Breathing Space or Hiding Place? Graduate Entrepreneurs' Perspectives of Entrepreneurship Education in Ireland

by

Mary Fenton, MBS, MA, BSc (Hons) Mgmt

Thesis submitted in fulfilment of the

degree of Doctor of Philosophy

Joint Faculty of Humanities,

St. Patrick's College, Dublin City University

Research Supervisors: Dr Almar Barry and Dr Hugh Gash

2013

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Declaration of Originality

I hereby certify that this material which I now submit for assessment on the programme of study leading to the award of Doctor of Philosophy is entirely my own work and has not been taken from the work of others save and to the extent that such work has been cited and acknowledged within the text of my work.

Signed:

Mary Fenton, ID No.: 57274673

Date: 12 December 2012

Dedication

This work is dedicated to my parents, Mary and Austin Fenton, and to Nessa,

my favourite sister, for their constant love and encouragement.

I am blessed and beyond grateful.

Acknowledgements

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Abstract

Entrepreneurship education (EE) has become a panacea for graduate unemployment despite a lacuna of empirical evidence to demonstrate that it can generate more entrepreneurial activity (Matlay, 2007; Potter, 2008). This research examines graduate entrepreneurs' perspectives of EE at third level in their formation as entrepreneurs. The South East Enterprise Platform Programme (SEEPP) provides an interesting case study of graduate entrepreneurship within South East region of Ireland, where research was conducted amongst 30 graduate entrepreneurs *i.e.,* 15 SEEPP participants and 15 non-SEEPP entrepreneurs. This research also included the perspectives of 15 enterprise enablers, namely SEEPP lecturers and enterprise development agency (EDA) personnel to provide a triangulated perspective of EE at third level. The graduate entrepreneurs and enterprise enablers acknowledged initiatives by HEIs to promote entrepreneurship but they believed that EE does not adequately prepare students for self-employment mainly because: (i) HEIs are focused on preparing students for employment; (ii) lecturers lack critical enterprise experience; (iii) the academic nature of EE; and (iv) EE's 'one size fits all' approach fails to recognise the heterogeneity of learners' needs. The notion that more EE will lead to greater numbers of graduate entrepreneurs is unrealistic because graduates' route to self-employment is not linear, moreover, there is a paucity of supports for 'raw graduates' in their transition to self-employment. Whilst some EDA personnel regarded EE at third level as a 'hiding place', many graduate entrepreneurs believed that HEIs provided a 'breathing space' to develop their business. This research offers a nuanced understanding of EE at third level and the prevailing economic conditions for graduate entrepreneurship in Ireland. It contributes to the advancement of knowledge, practice and policy by proposing a conceptual framework for EE at third level to meet the diverse needs of graduate entrepreneurs. It concludes with the identification of areas worthy of further research.

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List of Abbreviations and Acronyms

ACE	Accelerating Campus Enterprise
CEO	Chief Executive Officer
CEB	City/County Enterprise Board
CORD	Commercialisation of Research & Development
CPD	Continuing Professional Development
CSO	Central Statistics Office
DES	Department of Education and Skills
EC	European Commission
EI	Enterprise Ireland
EPP	Enterprise Platform Programme
EU	European Union
FAS	Irish Training & Development Authority (now known as SOLAS)
FDI	Foreign Direct Investment
Forfás	National Policy Advisory Body for Enterprise & Science
GDP	Gross Domestic Product
GNP	Gross National Product
GEM	Global Entrepreneurship Monitor
GNP	Gross National Product
HEA	Higher Education Authority
HEI	Higher Education Institute
HETAC	Higher Education Training and Awards Council
HPSU	High Potential Start Up
IDA	Industrial Development Authority
IoT	Institute of Technology
IOTI	Institute of Technology Ireland
IP(R)	Intellectual Property (Rights)
ISME	Irish Small Medium Enterprise Association
MBA	Master of Business Administration
MNCs	Multi-National Companies
NCEE	National Council for Entrepreneurship Education (UK)
NCGE	National Council for Graduate Entrepreneurship (UK)
NCC	National Competitiveness Council
NFQ	National Framework for Qualifications
NICENT	Northern Ireland Centre for Entrepreneurship
NQAI	National Qualifications Authority of Ireland
OECD	Organisation for Economic Co-operation & Development
PRTLI	Programme for Research in Third Level Institutes
R&D	Research & Development
RPL	Recognition of Prior Learning
RTC	Regional Technical College
SEEPP	South East Enterprise Platform Programme
SMEs	Small Medium Enterprises
WIT	Waterford Institute of Technology

The Journey

One day you finally knew what you had to do, and began,

though the voices around you kept shouting their bad advice –

though the whole house began to tremble and you felt the old

tug at your ankles. "Mend my life!" each voice cried. But you

didn't stop. You knew what you had to do, though the wind

pried with its stiff fingers at the very foundations, though their

melancholy was terrible. It was already late enough, and a wild

night, and the road full of fallen branches and stones. But little

by little, as you left their voices behind, the stars began to burn

through the sheets of clouds, and there was a new voice which

you slowly recognised as your own, that kept you company as

you strode deeper and deeper into the world, determined to do

the only thing you could do – determined to save the only life

that you could save.

Mary Oliver (1986)

Chapter 1 Introduction

"The dogmas of the quiet past are inadequate to the stormy present. The occasion is piled high with difficulty and we must rise with the occasion. As our case is new so must we think anew and act anew. We must disenthrall ourselves and then we shall save our country."

President Abraham Lincoln (1862)

1.0 Introduction .

As an island on the periphery of Europe, Ireland is an interesting case study of a small, open economy that has changed its economic policies from protectionism to export-orientation. Given the current, financial crisis in the Irish, Eurozone and indeed international economies, economic recovery and future wealth creation are contingent upon developing growth-oriented, indigenous enterprise to stimulate job creation, export trade, innovation, economic growth, prosperity and national competitiveness (Birch and Medoff, 1994; Jack & Anderson, 1999; Acs, Carlsson, & Karlsson, 1999; Henry, 2000; OECD, 2008; Hisrich & Peters, 2002; Green, 2012). Consequently, international governments are focusing on higher education institutions (HEIs) to increase the supply of entrepreneurial talent to create new businesses, employment and wealth. Entrepreneurship education (EE) owes its rapid growth to the rise of entrepreneurship to the top of government agendas in both industrially developed and developing countries (Matlay, 2012). It is regarded by some as a solution to declining economic output as well as rising levels of youth and graduate unemployment (Storey, 1994; Jack *et al.*, 2009; Matlay, 2009; Gibb, Haskins & Roberston, 2009; Carey & Matlay, 2011; Draycott & Rae, 2011; Matlay, 2012). There is a significant economic dividend to be reaped from focusing policy and supports in fostering an entrepreneurial mindset across the whole student population (Martin & Associates, 2011). However, Green (2012) argued that entrepreneurship is often regarded as an esoteric activity for a talented minority of Business students, whereas, it should be regarded as an everyday practice for all students. Audits of international HEIs focus on measurable outcomes such as the commercialisation of research, licensing agreements, disclosures, number of spin-offs, however, they represent the far end of the EE continuum. This chapter provides a contextual background and rationale for this study, it details the research aim, objectives, the chosen methodology and it concludes with an overview of the dissertation.

1.1 Contextual Background to the Research

From 1997 to 2007, there was a dramatic transformation of the Irish economy which manifested itself in an average annual growth of 7.2% in Gross Domestic Product (GDP) and 6.3% in Gross National Product (GNP) (Power, 2009). Ireland was being heralded internationally as an economic cause célèbre and the economist Kevin Gardiner (1994) referred to this unprecedented economic growth as the 'Celtic Tiger'. There is some mystery about the Celtic Tiger which the historian R.F. Foster suggested 'appeared like a miraculous beast in a forest clearing and economists are still not entirely sure why' (Lewis, 2011). The reality is more prosaic: Ireland's economic transformation was driven by an increase in the level of foreign direct investment (FDI), an exponential growth in the construction industry, inflation of the property market and the availability of cheap, affordable finance which fuelled consumer spending. At the height of the Celtic Tiger, some 20% of the Irish workforce was employed in the construction industry which accounted for nearly a quarter of GDP, compared to less than 10% in normal (sic) economies (ibid). Returns to the Exchequer from property transactions, income, corporate and value added tax (VAT) grew exponentially and it appeared as though the country was awash with money. Whilst these extraordinary levels of economic and employment growth were laudable, much of what was passed for economic prosperity during the Celtic Tiger years was built on a foundation of debt that was never sustainable (Power, 2009).

Whilst academics, economists and journalists voiced concern about the over-reliance on construction and the inflated property market, the government refuted their concerns and predicted, at worst, a softening of the property market and the economy. They were proved wrong because what occurred since the demise of the Celtic Tiger is without precedence in Irish economic history. In the third quarter of 2008, economic activity weakened sharply which led to an implosion of the Irish economy. This was caused by a confluence of factors, namely: the global economic downturn, triggered by the international banking crisis, and an unrelated, but intertwined, bursting of the property bubble in Ireland (Ó'Foghlú, 2010). On 30th September 2008, in an effort to stabilise the indigenous banking sector, the government decided to bailout the Irish banking system.

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This decision led to the socialisation of the banking debt and ultimately resulted in the surrender of economic sovereignty to the International Monetary Fund, European Union (EU) and European Central Bank troika. It copper-fastened an era of deep austerity; unemployment rose to 14.8% and in aggregate terms, GDP fell by 3% and GNP by 2.8% in 2008 which was the first annual contraction in economic activity since 1982 and which marked a major turning point in Ireland's economic history (Power, 2009). The impact on the public finances was catastrophic as revenues generated through property taxes effectively collapsed (Lewis, 2011). McWilliams (2012, p.5) maintained that 40,000 Irish people left Ireland in 2011, 95% of whom were between the ages of 19 to 44 years and 69% of this 'Generation Skype' have at least a primary degree which makes them Ireland's most educated emigrants ever.

The Irish economy is still functioning, albeit at a much slower rate, and there are signs of economic recovery through export growth. According to the Industrial Development Agency (IDA) (2012), 92% of all exports are driven by the FDI sector, 75% of which is American. This highlights a continuing trend in over-dependency on external sources of economic growth which are footloose and ultimately may not prove to be sustainable sources of employment. Henriksen (1999) posited that if the challenge of creating sustainable employment is to be met, countries must stimulate the growth of indigenous firms, which are not only necessary to replace businesses and jobs, which were lost due to the disappearance and downsizing of existing businesses, but also essential for innovation activity (Stevenson & Lundström, 2001; O'Brien, 2011). Despite the IDA's success in identifying, pursuing, and securing prestigious FDI since the 1950s, concern has been expressed that the government was overly focused on attracting and supporting multinational companies (MNCs) to fuel growth in the economy, and often to the detriment of indigenous enterprise (Cooper, 2009). FDI is of strategic importance to Ireland because on average, foreign-owned companies pay better wages than their Irish counterparts, and the duration of each job is longer. FDI companies offer greater job security, exposure to international business and in-house training (O'Brien, 2011). Cooper (2009) and O'Brien (2011) cautioned that Ireland's obsession with attracting FDI has been to the detriment of homegrown enterprise which is weak.

