship Education: Suggestions for Increasing Effectiveness, *Journal of Small Business Management*, 22 (2), 18-25.

Sexton, D.L. and Bowman, N. (1988), Validation of an Innovative Teaching Approach for Entrepreneurship Courses, *American Journal of Small Business*, 12 (3), 11-21.

Shapero, A. (1971), An Action Program for Entrepreneurship, Report prepared for the Ozart Regional Commission, April.

Shapero, A. (1975), The Displaced Uncomfortable Entrepreneur, *Psychology Today*, November, 83-88.

Shapero, A. and Sokol, L. (1982), The Social Dimensions of Entrepreneurship, in *Encyclopaedia of Entrepreneurship*, Kent, C.A. et al., Eds., Prentice Hall.

Shiels, T. (1977), Entrepreneurial Opportunities and Buyer Behaviour in the Irish Healthcare Industry, MBA Thesis, University College Dublin.

Silver, D. (1988), A Portrait of the Entrepreneur, *Accountancy*, February.

Smith, A. (1776), *Inquiry into the Nature and Causes of the Wealth of Nations*, London.

Smith, N. (1967), *The Entrepreneur and His Firm: The Relationship between Type of Man and Type of Company*, East Lansing, Michigan, State University Press.

Smyth, P. and Leach, P.C. (1993) *The Family Business in Ireland*, Blackwater Press, Dublin.

Stake, R.E. (1976) *Evaluating Educational Programmes, The Need and the Response*, Washington DC: OECD Publications Centre.

Stake, R.E. and Easley, J.A. (1978) *Case Studies in Science Education*, Champaign, IL. University of Illinois, Center for Instructional Research and Curriculum Evaluation.

- Stanworth, M.J.H. and Curran, J. (1973), *Management Motivation in the Smaller Business*, Gower Press, London.
- Stanworth, M.J.H. and Gray, C. (1992), Entrepreneurship and Education: Action-Based Research with Training Policy Implications in Britain, *International Small Business Journal*, 10 (2), 11-23.
- Steinhoff, D. (1978), *Small Business Management Fundamentals*, 2nd Ed., New York, McGraw Hill.
- Stepanek, (1979), *Entrepreneurship, a Comparative and Historical Study*, P. Wilken, Ed., Ablex Publishing Company.
- Stevenson, H.H., Roberts, M.J. and Grousbeck, H.I. (1989), *New Business Ventures and the Entrepreneur*, Irwin.
- Stocker, R. (1991), Evaluating and Re-thinking the Case Study, *The Sociological Review*, 39, 88-112.
- Stone, L. (1984) Results from a Global Curriculum Project Evaluation: Practical Problems - Theoretical Questions, *American Educational Research Association*, New Orleans.
- Storey, D.J. (1982), *Entrepreneurship and the New Firm*, Croom Helm, London.
- Storey, D. L. (1994) *Understanding the Small Business Sector*, Routledge, London.
- Storey, D.J. and Johnson, S. (1987), *Job Generation and Labour Market Change*, London, MacMillan, 119.
- Stufflebeam, D.L. et al. (1971) *Educational Evaluation and Decision Making*, Itasca, Ill, Peacock.
- Swanson, D. and Webster, L. (1992), *Private Sector Manufacturing in the Czech and Slovak Republic, A Survey of Firms*, Washington DC, The World Bank.
- Swayne, C. and Tucker, W. (1973), *The Effective Entrepreneur*, Morristown, New Jersey, General Learning Press.
- Talmage, H. (1982) Evaluation of Programs, in. H.E. Mitzel (Ed.) *Encyclopaedia of Educational Research*, (5th Ed.) New York, The Free Press.
- Task Force on Small Business (1994)*, Government Publications Sales Office, Dublin.
- Taylor, J.R. (1978), *How to Start and Succeed in a Business of Your Own*, Reston, Virginia, 20-23.
- Telesis Consultancy Group (1982), *A Review of Industrial Policy*, Report No. 64, Dublin, National Economic and Social Council.
- Timmons, J.A., Smollen, L.E. and Dingee, A.L.K. (1990), *New Venture Creation*, Homewood 111, Irwin.
- Tyler, R. (1949) *Basic Principles of Curriculum and Instruction*, University of Chicago Press.
- Ulrich, T.A. and Cole, G.S. (1987), Towards More Effective Training of Future Entrepreneurs, *Journal of Small Business Management*, October, 32-39.
- Van de Ven, A.M. (1980), Early Planning, Implementation and Performance of New Organisation, in *The Organisation Life Cycle*, Kimberley, J.R., and Milne, R., Eds., Jossey Bass.