Supporting indigenous enterprise, particularly high potential start-ups (HPSUs) or 'gazelles', with the potential to grow, scale and trade internationally has come into sharper focus as a solution to regenerate the beleaguered Irish economy (Acs, Carlsson & Karlsson, 1999; Government of Ireland, 2008; Innovation Task Force, 2010; Programme for Government, 2011). Ireland is regarded as an innovation follower rather than an innovation leader and this is a cause for additional concern. If Ireland is to regain some of its competitive advantage, it can no longer rely on FDI to drive economic development. Instead, the government needs to concentrate on indigenous enterprise to drive sustainable economic recovery, competitiveness and prosperity. Stevenson *et al.* (2001) concluded that the government's role is to stimulate a culture of social capital exchange based on indigenous entrepreneurship and to create the appropriate institutional framework at a national level to address the supply side of entrepreneurship. Creating an environment where individuals and companies are facilitated to create economic activity and employment and have the confidence to do so (Innovation Task Force, 2010). This has led to an increased awareness and expectation of the role of HEIs in increasing the supply of entrepreneurial talent to create knowledge, new businesses, future employment and wealth. President Higgins (Irish Times, 26 January 2012) posited that:

> Now more than ever, an original and confident education system is needed, to help us
> to achieve our social and economic objectives and to place us on a sustainable footing.

1.2 The Role of Higher Education in Enterprise Development

HEIs' role has evolved from one that was primarily concerned with teaching and research to one where each HEI is part of the entrepreneurship system with an increased mission to encompass economic and social development (Neck, Dale Meyer, Cohen & Corbett, 2004). They are regarded as seedbeds of innovation fostering new knowledge and ideas which could be translated into commercial entities and exploiting the intellectual assets and enhancing economic growth. HEIs can foster greater entrepreneurship through EE; knowledge transfer; academic spin-offs; spin-ins; the commercialisation of R&D; campus incubators; and/or indirectly through networking and training.

Potter (2008) called upon HE management to show leadership in promoting entrepreneurship through courses; knowledge exchanges with enterprise; instilling an enterprise culture; and creating a greater awareness of the forms and value of entrepreneurship accrued by staff and students. Both the President of University College Dublin and the former Provost of Trinity College Dublin called upon Irish HEIs to be brave and ambitious for their graduates and create the right conditions for entrepreneurship to flourish by embedding entrepreneurship across the spectrum of the curricula (Brady & Hegarty, 2010). This requires HEIs to define, articulate and increase awareness of an explicit third mission to promote entrepreneurship and provide corresponding public funding to support this endeavour (Potter, 2008). Despite reduced budgets for HEIs, it is imperative that the government keeps faith with its investment in HEIs to promote human knowledge development by offering more initiatives to cultivate innovation and entrepreneurship at both undergraduate and graduate level and by cultivating entrepreneurial HEIs (Innovation Task Force, 2010; Hunt, 2011; Higher Education and Training Awards Council (HETAC), 2012). In order to sustain entrepreneurship within a HEI, Van der Sijde and Ridder (1999) argued that there is a need for the HEI itself to become entrepreneurial. HEIs are urged to create opportunities for students to experience entrepreneurship in order to produce graduates who will be capable of using their knowledge and applying it to start and grow their own businesses (Forfás, 2007).

Until the early 1980s, there was little or no acknowledgement in Irish economic policy of the intrinsic links between economic growth and the education system (Carr, 1998). HEIs are now acknowledged as pivotal in fostering entrepreneurship and driving the rate of entrepreneurial activity by promoting and supporting campus entrepreneurship. Heretofore, their primary focus was to prepare students for employment in industry but they have a strategic role to play in preparing graduates for both employment and self-employment. The second dimension to their strategic importance is the link between economic prosperity and new knowledge. Increasing the supply of entrepreneurial talent to create and grow new businesses is regarded as a strategic objective to rejuvenate the beleaguered Irish economy and create employment and wealth.

HEIs are mandated to play a key role in the development of an enterprise culture through EE and producing graduate entrepreneurs capable of applying their knowledge to start and grow their own businesses. The National Council for Competitiveness (NCC) (2009) identified undergraduate teaching as a core activity and as a seedbed for graduate researchers, employees and entrepreneurs. It recommended improving the quality and relevance of EE that students receive whilst expanding access and participation further (ibid). The NCC (2009) called for HEIs to embed entrepreneurship and innovation at all levels of the education system in order to equip students with the skills and self-efficacy to regard self-employment as a career option. Instead of depending on a limited domestic market, graduates should become export-orientated and be capable of exploiting opportunities emerging from international markets. There is growing pressure on HEIs to become more entrepreneurial themselves. Brady et al. (Irish Times, 3 March 2010) maintained that this requires a transformation of HEIs:

> from gate keepers to door-openers, where HEIs have a unique competence to scan the horizon, to be the national antennae and transmitters, alert to the emergence of new global trends and technology, and prompt in their onward conveyance of this data to key public and private partners. The scope and quality of knowledge or intellectual capital needed to drive economic growth must be built on a confident, imaginative and progressive approach to EE and a commitment to the concept of an entrepreneurial higher education sector.

The Report of the Small Business Forum (2006) recommended that the government should adopt a national entrepreneurship policy focused on optimising the number of incipient businesses, particularly HPSUs. It identified three specific platforms on which policy ought to be built, namely: (i) stimulating latent entrepreneurship; (ii) reinforcing entrepreneurship in education policy; and (iii) enhancing a culture for entrepreneurship. Forfás (2007) recognised the need for policy to focus on culture and for HEIs to create opportunities for students to experience entrepreneurship in order to produce the entrepreneurial talent to grow new businesses. The Global Entrepreneurship Monitor (GEM) Report for Ireland 2011 (2012) recommended: (i) a stronger focus on entrepreneurship as a career option; (ii) encouraging creativity and innovation; and (iii) the involvement of business people in career guidance.

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There appears to be a confluence of policy recommendations with a growth in EE provision and this is testimony to the increasing recognition of entrepreneurship as a subject in Irish HEIs (Martin *et al.*, 2011). Despite Cooney and Murray's (2008) claims that EE at third level was still very much in its infancy in Ireland, the GEM Report for Ireland 2011 (2012) claimed that graduate entrepreneurial new venture creation was 10.2% in comparison with the EU average of 6.1% and the United States (US) average of 8.7%. Martin *et al.* (2011) cited a National Council for Graduate Entrepreneurship/Young Entrepreneurs Scheme survey of EE in Irish HEIs showing student engagement rate (SER) was 12% *i.e.,* the percentage of total students enrolled in the sector that engages in EE through either curricular or extra-curricular activities. Comparable SER figures for the UK and EU were 16% and 24% respectively (*ibid*). This proves that whilst much had been achieved, most Irish HEIs are still lagging behind international EE provision at third level (Cooney, 2008).

The Accelerating Campus Entrepreneurship (ACE) initiave (2009) maintained that the absence of an explicit institutional entrepreneurship strategy in HEIs has led to poor communication of existing entrepreneurship supports. Consequently, graduates who had identified commercialisation opportunities for their research were missing out on the encouragement to progress their ideas. Forfás (2007) set out a blueprint to drive entrepreneurship in Ireland and submitted a draft policy statement to the Department of Jobs, Enterprise and Innovation. Whilst the Department developed a final policy statement for the Minister with an expected publication date in early 2008, no policy or strategy has yet emerged (Martin *et al.*, 2011; HETAC, 2012). There was a lack of high-level policy commitment to both EE and entrepreneurship itself *i.e.,* there is no national framework or an articulated institutional strategy for EE that would support education and practice among staff and students at all levels and across all disciplines (*ibid*). The Innovation Task Force (2010) recognised that higher education is central to the innovation economy and requires the government to keep faith with its investment in the sector in order to support human and knowledge development. It highlighted the need for: (i) investment of 3% of GDP in R&D; (ii) more initiatives by the HE sector to cultivate innovation and entrepreneurship at both undergraduate and postgraduate level; and (iii) cultivating entrepreneurial HEIs (*ibid*).

The National Strategy for Higher Education to 2030 *aka* the Hunt Report (2011) recognised entrepreneurship be embedded in official HEI policy, mission statement and practices. This is an important development in that it gave legitimacy to the 'third pillar' of Irish HEIs' mission in a strategic policy document. However, there is a need for sustained government funding for entrepreneurship and EE at third level as short-term funding or frequent changes in funding mechanisms create uncertainty and vulnerability amongst third-level EE projects. Long-term sustainable funding can facilitate the continuing professional development (CPD) of HEI staff, including lecturers and administrators, thereby equipping them with an entrepreneurial skill-set. Ongoing funding would have the additional benefit of supporting the commercialisation and exploitation of new ideas and contribute to the creation of an entrepreneurial HEI.

1.3 Identification of the Research Problem and Rationale

EE is the first, and arguably the most important conduit for embedding an entrepreneurial culture at third level, fostering students' entrepreneurial mindset and developing the supply of future entrepreneurs. Whilst anecdotal evidence suggests that graduate entrepreneurs benefit from EE, there is little empirically rigorous research to support the assumption that it can generate better outcomes of entrepreneurial activity or that graduate entrepreneurs benefit from EE (Brockhaus, 1993; Matlay, 2006; Carey & Matlay, 2007; Nabi & Holden, 2008). Much of the specialist knowledge in EE still relies upon anecdotal evidence of the link between a government-driven expansion of the educational system and an overall increase in graduate entrepreneurship. Heretofore, research has focused upon curriculum development, programme delivery, and quality of provision from the perspective of HEIs and/or lecturers (Matlay, 2012). There is a lacuna of research examining graduate entrepreneurs' perspectives of EE in terms of its effectiveness in their formation as entrepreneurs (Matlay, 2007; Potter, 2008). It appears that little research on EE in Ireland has gone to the heart of what graduate entrepreneurs really think about current EE provision at third level. This research aims to add value to the considerable body of knowledge of EE by conceptualising graduate entrepreneurs' perspectives of EE at third level in their formation as entrepreneurs.

The importance of EE in preparing graduates for self-employment has been highlighted, however, it is evident that critical questions have not been raised or answered regarding the effectiveness of EE in producing sustainable graduate enterprises (Martin *et al.*, 2011; HETAC, 2012). Questions remain regarding the effectiveness of EE at third level and there is a need for an adroit examination of EE at third level because long-term funding for EE will be contingent on its perceived effectiveness. Paradoxically, graduate entrepreneurs' perspectives of EE have been largely overlooked in previous research. This influenced my decision to place graduate entrepreneurs at the heart of this study to examine their perspectives of EE at third level in their formation as entrepreneurs. This study will have three-fold contribution, namely: (i) theory; (ii) practice; and (iii) policy. The findings will add value to the considerable body of knowledge of EE and advance the theory of EE by identifying areas worthy of further research. It will contribute to practice by recommending how HEIs could enhance EE in order to meet the needs of graduate entrepreneurs and it will inform and guide policy in critical areas of education and enterprise.

1.4 Research Aim and Objectives

This research aims to examine graduate entrepreneurs' experiences and perspectives of EE at third level in their formation as entrepreneurs. Inherent in this research aim are the following research objectives:

1. **To contextualise the role of HEIs in enterprise development and entrepreneurship education with a specific focus on the Irish Institutes of Technology;**

2. **To examine graduate entrepreneurs' perspectives of entrepreneurship education at third level *i.e.,* at undergraduate and, where applicable, at graduate level;**

3. **To conduct a detailed case study of a bespoke graduate enterprise programme;**

4. **To examine enterprise enablers' perspectives of the role of HEIs in fostering and supporting graduate enterprise development through entrepreneurship education, at institutional, regional and national level.**

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In order to achieve the overall research aim and objectives, I chose the following research methodology.

1.5 Methodological Approach

I adopted a largely qualitative research approach underpinned by a phenomenological philosophy which I believed was congruent with the overall research aim, objectives, and my own research experience. The primary data collection method was semi-structured interviews with the graduate entrepreneurs and enterprise enablers but it also incorporated quantitative data collection methods *i.e.*, e-questionnaires. One of the reasons I chose this topic was the access I would have to the key stakeholders in enterprise development in the South East region of Ireland. I believed that the South East Enterprise Platform Programme (SEEPP) would be a relevant case study as it is a year-long rapid business incubation programme aiming to develop the entrepreneurial skills of graduate entrepreneurs in the region. SEEPP offers participants: (i) training tailored to the needs of start-ups; (ii) funding; (iii) mentoring; (iv) networking; and (v) incubation facilities. SEEPP aims to: (i) nurture and support innovative start-ups in the region; (ii) support the creation of sustainable, regional employment; (iii) support companies in developing new export markets; (iv) develop companies that can transfer to the Enterprise Ireland's HPSU division; (v) develop the participant's business skills; (vi) support innovation networks and knowledge sharing; and (vii) assist the participants to evaluate current and future business opportunities. It is delivered over an academic year and provides participants with an applied learning environment in which to hone their business development skills relevant for planning and starting their business. I distributed an e-questionnaire to 150 past participants of SEEPP and conducted semi-structured interviews with 30 graduate entrepreneurs *i.e.*, 15 SEEPP participants and 15 non-SEEPP graduate entrepreneurs. A guiding criterion for the selection of the graduate entrepreneurs was that they must have established their businesses between 2001 and 2010. Mindful that the data generated could be interpreted through the prism of my own preconceptions I made every effort to counter bias through triangulation, therefore, I conducted semi-structured interviews with 15 enterprise enablers *i.e.*, eight SEEPP lecturers and seven EDA personnel.

1.6 Structure of Dissertation

This dissertation comprises nine chapters as follows: **Chapter 1** provides a contextual background to this study and details the research aim, objectives and provides an overview of the structure of the dissertation. **Chapter 2** examines the germane literature relating to entrepreneurship and approaches to EE at third level, the role of entrepreneurship lecturers and the difficulty in measuring the effectiveness of EE. It concludes with a theoretical framework for EE at third level. **Chapter 3** examines Irish enterprise policy and the role of higher education in enterprise development. **Chapter 4** details the research aim, objectives and questions and the methodological process employed in order to vindicate the choice of research design. **Chapter 5** profiles the graduate entrepreneurs who participated in this study and examines their motivation for self-employment. **Chapter 6** analyses the results of the semi-structured interviews with 15 SEEPP graduate entrepreneurs and with 15 non-SEEPP graduate entrepreneurs. **Chapter 7** analyses 15 enterprise enablers' perspectives of EE at third level. **Chapter 8** discusses the research findings *vis-à-vis* the germane literature, policy and offers a revised conceptual framework for EE at third level. **Chapter 9** concludes this study by outlining the salient research conclusions and recommendations of this research. It also highlights the contribution and the limitations of this research and recommends future research to advance the field of EE.

Figure 1.1 Overview of Dissertation Structure

<div align="right">

Source: Current Research
</div>

1.7 Conclusion

The demise of the Celtic Tiger has been a catalyst for the government's focus on entrepreneurship to rejuvenate the beleaguered Irish economy. Consequently, there is increasing pressure upon HEIs to produce greater numbers of graduate entrepreneurs. HEIs' role has evolved from one that was primarily concerned with teaching and research to one where each HEI has an increased mission to encompass economic and social development. EE has become a panacea for creating greater numbers of graduate entrepreneurs yet there is a lacuna of empirical research and evidence to substantiate HEIs' claims that graduates benefit significantly from EE. A fundamental flaw in the extant literature is an absence of graduate entrepreneurs' perspectives of EE at third level and its impact on their formation as entrepreneurs. By placing graduate entrepreneurs at the heart of this study, this research aims to give voice to their perspectives of EE at third level. Chapter 2 will examine the germane literature relating to entrepreneurship, the emergence of entrepreneurial HEIs and their role in enterprise development with a particular focus on EE.

Chapter 2 Literature Review

"If I were to wish for anything, I should not wish for wealth and power, but for the passionate sense of the potential, for the eye which, ever young and ardent, sees the possibie. Pleasure disappoints, possibility never. And what wine is so sparkling, what so fragrant, what so intoxicating, as possibility!"

Kierkegaard (1813-1855)

2.0 Introduction

There has been considerable growth in EE at third level, and the content of related curricula is regarded as symptomatic of widespread government belief in the positive impact that entrepreneurship can have on the socio-economic and political infrastructure of a nation (Matlay & Carey, 2007; Matlay, 2007; Carey *et al.*, 2011; Matlay, 2012). EE is gaining credibility given the growing importance of small and medium enterprises (SMEs) to national and international economies and the need for graduates to acquire a wide range of entrepreneurial skills in order to increase graduate entrepreneurship (Mitra, 2002; Matlay, 2012). This has led to an expedient expectation that more as well as better EE would result in a proportionate increase in both the number and the quality of entrepreneurs entering an economy (Matlay; 2005; Carey *et al.*, 2011). Despite the growth in research regarding EE, there is limited empirical evidence to support the assumption that EE can generate greater entrepreneurial outcomes or prepare graduates for entrepreneurial careers (Matlay, 2007; Potter, 2008; Gibb *et al.*, 2009). This gives rise to key questions: (i) are entrepreneurs born or made? or (ii) with the right EE programme can people be educated to be entrepreneurial in their professional lives? This chapter conceptualises EE at third level by discussing and critiquing literature relating to five central themes, namely: (i) entrepreneurship; (ii) entrepreneurial HEIs; (iii) approaches to EE at third level; (iv) the role of entrepreneurship lecturers; and (v) the difficulty in measuring the effectiveness of EE. The intention of this approach is to provide a theoretical framework for EE at third level, against which the research findings will be discussed in Chapter 8.

2.1 Entrepreneurship: An Evolving Definition

Entrepreneurship is part of the Zeitgeist; it has permeated the consciousness of the general population largely due to the reality television show 'Dragons' Den' which has succeeded in 'humanising' the concept of entrepreneurship. Entrepreneurs are regarded favourably for their obsessive opportunity awareness and their ability to make money from the exploitation of opportunities (Schumpeter, 1934; Henry & McGowan, 2007; Taatila, 2010). The most distinctive trait of entrepreneurs is their ability to discover, recognise and exploit opportunities, a characteristic which separates them from wage earners (Greene-Beatty & Fenton, 2011). The notion of entrepreneurs pursuing profit and opportunity in the context of risk and ambiguity has persisted over time and has influenced the contemporary understanding of entrepreneurship (Cantillon, 1755; Say, 1855). Kirsner (1973) maintained that entrepreneurs are alert to opportunities, whereas Schumpeter (1934) believed that entrepreneurs create them. Mitchell, Busenitz, Lant, McDougall, Morse and Smith (2002, p.96) maintained that:

> Entrepreneurship is about individuals who create opportunities where others do not, and who attempt to exploit those opportunities through various modes of organising, without regard to resources currently controlled.

In common parlance, entrepreneurship suffers from the myth that it only concerns the creation of a new business. This understanding of entrepreneurship has been influenced by Cantillon (1755) who introduced the word to the economic lexicon by defining an entrepreneur as someone with the foresight and confidence to operate in conditions where costs may be known but rewards unknown. Say (1855, I.VI.19) developed Cantillon's thesis by defining entrepreneurs as 'individuals who shift economic resources from an area of lower productivity to an area of higher productivity and greater yield.' Korsgaard and Anderson (2011) argued that entrepreneurial activity has the potential for multiple forms of transferable value which extend beyond economic outputs. Entrepreneurship means different things to different people ranging from: creativity and innovation, to particular personality traits (HETAC, 2012).

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Sharma and Chrisman (1999) maintained that entrepreneurship encompasses acts of organisational creation, renewal, or innovation that occur within or outside an existing organisation. Thus, entrepreneurship is gaining a broader meaning *i.e.,* the ability of an individual possessing a range of essential skills and attributes to make a unique, innovative contribution to the world of work, whether in employment or self-employment (Bridge, Hegarty & Porter, 2008). It is a way of thinking and behaving that fosters an ingenious spirit and improves mankind (Timmons, 2008, in McGowan, 2012). Similarly, the European Commission (EC) (2007, p.1) defined entrepreneurship as:

> An individual's ability to turn ideas into action. It includes creativity, innovation and risk taking, as well as the ability to plan and manage projects in order to achieve objectives. This supports everyone in day-to-day life at home and in society, makes employees more aware of the context of their work and better able to seize opportunities, and provides a foundation for entrepreneurs establishing a social or commercial activity.

Whilst the majority of students are unlikely ever to establish their own business, they may make a unique, innovative and valuable contribution to her/his employment (McGowan, 2010; Carey *et al.*, 2011). Entrepreneurial activities in employment are often referred to as 'intrapreneurship' or corporate entrepreneurship. Social entrepreneurship seeks to solve or alleviate social or environmental problems and to achieve social change within a social or community context (Bridge *et al.*, 2008; Cooney & Murray, 2008; Blenker, Korsgaard, Neergaard & Thrane, 2011). The multiplicity of definitions of entrepreneurship is depicted in Figure 2.1:

Figure 2.1 Definitions of Entrepreneurship

Source: Current Research

Providing a definition of entrepreneurship, however, becomes problematic when one takes into consideration the variety of 'disciplinary' and 'sector specific' factors which impact upon entrepreneurship. For example, the broad diversity of academic disciplines within HEIs and the range of economic, social, cultural, industrial and corporate sectors in the world of work from which entrepreneurs emerge. This fuzziness surrounding an accurate and appropriate definition becomes further confounded when 'context' factors (e.g., location, county or locale) and type of organisation (educational, social or cultural) are taken into consideration. However, across the different forms of entrepreneurship, a core theme exists in the form of a value-creating entrepreneurial meta-competence, an entrepreneurial mindset, or method which can be applied in multiple walks of life and not only in starting one's own business (Gibb, 2002; Sarasvathy & Venkataraman, 2011; Blenker et al., 2011).

Schumpeter (1942) and Drucker (1985) argued that innovation is the specific instrument of entrepreneurship, the act that endows resources with a new capacity to create wealth. In other words, entrepreneurs focus on innovation, and innovation is rooted in creating change and endowing existing resources with new wealth (Goossen, 2010). Gibb et al. (2009) concluded that the notion of 'creative destruction' means that entrepreneurs continually challenge the status quo or displace existing products or services, and replace them with improved or more dynamic offerings. Schumpeter (1936) reserved the term entrepreneurship for the creative activity of innovation, and identified five indicators of innovation, namely: (i) developing new products and services; (ii) developing new methods of production; (iii) identifying new markets; (iv) discovering new sources of supply; and, (v) developing new organisational forms. After the initial start-up phase, Schumpeter (1936) argued that entrepreneurs settle down to the task of managing their business, thus, ceasing to be entrepreneurs. Schumpeter (1934) maintained the belief that successful entrepreneurs bear certain characteristics that are independent of education, training or upbringing. He concluded that an entrepreneur is a 'special person', an innovator, and suggests that these extraordinary people have the ability to bring about extraordinary events (ibid).