- Van Slooten, J.D., Hild, R.J. and Hunt, H.K., (1986), Characteristics of Collegiate Entrepreneurs and their Ventures, in Ronstadt, R., et al., Eds., *Frontiers of Entrepreneurship Research*, Wellesley, Mass., Babson College.
- Vesper, K.H. (1980), *New Venture Strategies*, Englewood Cliffs, Prentice Hall.
- Vesper, K.H. (1985), New Developments in Entrepreneurship Education, *The Art and Science of Entrepreneurship*, Sexton, D.L. and Smilor, R.W. Eds., Cambridge, Mass, Ballinger.
- Vesper, K.H., McMullen, W.E. and Ray, D.M. (1989), Entrepreneurship Education: More than Just an Adjustment to Management Education, *International Small Business Journal*, 8 (1), 61-65.
- Vesper, K.H. (1993), *Entrepreneurship Education*, Entrepreneurial Studies Centre, University of California, L.A.
- Vogel, J.H. (1989), Entrepreneurship, Evolution and the Entropy Law, *Journal of Behavioural Economics*, 3, 185-204.
- Waddell, F.T. (1983), Factors Affecting Choice, Satisfaction and Success in the Female Self-employed, *Journal of Vocational Behaviour*, 23, 294-304.
- Watkins, J.M. and Watkins, D.S. (1983), The Female Entrepreneur, Her Background and Determinants of Business Choice - Some British Data, in Hornaday, J.A. et al., Eds., *Frontiers of Entrepreneurship Research*, Wellesley, M.A. Babson College.
- Webb, T., Quince, T. and Wathers, D. (1982) *Small Business Research, The Development of Entrepreneurs*, Gower, Aldershot.
- Weber, M. (1959), *The Protestant Ethic and the Spirit of Capitalism*, New York, Scribner.
- Weihe, H.J. and Reich, F.R. (1993), Entrepreneurial Interest among Business Students: Results of an International Study, in *Entrepreneurship and Business Development*, Ed. Klandt, H. Avebury.
- Weinrauch, J.D. (1984), Educating the Entrepreneur: Understanding Adult Learning Behaviour, *Journal of Small Business Management*, 22 (4), 32-37.
- Welsh, J.A. and White, J.F. (1981), Converging on Characteristics of Entrepreneurs, *Frontiers Of Entrepreneurship Research*, Wellesley, Mass, Babson College, 504-15.
- Whyte, G. (1988), Enterprise Education; Economic Development through Education and Training, CRAC Conference, Cambridge, July.
- Wilensky, H.L. (1964), The Professionalisation of Everyone, *American Journal of Sociology*, 70, 137-158.
- Wilken, P.H. (1979), *Entrepreneurship: A Comparative and Historical Study*, Ablex Publishing Company.
- Winfield, I. (1984), *People in Business*, Heinemann, London.
- Worthen, B.R. and Sanders, J.R. (1987). *Educational Evaluation, Alternative Approaches and Practical Guidelines*, New York, Longman.
- Wortman, M.S. (1986), A Unified Framework, Research Typologies, and Research Prospectuses for the Interface between Entrepreneurship and Small Business, In Sexton,

D.L. and Smilor, R.W., Eds., *The Art and Science of Entrepreneurship*, Cambridge, Mass., Ballinger.

Yin, R.K. (1994), *Case Study Research, Design and Methods*, Sage Publications, London.

20 June 1996

Patricia Fleming
University of Limerick

ENTREPRENEURSHIP
JYVÄSKYLÄ, FINLAND

Dear Patricia,

RISE'96 BEST DOCTORAL PAPER

On behalf of the Organizing Committee of RISE'96 I have a great pleasure to inform that the panel of seven American professors chose your paper:

"Entrepreneurship Education in Ireland: A Longitudinal Study"

to be the winner of the title of the best doctoral paper. Your paper has also been accepted to be published in the Academy of Entrepreneurship Journal's European edition later this year.

Congratulations and Best Regards,



Matti Koiranen

Professor in Entrepreneurship
Chairman of the RISE'96 Conference

20 September 1995

«Name»

«Address»

Dear Graduate

As one of the institutions in Ireland involved in teaching entrepreneurship courses, the College of Business has embarked on a long-term study into key aspects of the impact of enterprise programmes. One of the steps in this process is the present research entitled Graduate Career Path Survey - Trends and Entrepreneurship 1995.

I am aware that during your time here at University of Limerick you selected to study the two year entrepreneurship option as a minor stream. The modules included Enterprise Formation, Enterprise Renewal, New Enterprise Development and the Small Business Institute Consulting Programme. This study will attempt to examine the usefulness and effectiveness of these and other undergraduate enterprise courses.