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Within the nature or nurture debate of entrepreneurs, there is a growing acceptance of entrepreneurship as a systematic, organised, rigorous discipline that can be learned, mastered, taught, or at least encouraged, through EE (Anselm, 1993; Drucker, 1993; Gorman, Hanlon & King, 1997; Drucker, 2002; Kuratko, 2003; Dorf & Byers, 2005). Sarasvathy and Venkataraman (2011) concluded that entrepreneurship can unleash the potential of human nature through principles and mechanisms that should be taught to all learners, regardless of their characteristics and personalities. Likewise, McGowan (2010) concluded that: (i) everyone has the potential to behave entrepreneurially; (ii) people can be educated to become more entrepreneurial; (iii) entrepreneurial people are active in all walks of life; and (iv) the more people realise their entrepreneurial potential, the better. However, despite a significant increase in the number of EE courses in HEIs, a commonly held notion persists that entrepreneurs are born and not made. Engel and Charron (2006) cautioned that HEIs cannot plan entrepreneurship but they can support it through pedagogy, skills development and networking opportunities. Kirby (2004) highlighted that self-employment was a traditional route for those with little formal education but he noted that in a knowledge economy, EE is likely to be of increasing value. Given its broader definition, it does not serve HEIs to limit entrepreneurship as an arcane activity limited to just Business students; rather it should be regarded as an everyday practice for all students (Blenker *et al.,* 2011; Green, 2012). At the *122nd Opening Convocation Ceremony,* the President of Stanford University, John Hennessy (2012, p.4) told incoming students:

> Your undergraduate education is a foundation for the rest of your life. It is a once in a lifetime journey. It is much more than just a ticket to your first job. It is an opportunity to develop the skills and passion for being a lifelong learner in areas related to and outside of your future career.

This is not an idealistic aspiration for 'freshers' but it is founded upon his experience of leading one of the most entrepreneurial universities in the world. Green (2012) recommended that entrepreneurship should be central to the academy and this requires the legitimisation of self-employment as a viable career option for graduates (EC, 2006; Gibb & Hannon, 2006). This involves challenging and inspiring young people with an entrepreneurial mindset by nurturing a new culture of EE and embedding entrepreneurship within the curriculum (Bewick, 2011).

Increasingly, employers and governments are calling for graduates with a range of enterprising skills or an entrepreneurial mindset with foci upon creativity, capacity for innovation, networking relationship management and risk-taking. Florida (1999) believed that HEIs' primary role as a nation's 'primary knowledge source' is to produce graduates or 'knowledge workers'. Traditionally, HEIs have focused on preparing students and graduates for employment, however, Gibb and Hannon (2006) argued that a degree is no longer a 'voucher for a job for life', rather, it is merely an 'entry ticket in to the world of work'. Employability is a key concern of graduates, however, the global economic downturn has had an adverse impact on graduate employment thus rendering the notion of a job for life as a fallacy. Graduates are forced to consider multiple career options such as employment, postgraduate study, gap years, emigration, internships and self-employment (Gibb *et al.*, 2009; Matlay, 2012). Handy (2001) likened future workers to 'fleas' with the agility and skills to 'hop' from one career to another unlike the 'elephants' of the past who worked for a large corporation in what was essentially regarded as 'a job for life'. He predicted that future employees would have a portfolio of careers throughout their lives, an idea that has been embraced by the Hunt Report (2011, p.37):

> Whether as employees of established leading companies, as entrepreneurs in new start-up enterprises, or as social innovators, Irish graduates need to be job shapers and not just job seekers.

Taatila (2010) argued that education teaches people more about risk aversion instead of helping them look at the potential of self-employment *i.e.*, focusing on transmitting academic knowledge whilst ignoring the psychological growth of students. Whilst this is not necessarily a negative issue, generally speaking, from the perspective of EE, it is neither progressive nor positive. The following section will examine the paradigm of the entrepreneurial HEI and the fundamental question: Are HEIs paying lip service to the enterprise agenda or do they have a genuine desire to integrate and anchor entrepreneurship within their mission, policies and practices in order to become entrepreneurial themselves?

2.2 Entrepreneurial Higher Education Institutions

Newman (1854) held a utopian vision for a university as the preserve of knowledge and intellectual debate. Over the past century, there has been a fundamental change in the nature of the work carried out by HEIs and their mission has evolved from teaching to include research, the development of new knowledge, and entrepreneurship through teaching, research and the commercialisation of research via knowledge transfer (Flexner, 1930; Leydesdorff & Etzkowitz, 1998; Etzkowitz *et al.*, 2000; Barry, 2004; Neck *et al.*, 2004; Potter, 2008). This is what Etzkowitz *et al.* (2000) referred to as the 'entrepreneurial university' whose purpose is to transform academic knowledge into economic and social value. The current Irish Minister for Education and Skills posited that higher education in its traditional role as a stronghold of independent thought, autonomy and uncorrupted inquiry, is ideally placed to identify and articulate innovative ways forward (Quinn, 2011). Slaughter and Leslie (1999) referred to fundamental change in the nature of the work being carried out by HEIs and academics as 'academic capitalism'. They linked the rise of academic capitalism to the new managerialism in HEIs which is anathema to some academics (*ibid*). McCay (2002, p.2) condemned HEIs' third mission as 'a shady villainy, a fifth column, gnawing away at the basic values that define a university, a wolf masquerading as a milch-cow'. The extrinsic value of higher education is at odds with the traditional notion of a HEI as the locus of intellectual debate with its focus on liberal education for its own sake. Garvin (Irish Times, 1 May 2012) argued that the notion that knowledge is an end in itself has become alien to some academics and HEIs' research agendas are being driven by the applied research demands of industry. He posited:

> One of the human race's greatest inventions, the university has as its core the idea of the free exercise of intelligent and well-educated people who have the secular equivalent of a vocation to the work to which they turned their talents and effort. Since the takeover of many universities by commercially minded people, this central core is under threat. The pressure to engage in applied; intellectually derivative and financially profitable research at the expense of traditional free inquiry has intensified.

The Executive Chairman of Google, Eric Schmidt (2007) approved this change by stating that researchers have become intellectual mercenaries for product teams: they are there to solve immediate needs.

The separation of teaching, research and business activities into discrete functional silos has become less sustainable and the notion of academics hiding away in their ivory towers pursuing blue sky research been challenged by both government and industry and, indeed, by many academics themselves (Etzkowitz, Webster, Gephardt, & Terra, 2000). Goethe (1749 -1832) was prescient in his belief that knowing is not enough we must apply, willing is not enough, we must do. The academy is looking beyond research to include integration and application of knowledge and ideas (Flexner; 1930; Bok, 1982; Etzkowitz *et al.*, 2000). Arguably, all parts of the education system have been influenced by the utilitarian argument of the extrinsic and economic value of having a better-educated workforce (Ó'Foghlú, 2010). HEIs need to move towards the antithesis of traditional ivory tower of learning and research to economic development through the creation of a supportive environment or ecosystem within which graduate entrepreneurship can flourish. Notwithstanding a practical, policy-driven approach seeking to encourage the flow of new knowledge to industry, this approach may fail to incorporate a broader understanding of the intrinsic value of education beyond economic outputs. Maskell and Robinson (2011) critiqued the uneducated nature of the policy discussion informing the transformations that are taking place at third level. Whilst Bok (2003, in Gibb *et al.*, 2009) cautioned against the 'prostitution' of HEIs, the Provost of Trinity College Dublin, Patrick Prendergast (Irish Times, 26 August 2011) proffered a more measured view:

> We must remember what universities are actually intended to do and what they have done successfully as a cornerstone of society for generations. They are educational organisations dedicated to the pursuit of knowledge – so while they must be pro-commercial, they will lose their way if they put commercial activities ahead of the education of students by academics that are active in research at the frontier of their discipline.

Despite some academics' resistance to the enterprise agenda, McGowan (2010) argued that this need not be an offence to what HEIs are about, rather it should be a natural extension of their mission. Gibb *et al.* (2009) maintained that HEIs are entrepreneurial when they are unafraid to maximise the potential for commercialisation of their ideas and create value in society.

The entrepreneurial HEI represents an inter-disciplinary, interactive environment to facilitate academic/graduate entrepreneurship (Etzkowitz & Leydesdorff, 2000; Barry, 2004). Etzkowitz *et al.* (2000) claimed that this raises fundamental questions regarding mission and governance for HEI leaders.

2.3 Entrepreneurial Leadership in Higher Education

An entrepreneurial HEI embraces a wide variety of different typologies of HEIs with different missions and strategies including those with a strong research tradition as well as newer organisations (Clark, 1998; OECD, 2000; Currie, 2002; Barsony, 2003; Gibb & Hannon, 2006; Kirby, 2006; Mohrman *et al.*, 2008; Gibb *et al.*, 2009). Given the idiosyncratic nature of each HEI *vis-à-vis* focus, individual strengths and its regional hinterland, there is no single blueprint for developing an entrepreneurial HEI (Geiger, 2006; Mohrman *et al.*, 2008). Nonetheless, Gibb *et al.* (2009) concluded that an entrepreneurial HEI requires a strong and committed Governing Body, HEI leadership, an enterprise infrastructure and introducing cross-disciplinary structures to complement EE. Brennan, McGovern and McGowan (2007) cautioned that the presence of entrepreneurial activity within a HEI does not necessarily make it entrepreneurial. The notion that HEIs are entrepreneurial based on their level of commercialisation of R&D and formation of spin-offs is naïve and has highlighted the need for a more nuanced debate on the leadership and values required for entrepreneurship to flourish in HEIs. Governments are calling on HEI management to show leadership in the promotion of entrepreneurship through courses and knowledge exchanges with enterprise. This can instill an enterprise culture and promote a greater awareness of the forms and value of entrepreneurship amongst staff and students. The concept of an entrepreneurial HEI is distasteful to some academics: Garvin (2012) derided 'indescrible grey philistinism' and 'hideous management-speak' increasingly characterising the public culture of HEIs. Laffan (2010, in Garvin, Irish Times, 1 May 2012) maintained that academic staff were 'throttled' by managers and bureaucrats 'some of whom do little else except hinder us academics from getting on with our teaching and research'. Higher education is delivered within an evolving national policy framework set out by government because the former is largely dependent upon the latter as its main funding (Gibb *et al.*, 2009).

Given reduced Exchequer funding, there is considerable pressure on HEIs to seek a greater proportion of their funding from alternative sources and pursue research which will contribute to society *(ibid)*. This has resulted in more commercially focused HEIs, capable of sourcing alternative income streams and achieving improvements in productivity in the delivery of higher education. HEIs will be assessed not only on their teaching and research functions, rather, they will also be judged on how they contribute to the development of the knowledge economy, their links with industry and high visibility activities such as EE; spin-offs and spin-ins; links with SMEs/industry; knowledge transfer; the commercialisation of R&D; campus incubators; and the development of diverse income streams. Brady *et al.* (Irish Times, 3 March 2010) maintainted that this requires 'a profound cultural shift from a carping, destructive approach to one characterised by a more positive, can-do attitude; from an insular approach to one that is truly global; from a fear-ridden approach to one that encourages risk-taking and a sense of adventure'. There is a need to regard entrepreneurship as a corporate rather than an individual phenomenon as the best guarantee for the sustainability of entrepreneurship within a HEI is to change it into an entrepreneurial organisation (Van der Sijde *et al.*, 1999; Brennan *et al.*, 2007). What holds for the integration of entrepreneurship in the academic curricula also holds for the commercialisation of R&D and knowledge through spin-off companies.

Entrepreneurship within a HEI manifests itself through: (i) the development of an interface environment in HEIs to link academia with industry; (ii) the development of internal capacities to administer services to industry; (iii) a cultural change in the academic community's perception of the commercialisation of higher education research; (iv) a shift in the motivation of academic staff to engage in partnerships with industry; (v) the development of campus incubators; and (vi) a growth in entrepreneurship activities including EE (Neck *et al.*, 2004). It would be naïve to assume that HEIs work independently of the macro-entrepreneurial or innovation ecosystem comprising entrepreneurs and SMEs; investment in R&D; the education system, particularly HEIs; finance; the tax and regulatory environment; and public policy and government institutions (Innovation Task Force, 2010; Atkins, 2012).

At the heart of any attempt by any HEI to promote entrepreneurship is its relationship with the wider enterprise community and they draw their relevance and importance from the strength of their connection to the society they serve (Mitra, 2008; Quinn, 2011). The engagement mission is, therefore, rightfully given prominence as the third pillar of the higher education mission. HEIs are reservoirs of ability and talent which can enrich and be enriched by greater interaction with business, industry and the community (Atkins, 2012). Such interactions do not just happen through serendipity or 'ad hoc' arrangements; rather there is a need to create appropriate structures, incentives and opportunities so as to strengthen HEI interactions with regional and national enterprise communities. Barry (2004) argued that an economy that fosters close interactions between industry/SMEs, HEIs and government gains competitive advantage through quicker information diffusion and product deployment. The traditional concept of one-to-one, top-down relationships between the academy and enterprise has become largely obsolete given the development of effective networks involving HEIs, entrepreneurs and enterprise development agencies (EDAs). Such unilateral relationships have been replaced by the triple helix model of multiple relationships which offers a meaningful framework for understanding HEI academic entrepreneurship and the evolution of a complex ecosystem of inter-relationships between HEIs, industry/SMEs and government. Figure 2.2, Etzkowitz and Leydesdorff's (1999) 'triple helix model', depicts multiple reciprocal relationships at different points in the process of knowledge capitalisation, wherein the first dimension is internal transformation of each of the actors, such as the development of lateral ties amongst companies through strategic alliances or an assumption of an economic development mission by HEIs.

Figure 2.2 Triple Helix Model of Government-HEI-Industry Relationships

Source: Etzkowitz and Leydesdorff (2000, p.111)

The Triple Helix model is designed to promote entrepreneurial and innovation initiatives through strategic alliances. Whilst an alliance is usually encouraged by government, the reality is that government does not control it (Etzkowitz et al., 2000). Once an initiative based on this model becomes successful, governments tend to withdraw their support, in the hope that initiatives will become self-funding through collaboration between industry and academia. The synergy between the three actors serves to create an appropriate environment to promote conditions to increase a firm's innovation. The triple helix model suggests that each actor can assume the role of other actors; in effect, HEIs may assume entrepreneurial roles or tasks such as commercialising R&D or establishing campus companies, whereas, industry may assume academic roles such as identifying postgraduate research opportunities. In some instances, government or EDAs may assume the role of venture capitalist to SMEs. The second dimension is the influence of one helix upon another e.g., the role of government in implementing policy. The third dimension is the creation of trilateral networks, formed for the purpose of coming up with new ideas and formats for high-tech development (ibid).

Barry (2004) and Jordan and O'Leary (2008) concluded that it would be overstating the case to argue that higher education-industry partnerships initiate economic development. Nonetheless, it is essential to build strategic alliances and relationships between HEIs, SMEs and EDAs but the scope and quality of knowledge or intellectual capital needed to sustain and drive economic growth. By cultivating such relationships, there is a need to balance three key elements of HEIs' missions, namely: (i) generating new knowledge i.e., research and intellectual capital; (ii) passing this knowledge to future generations i.e., teaching and the generation of human capital; and (iii) serving the needs of industry, commerce and the wider social community (Goddard, Charles, Pike, Potts and Bradley, 1994). This requires balancing the needs and demands of SMEs whilst not compromising the academic integrity of the HEI for short-term commercial gains. It is ultimately the responsibility of individual HEI management to align the interests of the academic and the SME community through clear objectives, priorities, metrics and incentives.

Numerous studies on the relationship between HEIs and SMEs have examined the economic value of HEI activity, the contribution of the staff and students to the economy, spin-off companies, and the spill-over effects of knowledge (Mitra & Formica, 1997; Mitra & Manimala, 2008; Jordan & O'Leary, 2008). Whilst there is little doubt of the benefits to regional and national economies of successful interactions between HEIs, SMEs and EDAs, Florida (1999) argued that policy makers have overstated the degree to which HEIs can drive regional and national economies. Entrepreneurial HEIs can encourage the development of spin-off companies *i.e.*, companies resulting from the commercialisation of HEI-led R&D and/or academic or student initiative. Whilst the notion of spin-offs is well developed in the US, it is a less developed concept in Europe and Ireland with the EU lagging behind in terms of spin-off companies. Dahlstrand (2008) concluded that a well-functioning spin-off policy should encourage entrepreneurship in general or focus on the creation of high-growth firms and recommended that policy needs to include a long-term perspective and incorporate the nature of indirect economic effects. This is referred to as a 'technology push strategy', where government and HEI policies focus on offering support to new venture creation and the development of spin-offs.

Campus incubators provide a focal point for campus entrepreneurship and have evolved from providing entrepreneurs with mere workspace to providing them with access to the host HEI's embedded knowledge *i.e.*, academic staff, resources and facilities. Entrepreneurs, many of whom are graduates, place a high value on a campus incubator address but increasingly, they place a greater emphasis on the value added support services such as training, mentoring and networks, as well as on the association with and access to a reputable HEI's academic staff, expertise, facilities, manager's expertise, enterprise networks, student and graduate placements ((Fenton, 2005). By initiating real synergies between the student, academic and enterprise communities, campus incubators can provide a stimulating and supportive environment for campus enterprise development. As many campus incubators are located off-campus, therefore, opportunities for interaction between the student, academic and enterprise communities are being squandered largely because of geography (Crehan, Barry & Fenton, 2011).

Gibson (2011) spoke of the importance of visibility for the promotion and development of entrepreneurship on campus and many HEIs have developed hatcheries *i.e.,* incubation spaces for undergraduate students to trial their business ideas. This sends an important signal to both the internal and external communities of its commitment to the promotion of the enterprise agenda. Each of these entrepreneurial initiatives is laudable for creating awareness and visibility of the enterprise agenda, however each is only one constituent of an entrepreneurial ecosystem. Carey *et al.* (2007) suggested that building an enterprise culture and encouraging dynamic start-ups have the greatest implications for HEIs. There is a need to match the investment in the physical enterprise campus with human capital development and EE is perceived by many as the most cost-effective and speedy way to increase both the quality and the quantity of entrepreneurs entering an economy (Matlay, 2008; Carey & Matlay, 2010; Matlay, 2012). Consequently, HEIs are placing a greater emphasis on EE to stimulate entrepreneurial mindsets amongst academic staff, students and graduates. The following section will explore EE at third level in terms of its genesis, focus, effectiveness, pedagogical approaches, and the role of lecturers.

An entrepreneurial HEI can foster and support entrepreneurship through the creation of an entrepreneurial ecosystem comprising layers of mutually-interacting organisational initiatives and practices, engaging external as well as internal parties (Cooney, 2011; HETAC, 2012; Atkins, 2012), as depicted in Figure 2.3.

Figure 2.3 Entrepreneurial Ecosystem within a Higher Education Institution

Adapted from: Neck *et al.* (2004); Hannon (2006); Gibb *et al.* (2009); Atkins (2012)

This figure represents a somewhat idealistic depiction of the entrepreneurial ecosystem which is at odds with the traditional structure of a HEI with its origins in the industrial age. Consequently, many HEIs are structured in functional silos mirroring industry (Wilson, 2008; Robinson, 2010). According to Hederman (2011, p.5), this paradigm of education has persisted over time:

> We have borrowed our education systems from armies, conquerors, mathematicians, scientists, technologists ... The industrial revolution, the scientific revolution, the technological revolution, the cybernetic revolution: these have all transformed our lives and we are grateful to them. We know also that they need young hands to keep them going, to make them work, to maintain the infrastructure of our Western World. But there is more to life than science; there is more to science than technology. That more is an inner garden of the imagination which each of us should be allowed to cultivate, where we should be encouraged to dwell for at least some part of our days and lives.

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There is a need to abandon the industrial metaphor of 'siloing' knowledge into distinct, traditional disciplines and move instead towards a multi-disciplinary, more fluid flow of knowledge. Speaking at the *2010 Technology, Entertainment and Design (TED) Conference*, Robinson (13 February 2010) concluded that:

> We have to go from what is essentially an industrial model of education, a manufacturing model which is based on linearity... to a model that is based more on principles of agriculture and recognise that human flourishing is not a mechanical process; it's an organic process. And you cannot predict the outcome of human development. All you can do, like a farmer, is create the conditions under which they will begin to flourish.

This has resonance with the entrepreneurial ecosystem depicted in Figure 2.3 (page 27) but it requires challenging the orthodoxy of higher education as HEI leaders need to take responsibility for: (i) developing sustainable entrepreneurial ecosystems; and (ii) unequivocally taking responsibility for understanding and championing the cause of entrepreneurship and EE (Green, 2012; HETAC, 2012). As commercial exploitation of HEI research becomes a key factor in the generation of economic wealth, the traditional educational function of HEIs as disseminators of knowledge has evolved. It is important to recognise that HEIs are no longer the sole provider of new ideas or innovation given that research is conducted increasingly through bi-lateral, inter-regional and global networks, with inter-locking innovation systems because complex problems require collaborative solutions (Ó'Foghlú, 2010). Hybrid organisations are being invented in the transition from statist and laissez-faire triple helix regimes to one of overlapping, relatively independent spheres in which each maintains its primary purpose whilst also assuming the role of the other (*ibid*). The challenge for HEIs is to mobilise themselves towards the development of strategic partnerships with industry/SMEs and government-funded EDAs to harness the embedded knowledge of their individual HEI and to facilitate knowledge transfer from HEIs to SMEs and *vice versa* (Etzkowitz & Goktepe, 2005). This can be achieved through greater access to each HEI's expertise, core competencies, embedded knowledge and research capability of academic staff. HEIs can work with SMEs to develop student projects, student placements, graduate placements and postgraduate research.