I appreciate some time has passed since you were here at college and you may not recollect the entrepreneurship option in detail. However, your co-operation in participating in this survey is crucial as each response will make this study more meaningful and will assist enormously in future curriculum development. All questionnaires are absolutely confidential and anonymity is guaranteed. This is to encourage you to be frank and open in your answers. I would be grateful if you would return the completed questionnaire at your earliest convenience.

Thanking you in advance

Yours sincerely

Patricia Fleming
Lecturer in Entrepreneurship
Department of Management and Marketing





UNIVERSITY of LIMERICK

O L L S C O I L L U I M N I G H

5 February 1996

Dear Graduate

As one of the institutions in Ireland involved in teaching entrepreneurship courses, the College of Business at the University of Limerick, in conjunction with Forbairt, embarked in 1991 on a long-term study of graduates who participated in the IDA Student Enterprise Award 1984-1988. The initial survey was carried out in 1991. You may recall a questionnaire I sent you at that time. All the responses received from the sample of 838 graduates were included in a study completed in 1993 (see attached Irish Times article).

Now five years after the first survey, I am conducting a longitudinal study by tracking the original sample. The aim of the study is to establish how graduates' career paths have progressed over time and to evaluate any further trends towards entrepreneurship in the selected group. The enclosed questionnaire has been designed to capture this information. I would greatly appreciate your cooperation in participating in this study as each completed response will make the results of the survey more meaningful and will assist enormously in future curriculum development. Please return the completed questionnaire by 1 March 1996.

Thanking you in advance for your assistance with this research.

Yours sincerely

A handwritten signature in cursive script that reads 'Patricia Fleming'.

Patricia Fleming
Lecturer in Entrepreneurship

Graduate Career Path Survey - 1996

- Trends and Entrepreneurship

QUESTIONNAIRE

Please return completed questionnaire to:

Ms P. Fleming
Lecturer in Entrepreneurship
Department of Management & Marketing
University of Limerick
Limerick

Graduate Entrepreneurship Survey

The main objectives of the research study are:

1. To explore the career paths of graduates who have participated in the IDA/Forbairt Student Enterprise Award 1989-1993.
2. To determine the graduate's initial career goals and identify any subsequent changes to these initial goals.
3. To examine the influence of the entrepreneurship course in determining career choice.
4. To determine the relevance of the graduate's qualification to his/her present work situation.
5. To ascertain the level of job satisfaction achieved by the graduate with his/her career to date.
6. To establish the number and type of graduates associated with an entrepreneurial career.
7. To explore the various factors that militate against self employment.
8. To establish the relevant factors that encourage self employment.
9. To evaluate the productivity of tertiary enterprise development programmes in terms of initiating start-up ventures.
10. To obtain a profile of the graduate entrepreneur.

General Instructions

The majority of questions merely require you to tick (✓) the space alongside the option which best represents your response. If you feel that none of the provided options applies, please write your response on the "other, please specify " line.

Please ignore the boxes on far right hand side of the pages; these are for computer coding purposes only.

QUESTIONNAIRE

Section A

In this first group of questions I need to know details about your educational qualifications, your career, and the level of job satisfaction you have attained, together with your opinion of the impact of the entrepreneurship option you participated in at college.

Education and Career to Date

1. Please give details of your University/College education and any other professional qualifications you have received.

<u>Degree/ Qualification</u>	<u>Level of Award</u>	<u>University/ Institution</u>	<u>Specialism</u>	<u>Year Received</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

2. Regarding your current work situation are you? (Please tick only one)

- a. Permanently employed by someone else _____
- b. In temporary/short-term employment _____
- c. Self-employed on a fulltime basis _____
- d. Self-employed on a part-time basis _____
- e. Unemployed _____
- f. Studying _____
- g. Other, please specify _____

3. What is your current occupation/job title ?



4. What, if any, were your initial career goals?

5. Are you pursuing these initial career goals Yes____ No____

If no, please indicate how these goals have changed _____

6. If you had a choice which of the following would you choose?
(Please tick only one)

(a) The job you have now (whether you are employed or self employed) _____

(b) The same kind of work but with some changes in working conditions or people you work with _____

(c) The same kind of work but in an enterprise of your own (for those in employment) _____

(d) A different kind of work entirely - in an enterprise of your own _____

(e) A different kind of work entirely - but not in an enterprise of your own _____

(f) Not applicable _____

7. Considering your age and qualifications how satisfied are you with your career to date?

Very Satisfied Satisfied Fairly Satisfied Dissatisfied Very Dissatisfied



8. How relevant do you feel your initial degree/diploma qualification has been to your career to date?

Very Relevant Relevant Fairly Relevant Little Relevance No Relevance

Please elaborate _____

9. Was your participation in th IDA/Forbairt Student Award anyway helpful in obtaining employment?

Very Helpful Helpful Fairly Helpful Little Help No Help

Please elaborate _____

10. Did you participate in the IDA/Forbarit Student Enterprise Award with the intention of perhaps becoming an entrepreneur?

Yes _____ No _____

If no, what was your main reason for taking the option?

11. Has the entrepreneurship course taken at college had an effect on the direction your career has taken?

Very Important Effect Important Effect Fairly Important Effect Little Effect No Effect

12. Do you think the IDA/Forbarit Student Enterprise Award is an opportunity for students. (Tick only one)

- (a) To develop a project which could subsequently be undertaken as a viable business concern _____
- (b) To develop skills such as teamwork, planning, marketing, finance _____

13. Are there any areas essential to entrepreneurial success that you feel should have received more emphasis in the entrepreneurship course you took at college? (Please tick)

Management _____ Marketing _____

Finance _____ Law _____ Operations _____

Information Technology _____ Human Resources _____

Other, please specify _____

PLEASE NOTE:

Section B to be completed only by those in employment. Q.14 - Q.26.
 Section C to be completed only by those who are self-employed. Q.27 - Q.47.
 Section D to be completed by all. Q.48 - Q.58.

Section B

To be completed only if you are currently in the employment of someone else, unemployed or studying.

In this section I would like to know more about your attitude to starting a business, details about your current job if you are employed, and the factors that you consider discourage or militate against entrepreneurship.

Attitude to Entrepreneurship

14. Have you at any point in your career been self-employed?

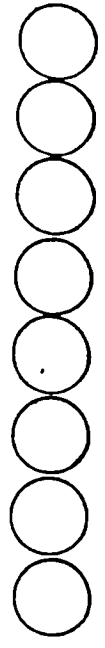
Yes___ No ___

If yes, please give details: _____

15. Are you currently running a business on a part-time basis?

Yes ___ No ___

If yes, what kind of business? _____



16. If you have considered, however tentatively, setting up your own business, did you take any of the following steps?

	Yes	No
(a) Identified an opportunity	_____	_____
(b) Made initial enquiries	_____	_____
(c) Carried out market research	_____	_____
(d) Sought advice from State agencies	_____	_____
(e) Sought financial advice	_____	_____
(f) Other, please specify _____		

17. How important are the following factors, in your opinion, in the choice between employment and starting your own business

	Very Important Factor	Important Factor	Fairly Important Factor	Factor of Little Importance	Factor of no Importance
(a) Importance of Job Security					
(b) Lack of perceived opportunity					
(c) Lack of finance					
(d) Lack of relevant experience					
(e) Perceived risk too high					
(f) Constraint of family responsibilities					
(g) Unsuitable business climate					
Other (please specify and rank as above):					

18. To what extent have you ever felt motivated to start your own business?

To a Very Large Extent To a Large Extent To a Certain Extent To a Small Extent To No Extent



19. To what extent are you actively seeking out an opportunity to establish your own business?

To a Very Large Extent To a Large Extent To Some Extent Very Little Not at All



20. Do you have any ideas for starting a business?

Yes _____ No _____

If yes, please give details



21. Do you feel you have the skills necessary to set up and run your own business?

Yes _____ No _____



22. Do you think it probable that someday you will start your own business?

Highly Probable Probable Some Probability Improbable No Probability



23. Are you currently working in an organisation that supports enterprise? (e.g. financial institution, government development agency, etc.)

Yes _____ No _____ Not applicable _____

If yes, please give details



24. Does your job involve in-company enterprise activity? (e.g. new product development, innovation, research, etc.).

Yes _____ No _____ Not applicable _____

If yes, please give details: _____

25. Do you work in a company with less than 50 employees?

Yes _____ No _____ Not applicable _____

If yes, How many people are employed in the company you currently work in:
_____ employees.

26. If you are working abroad would you consider returning to Ireland to start a business?

Yes _____ No _____ Not applicable _____

If yes, please elaborate:

Now please go to Question 48 : to provide some personal details and any comments you may have to assist this research.

Section C

To be completed only if you are self-employed.

In this next group of questions I would like to have details of the factors that motivated you into going into business, together with information about your company and the support received.