2.4 Entrepreneurship Education at Third level: The Struggle for Legitimacy

According to Heinonen, Poikkijoki and Vento-Vierikko (2005), EE refers to activities aimed at developing enterprising or entrepreneurial people and increasing their understanding and knowledge of entrepreneurship. Jones (2006) maintained that given the infrastructure of modules, programmes and teaching positions in HEIs, entrepreneurship has arrived as an essential subject area. The trend for EE has been replicated in many countries in Europe and in parallel to the growth in academic infrastructure; a whole corpus of research literature has been developing at the interface of entrepreneurship and education (Bechard & Gregoire, 2005). There is heterogeneity of EE across all levels which has been matched by a growing rhetoric that demands even more and better programmes (Carey et al., 2011). EE initiatives have been well documented in the US (Solomon, 2007; Kuratko, 2005), England (Matlay & Carey, 2007) and Ireland (de Faoite, Henry, Johnson & Van der Sijde, 2003; McGowan, 2010; Martin et al., 2011).

Jones (2010) contended that EE as a field of study lacks basic legitimacy as a source of value within the broader education community in HEIs. McGrath (2008) highlighted that detractors of EE argue that individuals can learn but are unlikely to be taught; too many EE programmes focus solely on the skills and know-how that a small business needs; Business Schools need to change both their content and process of learning; students need more than SME management skills; EE will fail if it is conceived narrowly as setting up businesses as part of vocational education and training, and consequently is not integrated into the student's overall studies. Despite these concerns, EE is gaining credibility because of the growing importance of SMEs to international economies and the need for graduates to acquire a wide array of entrepreneurial skills (Mitra, 2002; Matlay, 2012). The onus is on lecturers to provide a logical justification that EE is a feasible and desirable form of education in society. Anselm (1993) and Wilson (2008) concluded that the earlier a student's exposure to entrepreneurship, creativity and thinking skills, the more likely s/he will be to consider an entrepreneurial career.

Ideally, entrepreneurial competence should be acquired throughout lifelong learning, thus, there is a growing interest in how entrepreneurial skills and attitudes might be developed earlier. The Consortium for Entrepreneurship Education (2004) recommended that EE should start as early as possible in the education cycle as depicted in Figure 2.4.

Figure 2.4 Entrepreneurship Education: A Lifelong Learning Process

Basics	Competency Awareness	Creative Applications	Start Ups	Growth
Understanding basics of the economy & career opportunities, appreciation of the need for skills; motivation to learn.	The language of business; appreciation of small business issues; competency development.	The exploration of business ideas & creation of business plans.	New venture creation & the further development of competencies; Access available supports.	Coping with the issues of expansion; ongoing learning and skill development.

Adapted from: Consortium for Entrepreneurship Education (2004)

EE at third level originated in the US, where Professor Miles Mace (Harvard University) offered the first graduate courses in entrepreneurship in 1948 (Katz, 2003; Blenker, Korsgaard, Neergaard & Thrane, 2006). EE is a feature of most US HEIs, whereas, in contrast, it only substantially began to enter the higher education curriculum in Europe since the 1990s (Wilson, 2008). Essentially, Europe is in 'catch up' mode in terms of EE provision and entrepreneurship is still seeking academic credibility and a natural home within academia. A fundamental problem in EE provision at third level is that it is too rooted in the Business-school based model.

The reality is that the majority of entrepreneurship modules/programmes reside mainly in Business Schools which explains the lack of diffusion into non-Business curricula. There are two main approaches to integrating EE in HEIs, as espoused by Streeter, Jaquette and Hovis (2002), namely: (i) a 'focused approach' or (ii) a 'unified approach'. In a focused approach, faculty and students are situated exclusively in the Business School e.g., Harvard with its entrepreneurial programmes exclusively targeting Business School students. On the other hand, a unified approach adopts a broader, campus-wide and discipline-based approach and targets students both within and outside of the Business School (Pittaway & Hannon, 2007). Over the past decade, there has been a strong trend towards HEI-wide EE and it is continuing to gain momentum, particularly in the US (Hoffmann, May Vibholt, Larsen & Moffett, 2008). Streeter and Jaquette (2004) concluded that there are two versions of the unified approach: (i) the magnet model and (ii) the radiant model. In a magnet or centralised model, students are drawn from a broad range of disciplines and students are attracted to minor electives. Typically, entrepreneurial activities are offered by the Business School, but attended by students from all over the HEI. All resources and skills are united into a platform that helps facilitate the co-ordination and planning of entrepreneurial activities e.g., Massachusetts Institute of Technology, where EE is administered by the Sloan School of Management. Conversely, in a radiant or decentralised model, individual faculties are responsible for facilitating the integration and visibility of entrepreneurship activities and EE can be adapted to the specific structure of individual faculties. Effectively, there is a diffusion of EE across faculties, where students access EE at School level e.g., Cornell University.

Carey et al. (2007) concluded that successful EE at third level requires a combination of 'buy-in' from staff, students and the HEI, as well as the resources to fully equip and create better entrepreneurship lecturers. Building on the paradigm of the entrepreneurial ecosystem, successful EE requires 'buy-in' from two more stakeholders, namely the wider enterprise community and parents who can play a key role in influencing their children's career choice.

Jamieson (1984), Henry, Hill and Letich (2003) and Hyatti and Kuopusjärvi (2004) acknowledged that EE has wide-ranging aims, including: (i) education *about* enterprise; (ii) education *for* enterprise; (iii) training *in* enterprise. Garavan and O'Cinneide (2004) concluded that the objectives of EE are to: (i) acquire knowledge relevant to entrepreneurship; (ii) acquire skills in the use of techniques; (iii) identify and stimulate entrepreneurial talent; (iv) undo the risk-averse bias of many analytical techniques; (v) develop, enjoy and support enterprise; (vi) develop attitudes to change; and (vii) encourage start-ups and new ventures. There appear to be persistent difficulties regarding the conceptualisation of EE and contextual fragmentation given the lack of a universally accepted definition of entrepreneurship (Matlay, 2012). This has led to ambiguity and a lack of uniformity in the conceptual framework, curricula pedagogical design and approaches to EE, learning outcomes, and assessment (Gibb, 1993; Matlay & Carey, 2007; Mitra & Manimala, 2008; HETAC, 2012). A standardised definition of entrepreneurship across all HEIs is not realistic given each HEI operates within a regional context and is thus influenced by the region it serves. This leads to the conclusion that EE should be informed by international best practice and of a quality, weighting and quantity that would result in a noticeable impact upon students' entrepreneurial mindset.

2.5 Approaches to Entrepreneurship Education at Third Level

There are calls from employers and government for third level education to incorporate a greater skills focus across the whole curricula (OECD, 2001; Papayannakis, Kastelli, Damigos & Mavrotas, 2008). Specifically, employers are articulating the need for graduates equipped with a range of 'enterprising skills' with foci upon creativity, capacity for innovation, networking relationship management and risk taking (Moreland 2007). The European Commission (2006) called for the development of students' 'entrepreneurial mindset' and maintained that one of the objectives of EE at third level should be to nurture the personal qualities that form the basis of entrepreneurship, namely: creativity, problem solving, interpersonal and cognitive skills, spirit of initiative and independence. The net result will be the development of students' entrepreneurial capabilities and mindset necessary for entrepreneurship in all its guises.

This has shifted the focus of EE beyond its hitherto major concentration upon equipping a limited number of students for self-employment (Greene & Saridakis, 2008) towards the development of entrepreneurial skills for all (Jack *et al.*, 1999; Blenker *et al.*, 2006). This change of focus has opened up a wider debate on the nature of learning and approaches to EE at third level and highlights the need for a differentiated approach to EE at third level (*ibid*). EE continues to be discipline-based or module-based within the particular School or Department responsible for the course. Whilst there has been some experimentation occurring with multi-disciplinary teaching, this tends to be mostly at graduate level (Eurydice, 2010). Blenker *et al.* (2011) offered the following four paradigms of EE as a guide for the choice of a specific approach to EE, as depicted in the Figure 2.5.

Figure 2.5 Approaches to Entrepreneurship Education at Third Level
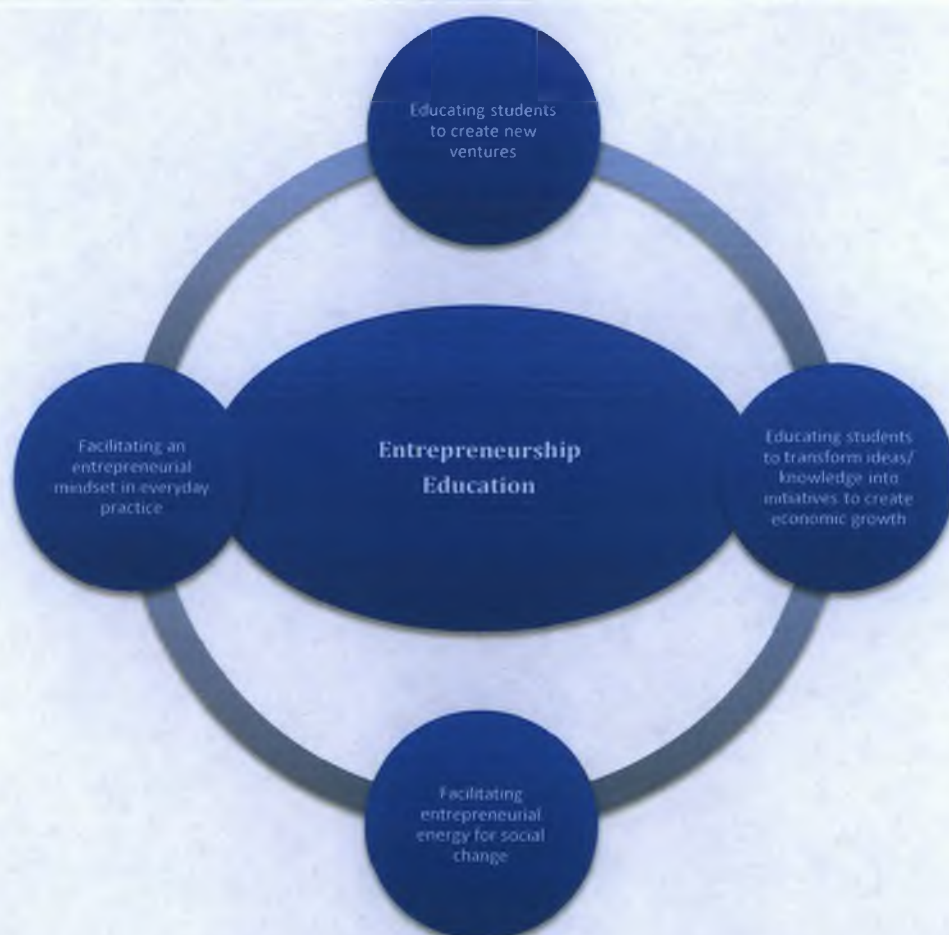
Source: Blenker *et al.* (2011)

In order to provide a better understanding of the emerging trends in EE, the following sub-sections look in detail at each of the four paradigms of EE.