Business Start-ups

27. What industry sector are you trading in?

28. What product/service are you selling?

29. Did you start the business?

- (a) Alone _____
- (b) With a partner _____
- (c) With more than one partner _____

30. How large a share of the company is owned by you _____%

31. Is your company the same type of business as that of a former employer?

Yes _____ No _____ Not applicable _____

32. What is the legal structure of the business?

- (a) Sole Trader _____
- (b) Partnership _____
- (c) Limited Company _____
- (d) Other _____

33. Where is your business located?

(a) Ireland _____ City/Town _____

(b) Abroad _____ Country _____

34. How many years have you been in business? _____ years.

35. What age were you when you first started this business? _____ years.

36. Have you been involved in more than one business start-up?

Yes _____ No _____

If yes, please give details

37. How many people on average (including yourself) are employed in the business? _____ employed



38. How much start-up capital was required to commence the business?

£ _____



39. Did you receive any grant-aid to start the business?

Yes _____ No _____

If yes, please state approximate amount £ _____

Funding Agency _____



40. How large do you expect your sales turnover to be this year?

£ _____



41. Does your company trade internationally?

Yes _____ No _____

If yes, how large a share of the firm's turnover is generated?

at home _____ % abroad _____ %



42. Please indicate your approximate annual basic salary (excluding benefits)

£ _____



43. Would you consider your own financial return from the company as:

Very Satisfactory Quite Satisfactory Satisfactory Of little Satisfaction Not Satisfactory



44. How important were the following factors in making the decision to establish your own company?

	Very Important Factor	Important Factor	Fairly Important Factor	Factor of Little Importance	Factor of no Importance
(a) Entrepreneurship course					
(b) Frustration with existing job					
(c) Perceived suitable opportunity					
(d) Low perceived risk					
(e) Availability of finance					
(f) Discovery of a potential partner					
(g) Failure of co. in which employed					
(h) Influence of Parents/role models					
Other (please specify and rank as above):					

45. Why did you set up in business?



46. What have been the greatest problems or difficulties you have encountered as an entrepreneur?

47. What main advice would you give to an aspiring entrepreneur?

Section D

To be completed by all.

In this last group of questions I need to know more about you, your parents and your future career plans

Personal and Family Background

48. Sex Male _____ Female _____

49. Age _____ years

50. Marital Status Single _____
 Married _____
 Other _____

51. Is your father self-employed?

Yes _____ No _____

(if yes, please give details)

52. Is your mother self-employed?

Yes _____ No _____

(if yes, please give details)

53. How many children are there in your family? (brothers and sisters) _____

54. What was your position in the family? _____
(First born, second, third, etc.)

55. Have any of your brothers or sisters started a business of their own?

Yes _____ No _____ Not applicable _____

(If yes, please give details)

56. Has one or both of your parents occupation/s influenced your career decision?

Yes _____ No _____

(If yes please specify)

57. What career plans have you got for the future?

58. Are there any questions which you feel should have been asked or areas which should have been examined? Please use the remaining space to voice any criticisms, suggest any areas of concern and indicate which direction further research should take:



I would like to thank you again for taking the time to assist me in my work. Please return the completed questionnaire to me in the enclosed envelope by 15 February 1996.

Patricia Fleming, Lecturer in Entrepreneurship,
College of Business, University of Limerick.

Case Study Interview

The Entrepreneur

- Would you please tell me about yourself before you started your first venture:
 - Were your parents, relatives, or close friends entrepreneurial? How so?
 - Did you have any other role models?
 - What was your education and co-operative experience? In hindsight, was it helpful? In what specific ways?
 - What was your previous work experience? Was it helpful? What particular experiences were especially valuable?
 - In particular, did you have any sales or marketing experience? How important was it or a lack of it, to starting your company?
- How did you start your venture?:
 - How did you spot the opportunity? How did it surface?
 - What were your goals? What were your lifestyle or other personal requirements? How did you fit these together?
 - How did you evaluate the opportunity in terms of: the critical elements for success? The competition? The market?
 - Did you find or have partners? What kind of planning did you do? What kind of financing did you have?
 - Did you have a start-up business plan of any kind? Please tell me about it.
 - How much time did it take from conception to the first day of business? How many hours a day did you spend working on it?
 - How much capital did it take? How long did it take to reach a positive cash flow and break-even sales volume? If you did not have enough money at the time, what were some ways in which you sourced further finance for the venture (i.e. bartering, borrowing, and the like). Tell me about the pressures and crises during that early survival period.