2.5.1 Educating Students to Create New Ventures

The traditional approach of EE programmes is a focus on entrepreneurial new venturing (ENV) and covers topics such as finance, growing a business, marketing, law, networking and family owned businesses (Gibb, 2002). This approach to EE is influenced by Schumpeter's (1934) belief that entrepreneurship is a function of innovation creating economic growth (Blenker *et al.*, 2011). This EE paradigm has its origins in traditional management theory, in which management control and planning are perceived as the central vehicles for businesses and entrepreneurs must adapt to the forces of the external environment (*ibid*). Kirby (2004) claimed that often EE equates entrepreneurship with ENV and/or small business management, with the focus being to educate 'about' entrepreneurship rather than educating 'for' entrepreneurship. Within this paradigm, EE adopts a fundamentally institutionalist view of the world, where people were seen as a resource to lead, manage or to be led, and managed, for the greater good of the corporation *i.e.,* it focuses on management science and the production of efficient and effective managers (Blenker *et al.*, 2011). Typically, EE is delivered by Business School lecturers, therefore, it is expected that a significant proportion of the content of entrepreneurship courses is founded on conventional management philosophies *e.g.,* business planning, accounting and finance. EE for ENV considers the relationship between the entrepreneur's new venture and its environment *i.e.,* gathering and analysing relevant information to make informed decisions about the feasibility of business ideas *i.e.,* whether or not to start a new venture (*ibid*). EE for ENV is influenced by the integration of marketing, strategy, budgeting and analysis of a potential business using a SWOT analysis *i.e.,* a business's strengths, weaknesses, opportunities and threats (*ibid*).

One of the more popular and dominant curricula formats of EE involves teaching students how to develop a business plan and many lecturers regard the development of a business plan as a fundamental feature of EE provision (Solomon, 2007). Gibb (2005) maintained that business plans were created by banks/accountants and reflect the culture of their world and he argued that there is little evidence to indicate a strong relationship between business planning and entrepreneurial success.

Jones (2010) argued that asking students to complete a business plan for an idea that they are unlikely to ever pursue has not been seen to heighten awareness of the importance of a students' resource profile for their future success. Other researchers such as Mullins (2006), Honig (2004), Potter (2008) and O'Gorman (2010) have been critical of the centrality given to the business plan in EE which they believed are largely abstract, theoretical and formulaic. Equally, students have criticised business plans as the main pedagogical approach "writing a business plan is so mundane, it's insane" (Glynn, 2012). This raises the question: why are business plans so popular amongst lecturers? Is it because they provide a formulaic approach to teaching and assessing entrepreneurship?

EE at third level needs to equip graduates more effectively with a diverse range of skills required to set up, grow and manage a small business. However, Johannison (1991) argued that to teach individuals to become not only more enterprising but businessmen (*sic*) is beyond the capabilities of an academic Business School. Branson (2008, p.283) concurred and maintained that:

> The British education system has a lot to do with our fear of failure. I think it concentrates exclusively on academic achievement and downplays the other contributions people can make to society.

Winslow, Solomon and Tarabishy's (1999) analysis of EE at third level highlights both the similarities and differences in design, delivery and assessment and concluded that the conceptual difference is often blurred, in both academic and real worlds. EE tended to provide a theoretical and practical coverage of the planning, implementing and operating stages of a small enterprise (*ibid*). McGrath (2008) argued that small companies cannot be considered miniature versions of large corporations, therefore, EE should focus on micro-enterprises and SMEs. Uncertainty of the attributes and behaviours that characterise entrepreneurs plus the evidence that entrepreneurs may be antipathetic towards education in most forms, all argue against investment in EE. Garavan and O'Cinneide (1994) partially agreed with these concerns and questioned what can be taught that is specific to entrepreneurship *per se*? There appears to be no body of well-researched and developed knowledge to form the basis of such programmes, a fact which has been consistently emphasised in the literature.

This raises a fundamental question, namely: what can HEIs do to prepare students to 'hit the ground running' in the development of their own businesses?

2.5.2 Educating Students to Transform Knowledge into Economic Growth

The exploitation of the intellectual assets of HEIs is now regarded as fundamental in gaining international competitive advantage. Florida (1999, p.71) maintained that:

> A key and all too frequently neglected role of a HEI in the knowledge economy is as a collector of talent *i.e.*, a growth pole that attracts eminent scientists and engineers, who attract energetic graduate students, who create spin-off companies which encourages other companies to locate nearby.

It is through the formation of new firms that much of the knowledge spillover can take place, research and new knowledge are commercialised and economic growth encouraged (Acs & Armington, 2006). Given the imperative to increase the rate at which research and knowledge are commercialised by HEIs, it is particularly important that entrepreneurship is embedded within HEI culture and curricula so that academics, researchers and students could have the skills to commercialise their ideas. Generally, governments want to support entrepreneurial activity for macro-economic reasons; however, this activity must result in economic growth at a societal level and not merely in profit for the individual entrepreneur (Blenker *et al.*, 2011). Venkataraman (1997) concluded that the connection between an individual entrepreneur's profit-seeking behaviour and the creation of social wealth is the very *raison d'être* of EE. One of the original inspirations of this approach to EE was Schumpeter (1950) who identified that ideas and knowledge generated at HEIs could and should be used as the foundation for forming new businesses (Blenker *et al.*, 2011). EE could be envisaged as constituting an element of practically any discipline in a HEI context. This has led to a significant focus on pairing entrepreneurship teaching with a number of other subjects, especially within the natural, medical and technical sciences. It is anticipated that such combinations could create a swift, efficient and innovative commercialisation of HEI-led research which would ultimately result in economic growth for the benefit of the wider society.

Rather than focusing on low level entrepreneurship, Potter (2008) recommended that HEIs should focus on increasing the supply of entrepreneurial talent which could: (i) develop high growth companies; and/or (ii) move seamlessly between employment and self-employment and *vice versa*. Gibb *et al.* (2006) argued that students should be encouraged to consider entrepreneurship with an emphasis on developing growth businesses or high impact ventures. However, this is based on the possibly questionable assumption that graduates are more ambitious people than other segments of the population (*ibid*). Matlay (2005) argued that a radical dichotomy might place small business management in the context and expectancy of normal sales, profits and growth, whilst EE tends to emphasise the possibility and desirability of rapid growth, high profit and above average capital gains or return on investments. Whilst fostering entrepreneurship may not necessarily result in a new venture creation, it can be a function of skills training *i.e.*, the training of people who could contribute to the development of entrepreneurial organisations through their employment (Mitra, 2008). There is strong evidence to suggest that the majority of individuals who start ventures, particularly in technology-oriented sectors, do not do so until they are in their mid- to late-thirties (Cooper, 1973; Cooper, 2006). Notwithstanding the importance of all types of EE at third level, the focus of EE higher education largely remains on EE for ENV and/or EE for economic growth. Potter (2008) maintained that EE at third level should help students with the motivation to start their own business. If entrepreneurship is to produce real graduates capable of generating businesses, employment and wealth, lecturers must develop programmes with the requisite academic rigour whilst maintaining a practical and real-world focus on the entrepreneurial climate (Solomon, 2008). Only then could HEIs produce graduates of a high calibre with the business acumen to recognise and foster creative potential through the creation of HPSUs. HEIs should focus on growth-oriented entrepreneurship and move away from a traditional business management focus to one aimed at stimulating growth-oriented entrepreneurship. This suggests that the focus of EE should be on developing students' skills *e.g.*, identifying opportunities, risk-taking, leadership, building strategic alliances and IP protection (*ibid*).

This is important because if HEIs continue to deliver EE through the lens of developing micro-enterprises are they missing out on the potential of developing HPSUs? This approach to EE shares the same fundamental planning and analysis skills addressed in EE for ENV but it also includes knowledge about building an entrepreneurial team, patents, internationalisation and accessing venture capital (Potter, 2008). Ideally, graduates should have assimilated a substantial body of theory and know-how to the knowledge frontier including an entrepreneurial mindset to assess commercial opportunities within the world of work. This approach goes some way to address the 'need to show students the value of wealth creation and we still need a good deal more entrepreneurial thinking in our universities' (Branson, 2008, p.283).

2.5.3 Facilitating Entrepreneurial Energy for Social Change

Education must remain a process where an individual learns to discover oneself and, in doing so, endeavour to improve the human condition.

Schank (2012)

The concept of entrepreneurship has broadened to include activities that are more directed at achieving social change *i.e.*, social entrepreneurship. Blenker *et al.* (2011) identified that the impetus for social entrepreneurship has been government cutbacks, market failures and the insight that for-profit corporations will benefit from taking social responsibility. Social entrepreneurship has adopted the underlying assumptions and values of the original, broader field of entrepreneurship (*ibid*). Two notable examples of this are the incorporation of the opportunity concept into the social entrepreneurship field (Thompson, Alvy & Lees, 2000; Haugh, 2005; Hockerts, 2006; Austin, Stevenson & Wei-Skillern, 2006) and the widespread use of role models (Sarasvathy, 2008). Whilst the purpose of social entrepreneurship is to foster social entrepreneurial projects and social change, Blenker *et al.* (2011) concluded that didactically and pedagogically, this approach has both similarities and differences compared to the traditional approach to EE *i.e.*, EE for new venture creation. Students learn the basic skills of business, namely: strategic planning and financial management; many of the tools and skills can be readily transferred from business-related EE, particularly if, for example, the initiative is based on selling a product and using the proceeds to support a disadvantaged group.

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EE for social entrepreneurship focuses on networking, fundraising and creating initiatives that may raise money through providing some type of service or by partnering with organisations *e.g.,* sponsors which results in a profit. Moreover, the similarities between EE for ENV and EE for social entrepreneurship include a focus on: innovation; teaching students how to develop relevant contacts and networks; and creative marketing. EE for social entrepreneurship differs from EE for ENV mainly because of its purpose, the motivation of the entrepreneur and the resources available to social entrepreneurs, namely: grants, sponsorship, donations, recruitment of volunteers etc. Examples of social enterprises include: Muhammed Yunus' Grameen Bank and Wanaari Maathi's Green Belt Movement.

2.5.4 Facilitating an Entrepreneurial Mindset in Everyday Practice

Steyaert *et al.* (2004) identified another trend in the field of EE is an increasing focus on entrepreneurship as an everyday practice. However, Rehn and Taalas (2004) argued that entrepreneurship research has traditionally overlooked the many 'mundane' or common forms of entrepreneurship which occur in the market as well as on the boundaries of and beyond the market. It is suggested that a more basic kind of entrepreneurial behaviour exists, denoting something broader than business entrepreneurship and involving 'initiative, strong persuasive power, moderate rather than high risk-taking, flexibility, creativity, independence/autonomy, need for achievement, imagination, high internal beliefs, control, leadership and hard work' (Gibb, 1987, p.6). Such concepts focus on initiative and risk-taking attitudes as competences expressed in a person's innovative actions which may find expression in many different contexts *e.g.,* employment, sportsclubs, community groups, the Arts etc. The basic premise is that the energy and passion which is present in entrepreneurial processes, can be used not only for creating a new business venture but also for solving a number of other social problems, creating community spirit, and enriching life in general. In order to broaden the scope of entrepreneurship, Steyaert *et al.* (2004) argued that the focus of EE should not be solely on the prospect of economic enterprise and profit, but on value creation in the broadest sense, including the community, enabling, and individual empowerment. This has resonance with Maslow's (1943) concept of self-actualisation.