- What outside help did you get? Did you have experienced advisors? Lawyers? Accountants? Tax experts? Patent experts? How did you develop these networks and how long did it take?
 - What was your family situation at the time?
 - What did you perceive to be your own strengths? weaknesses?
 - What did you perceive to be the strengths of your venture? Weaknesses?
 - What was your most triumphant moment? Your worst moment?
 - Did you want to have partners or do it solo? Why?
- Once you got going, then:
 - What were the most difficult gaps to fill and problems to solve as you began to grow?
 - When you looked for key people as partners, advisors, or managers, were there any personal attributes or attitudes you were especially seeking because you knew they would fit with you and were important to success? How did you find them?
 - Are there any attributes among partners and advisors that you would definitely try to avoid?
 - Have things become more predictable? Or less?
 - Do you spend more/same/less time with your business now than in the early years?
 - Do you feel more managerial and less entrepreneurial now?
 - In terms of the future, do you plan to harvest? To maintain? To expand?
 - Do you plan ever to retire? Would you explain?
 - Have your goals changed? Have you met them?
 - Has your family situation changed?

The Business

- What industry/sector are you trading in?

- What products/devices are you selling?
 - Who are your customers?
 - Is your company the same type of business as a former employer?
 - What is the legal structure of your business?
 - Have you been involved in more than one start-up?
 - How many people do you employ?
 - How much start-up capital was required to start your business?
 - Did you receive any grant-aid?
 - How large do you expect your sales turnover to be this year?
 - Does your company trade internationally?
 - What were the important factors in the decision to establish your own company?
 - What have been the greatest problems or difficulties encountered as an entrepreneur?
-
- What do you consider your most valuable asset - the thing that enabled you to "make it"?
 - If you had it to do over again, would you do it again, in the same way?
 - Looking back, what do you feel are the most critical concepts, skills, attitudes, and know-how you needed to get your company started and grown to where it is today? What will be needed for the next five years? To what extent can any of these be learned?
 - Some people say there is a lot of stress being an entrepreneur. What have you experienced?
 - What are the things that you find personally rewarding and satisfying, as an entrepreneur? What have been the rewards, risks and trade-offs?
 - Who should try to be an entrepreneur? Can you give me any ideas there?
 - What advice would you give an aspiring entrepreneur? Could you suggest the three most important "lessons" you have learned?



UNIVERSITY *of* LIMERICK

O L L S C O I L L U I M N I G H

Mr. Stephen Egan
Solas Data
Great Island Enterprise Park
West End
Ballincollig
Cork

23rd June 1997

Dear Stephen

You may remember I wrote to you last year concerning my research into graduate entrepreneurship. You very kindly completed the questionnaire I sent you and indicated that you were involved in a business start-up venture.

I have now completed the research survey study which is at the centre of a thesis I am submitting for a doctorate degree from the University of Durham. My supervisor has suggested that the inclusion of a few case studies on graduate entrepreneurship would greatly support my research findings. I am writing to ask you if you would consider giving me *a little of your time to interview you regarding yourself and your business.*

As I have a submission date for my thesis for early July, I would greatly appreciate your help in providing me with the information I require to complete my study.

I trust you are well and I look forward to hearing from you.

Yours sincerely

Patricia Fleming
Entrepreneurship Programme Leader

FOLEYS OF MALLOW

28 Bridge Street,
Mallow,
Co. Cork.

Tel. (022) 21480
Fax. (022) 42926

4th October, 1995.

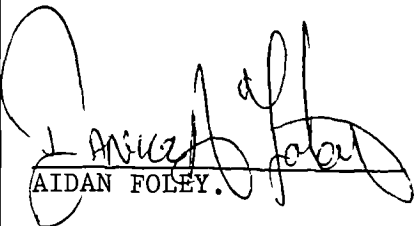
Ms. Patricia Fleming,
Lecturer in Entrepreneurship,
Department of Management & Marketing,
University Of Limerick,
Limerick.

Dear Patricia,

I am delighted to be able to assist you in your research. You will be glad to hear that the entrepreneurship stream was my favourite option during my four years. It has not let me down as I now control 13 companies involved in retail, wholesale, property development and manufacturing. The entrepreneurship option was excellent but it lacked a little reality. I took marketing and entrepreneurship and found that I lacked financial expertise in the start-up of my business, and therefore became vulnerable to "Professional Vultures" (accountants, solicitors etc who get fee's without doing work.

However, Patricia I know you have a busy schedule and If I can be of any further help, please contact me.

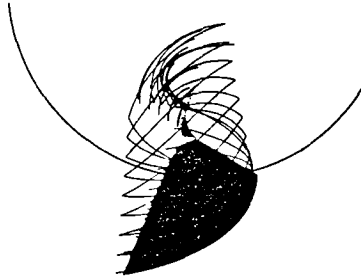
Yours sincerely,


AIDAN FOLEY.

SOLAS DATA

CAD/CAM/CAE/CNC Engineering Solutions

Great Island Enterprise Park,
West End, Ballincollig, Cork
Tel: 021 875300 Fax: 021 875254



Patricia Fleeming
College Of Business
University of Limerick
Castletroy
Limerick.

13 February, 1996

Dear Patricia,

Please find enclosed completed survey as requested.

It may be of interest to you that the structure of the business plan we drafted for the final report of the IDA/Forbairt student award scheme was used in our initial presentation to the banks and IDA when setting up my business.

Currently about 15% of our revenue comes from the exact same service that our student group submitted in IDA/Forbairt student award scheme back in 1989.

The IDA/Forbairt student award scheme was one the most useful modules I did in college, I would like to take this opportunity to thank you for your guidance then.

Best Regards

A handwritten signature in black ink, appearing to read 'S. Egan', with a long, sweeping flourish extending to the right.

Stephen Egan

Appendix

College	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
1. Dublin City University	7	14	4	17	21	18	7	24	10	43
2. University College Cork	3	2	3	4	5	5	4	6	8	6
3. University College Dublin	18	30	7	5	7	7	5	4	3	5
4. University College Galway	3	1	-	5	-	-	-	-	-	-
5. Trinity College Dublin	-	1	-	-	1	-	1	-	-	-
6. University of Limerick	4	5	11	7	16	17	13	14	14	31
7. RTC Athlone	-	-	-	-	12	34	31	50	43	54
8. RTC Carlow	2	1	1	4	6	4	10	3	4	8
9. RTC Cork	2	5	1	2	2	1	1	-	-	3
10. RTC Dundalk	2	3	6	11	11	15	7	9	2	2
11. RTC Galway	27	27	30	34	46	47	51	54	56	46
12. RTC Letterkenny	3	-	1	-	-	-	8	14	20	17
13. CoACT, Limerick	-	-	1	1	-	-	1	1	-	-
14. RTC Sligo	-	3	7	5	5	6	-	8	13	11
15. RTC Tralee	-	-	1	-	-	3	-	-	3	2
16. RTC Waterford	1	-	1	-	-	2	-	-	-	1
17. DIT Bolton St.	2	-	1	-	1	-	-	-	-	-
18. DIT Kevin St.	-	1	1	-	-	-	2	-	1	5
19. DIT COMAD	3	4	3	-	3	7	29	17	2	-
20. DIT College of Commerce	1	-	-	-	-	-	-	-	-	-
21. Institute of Education	-	-	-	-	-	-	-	-	-	2
22. College of Catering	-	-	-	-	-	-	-	4	-	-
23. Nat. College of Art & Design	-	-	-	-	-	-	1	1	-	-
Total	78	97	79	95	136	166	171	209	179	236

Overall Total = 1,446 Projects entered for Award

Student
Enterprise
Awards 1997

How your project will be judged

Project concept: What is the product? Is it innovative, an import substitution, or a development? Is it feasible? Is there a market for it?

Professionalism of approach: Have you looked at all the angles? Have you gathered all the skills you need for your team?

Presentation: Have you all the details in a form easily assimilated by potential investors? Have you a prototype designed/built?...it's not essential, but decide if your project would benefit from having one.

Planning and projections: Have you researched the market and worked out the cash flows? Have you costed the capital investment and operational cash needed?

NB: Forbairt Feasibility Grants are not available for the purpose of the scheme.

Submission Guidelines

The Forbairt Student Enterprise Awards provides you with the opportunity to demonstrate your ability to set up a business venture of your own.

Proposals are to be submitted to Forbairt (35-39 Shelbourne Road, Ballsbridge, Dublin 4) by June 30 1997.

What is required

You are asked to submit a proposal along the lines set out below aimed at the establishment of a **manufacturing project or an internationally traded service**.

The submission should follow the guidelines below and **should be presented in a document of not more than 8 pages with up to 10 pages of appendices and should be prefaced with a one page summary (see example)**.

The information in the detailed proposal should be presented in the sequence set out below:

A Project Summary (obligatory)

- The names and addresses of the promoters, the product and location of project
- Proposed investment
- Sales projections
- Employment
- Key Issues

B Promoters

- The name, course and year of study of each student:
- Link to project, how the project came about
- Management structure
- Any relevant experience

C Production

- Product/internationally-traded service description
- Process description
- Proposed level of output
- Investment details
- What will the investment achieve
- Raw materials, source, cost
- Quality and training as appropriate
- Environment
- A list of equipment

D Marketing

The content of the marketing section will depend on particular project and the quality of the information available, however the following points should be addressed if possible:

- 1 What is unique or special about your product/service?
- 2 How do you know that there is a demand for your product/service?
- 3 What competitive edge will you have over competing products/services?
- 4 At what price will you sell your product and how will this compare with your competitors?
- 5 Where do you intend to sell your product/service, i.e. home market, export market? Name potential customers.
- 6 What do you know about the market you propose to sell into; size, growth, trends, structure.
- 7 How are products to be distributed in the market?
- 8 How do you propose to let people know about your product/service? Advertising? Promotions? Merchandising? Other?

E Finance: requirements and funding

Work out your total fixed asset investment i.e. premises and plant and the working capital required to bring the project to full production.

Show:

(a) Fixed asset investment	£
(b) Working capital requirements	£
(c) Start up costs	£
<hr/>	
Total investment needed	£
<hr/>	

Indicate how it is proposed to raise the necessary capital

(a) Amount to be invested by principals	£
(b) Amount to be provided by borrowings	£
(c) Amount sought by way of grant	£
(d) Cash from profitable trading	£
<hr/>	
Total investment funded	£
<hr/>	

F Profitability

Under this section you should give projected accounts for the new project for the first two years. These Accounts should include projected profit and loss accounts, balance sheets and cash flow statements. These should form part of the appendices and be summarised under the headings as follows:

	Year 1	Year 2
	£	£
• Sales		
• Gross Profit		
• Net Profit		
• Net Profit/Sales %		
• Capital Employed		
• Return on Capital Emp.		
• Current Ratio		

The judges will be interested to know how "real" the figures in your projections are. Give them information on how the projections were made.

G Employment

How many people will be employed in this business?

Appendix A

Forbairt maintains a list of sectors which are well supplied by existing Irish manufacturers. Grants are not provided to manufacturers establishing or expanding in these areas unless it can be shown that a real import substitution, export or linkage opportunity exists. The specific industrial sectors involved are set out below:

- 1 Bread Baking and Flour Confectionery
- 2 Broiler Processing
- 3 Concrete Products
- 4 General Printing, Photo Typesetting & Print Finishing
- 5 Joinery
- 6 Plastics
- 7 Soft Drinks/Bottling
- 8 Structural Steel
- 9 Furniture
- 10 Tyre Remoulding

Appendix B

Examples of International Services Supported by Forbairt

- Data Processing
- Software Development
- Technical and Consulting Services
- Commercial Laboratories
- Administrative Headquarters
- Healthcare Services
- Research and Development Centres
- Recording Services
- Training Services
- Publishing Houses
- International Financial Services
- Any other internationally traded service, i.e. for export or import substitution.

Note

Patents: See attached leaflet

Small Industries Grants

For small industries with potential to employ up to 15 people our financial help is simple - straight employment grants for each new full-time job you create.

Employment Grants

- How Much?

It depends on the sector of industry you are in. Up to £5,000 for each new, full-time job is available.

- When do you get it?

Half when the employee starts work, the rest when the job has been there for 6 months.

The Rules

1. You can enter if you're a full time undergraduate with one exception, (see 9 below) attending any Third Level Educational Institution in the Republic of Ireland.
2. You should ideally form a team of not more than 5 students from within your college, bringing together financial / marketing / production skills... but applications from individuals will be accepted.
3. The application form must be returned to us by March 25, 1997. It must be signed by the head of your faculty or other appropriate person.
4. You must follow the Submission Guidelines. We're looking for innovation, research and a planned methodical approach to the project.
5. Your project must be feasible and it must be marketable.
6. The completed business plan must be sent to Forbairt by June 30, 1997.
7. Four finalists will be judged by a panel drawn from industry, education, finance and Forbairt, at a personal presentation prior to the television programme. The Final will be televised by RTE.
8. Craig Gardner, will present a prize of £1,000 for the submission with the most realistic and comprehensive section on business financing.
9. Cruickshank and Co., Patent and Trade Mark Agents will present a prize of £1,000 for a technically innovative project. *This prize is open to all full time post graduates*
10. The Regional Prizes will not be affected by the selection of the four finalists.
11. Any ideas submitted for the competition which are not put into commercial practice within two years by the promoters may be used in any way Forbairt deems appropriate.

For further information

Contact: Aideen Fitzgerald, Co-ordinator,
Student Enterprise Awards, Forbairt,
35-39 Shelbourne Road, Ballsbridge, Dublin 4.
Telephone (01) 808 2000 / 609 2123