These ideas are to an extent expressed in educational activities directed towards the personal development of the students, something that has been an integral part of EE. A range of coaching-oriented activities can often be identified, aimed at developing students' imaginative abilities, entrepreneurial competence and capacity for entrepreneurial actions. Within this paradigm, EE seeks to develop a student's ability to cope with diversity and complexity within their community. The concept of entrepreneurship as an everyday practice *i.e.,* an emancipating, everyday competence not necessarily related to creating new ventures is gaining momentum because ultimately, it will lead to students becoming virtuous citisens or strong cultural figures (Steyaert *et al.,* 2004). However, an ongoing difficulty is that many students leave secondary school without adequate creative or critical thinking skills. This is a consequence of an overemphasis on rote learning for 'high stake' examinations *e.g.,* the Leaving Certificate.

The current Minister for Education and Skills stated that there is compelling international evidence that students will perform better by moving away from terminal exams (Quinn, 2012 in Flynn, 2012). In October 2012, he announced a major overhaul of the Junior Certificate to encourage greater creativity, critical thinking, self-directed learning and indeed entrepreneurship amongst students. Ironically, many first year students are being taught how to think critically through mandatory modules such as Critical Thinking Skills. Notwithstanding the usefulness of such modules in developing students' analytical and study skills, this EE paradigm *i.e.,* facilitating an entrepreneurial mindset in everyday practice could facilitate greater student engagement and build upon students' prior knowledge. This would require students to contend with ambiguity, embrace uncertainty and develop a plan of action given there is no space for rote learning or black and white answers. Students could learn skills that will assist them to thrive and flourish at third level, and indeed life but for this EE paradigm to be successful, lecturers must have confidence in students' ability to learn. Blenker *et al.* (2011) argued that this form of EE 'de facto' overlaps to some extent with teaching through entrepreneurship, in the sense that an entrepreneurial mindset can only be learned through enterprising behaviour.

This has not been discussed to any great extent in the literature and it is unclear how it relates to the other types of EE (*ibid*). This EE paradigm concentrates on the personal rather than the business or societal level, developing an entrepreneurial mindset through the enhancement of self-efficacy (Bandura, 1997; Blenker *et al.*, 2011). Within this context, EE can play a vital role and in many respects serves as a precondition or foundation for the other forms of education. It aims to realise opportunities that originate from within the individual and which are, therefore, unique and less imitable, using both narrative and creative tools to fine-tune the project and commit and effectuate in order to bring to fulfillment. It mirrors the recommendations 'of the expert group on Education for Entrepreneurship (EC, 2005) that the objectives of education should include nurturing those personal qualities required for entrepreneurship *i.e.*, creativity, spirit of initiative and independence. There is no single blueprint for teaching entrepreneurship, therefore, what is taught through EE should serve to instil and enhance critical thinking and problem solving competencies and discourage rote learning.

2.5.5 Summary of the Four Paradigms of Entrepreneurship Education

Jones (2010) maintained that serious questions are being voiced about the societal value of EE and what should be the focus of EE. Blenker *et al.* (2011) concluded that it is evident that whilst the micro-level focus of EE has become an integral part of the curriculum in most Business schools, other perspectives are also gaining ground. The four paradigms represent four different approaches to EE because they build on different assumptions concerning the nature and purpose of entrepreneurial activity, embodying different learning goals and indicating different methods used in education (*ibid*). Whilst it may appear that there is a lack of congruency across the four paradigms, the skills gained through EE are not confined to the area of new venture creation but are applicable across a range of work and life experiences. This supports the notion of EE as a lifelong educational process (EC, 2004). Penaluna, Penaluna and Jones (2012) concluded that although EE is highly diversified in terms of presentation, content and style, there are clear commonalities with regard to expected student outcomes.

Much of existing EE teaches 'about' or 'for' entrepreneurship *i.e.,* EE for ENV, however, despite its dominant position in EE, this does not necessarily reflect a general or universal use of the paradigm (Blenker *et al.,* 2011). They maintained that this approach to EE paradigm to EE will only be successful if:

(1) It assumes that the students are already to some extent willing or motivated to engage in entrepreneurial activity;

(2) It is based on the Anglo-Saxon educational culture in which students return to university after having worked in an organisation, bringing with them extensive practical knowledge;

(3) The intention underlying courses is for students to become entrepreneurs either during their studies or immediately following their graduation;

(4) There may be a strong self-selection bias because typically students are already predisposed to entrepreneurship – the reason why they choose to follow the courses.

EE 'for' and 'about' ENV is not necessarily applicable or relevant to all areas of EE nor to all cultural settings for example, lecturers are confronted with students who are not motivated to pursue an entrepreneurial lifestyle (self-employment).

Many students enter a graduate programme immediately following their primary degree, and they often wait until they have gained a few years of practical experience before embarking upon self-employment. Some students may have a latent entrepreneurial potential even though they do not initially perceive themselves as being entrepreneurial. This means that initial work must be undertaken by lecturers in order to influence or develop students' entrepreneurial mindset before they are taught how to write a business plan (Blenker *et al.,* 2011). It resonates with the conclusion of the Finnish ENTLEARN project (2012) *i.e.,* teaching entrepreneurship is far from straight forward, in particular, the opportunity-discovery component of entrepreneurship is quite elusive.

Adcroft, Willis and Dhaliwal (2004) argued that whilst management education can contribute to the provision of technical skills to entrepreneurs, it cannot contribute to geographic chronology or the element of serendipity that is central to entrepreneurial events. Rather than choosing a single paradigm, Blenker *et al.* (2011) recommended lecturers might do better by seeking to integrate multiple paradigms in the overall curriculum, in order to produce a teaching portfolio that is relevant and useful for a larger number of students as well as providing the students with a broader range of value-creating skills, knowledge and motivation. Equally important is developing and strengthening students' self-confidence and self-efficacy *i.e.,* an enduring belief that they have the ability to perform specific tasks and anchor intentions to pursue innovative careers, important in pursuing entrepreneurial pathways (Bandura, 1997). Self-efficacy, a well-cited entrepreneurial attribute, is termed the internal locus of control, where an individual believes that a goal is achieved through their actions alone and is not dependent on external factors such as luck or other people's actions (Kirby, 2002; Timmons, 1999; Hisrich *et al.*, 2005). One of the key factors affecting self-efficacy in the workplace is how individuals are taught in an educational setting or in on-the-job training.

2.5.6 Differentiated Approaches to Entrepreneurship Education

Entrepreneurs cannot be assumed to be a homogenous group because they may have different training needs and require separate policies and approaches to training (Westhead, Ucbasaran & Wright, 2005). Robinson (2009) maintained that education doesn't need to be reformed, rather it needs to be transformed. He posited that the key to this transformation is to personalise education and to put students in an environment where they want to learn and where they can naturally discover their true passions (*ibid*). A generic approach is ill suited to all types of education, particularly EE. Nabi *et al.* (2001) recommended that each educational initiative to be tailored to the target group of students. This would involve a differentiated or personalised approach to teaching and assessing entrepreneurship. Nabi *et al.* (2008) concluded that there is no universal approach to EE that works for all contexts and graduates and different contexts require tailored approaches that best suit their individual needs.
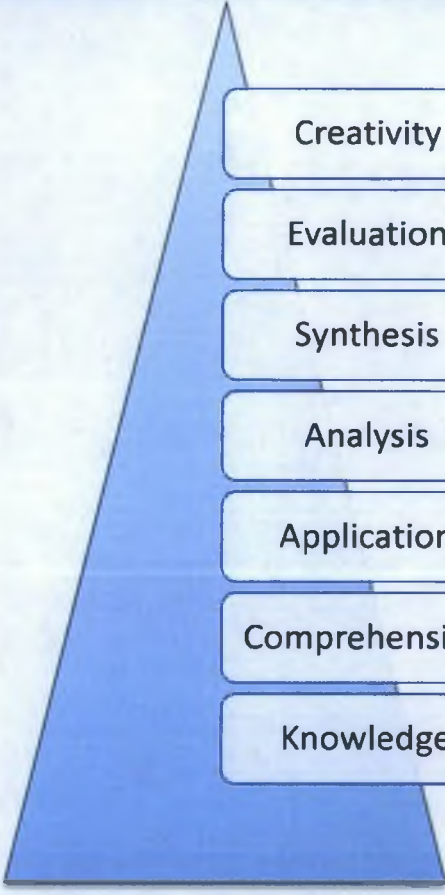
This highlights the need for a more differentiated approach to EE so as to deal with the heterogeneity of students. This is not without significant resource implications, particularly from the lecturer in terms of time, development of resources, the provision of student feedback and mentoring. EE can be analogous to adult education in that both lecturers and students play an active role in the co-creation of knowledge and lecturers assume the role of facilitators of teach (Carey *et al.*, 2011). Graham-Cagney (2011) concluded that the traditional approaches to adult learning incorporate psychoanalytical, behaviourist, social cognitivist and contructivist traditions and the key influence for this study is the constructivist tradition. Gibb *et al.* (2009) called for a differentiation between EE at undergraduate and postgraduate level with the objectives, indicative content and teaching methods of teaching, differing according to the level of education. The most important factor in teaching undergraduate students entrepreneurship is to work generally on their mindsets and to stimulate interest in self-employment and business creation *i.e.,* awareness and motivation. Undergraduate EE shares similarities to adult learning, namely: a respect for learners and recognition of their life and work experience with lecturers drawing from students' experience within a student-centred and collaborative learning environment. This serves to enhance the teaching-learning environment and to promote the cross-fertilisation of ideas amongst students. Conversely, postgraduate students need practical tools and concrete support in order to develop their business ideas. McHugh's (2006) research concluded that a year-long graduate entrepreneurship programme received much higher ratings for having assisted start-ups than the short-term courses and the majority of these entrepreneurs regarded the graduate entrepreneurship programme as excellent in aiding them in handling business problems. The type of EE received resulted in differences between how entrepreneurs experienced and handled business issues (*ibid*). Entrepreneurs who had participated in a graduate entrepreneurship programme had experienced fewer issues than entrepreneurs who had participated in short-term 'start-your-own business' courses. Students with appropriate business experience could have developed a relevant knowledge structure and contextual advantage and, therefore, would be better positioned to assimilate and contextualise learning outcomes from EE provision (Stuart & Abetti, 1990; Taylor & Banks, 1992).

Reinl (2011) concluded that motivation is an essential pre-condition for effective learning and is dependent on perceptions of benefit (Sadler-Smith, Allinson & Hayes, 2000). Micro-firm owner/managers will often seek new information when a problem arises that requires immediate resolution, demonstrating a preference for learning that is immediately applicable (Reinl, 2011). Patton *et al.* (2000) suggested that where learning is undertaken for more strategic motivations, it is likely that it will result in deeper levels of learning. The aspirations of owner/managers have obvious consequences for learning and management development and as a result levels of commitment and strategic focus will vary (Morrison, 1996). Cooper and Lucas (2007) claimed that when graduates leave formal education only a very small minority will start their own ventures immediately after college. Deakins and Freel (1993) highlighted that few graduates of high-technology courses start a company soon after graduating relative to their non-technical colleagues. This may be because they lack the requisite skills, self-confidence, self-efficacy and/or capital to set up their own business. The GEM Report for Ireland 2011 (2012) concluded that people who are confident that they have the ability to successfully start and manage a business are more than seven times more likely to be an entrepreneur compared to those who do not have this confidence. The question is: what factors lead to such confidence?

Figure 2.6 synthesises the main aims and outcomes of EE at third level.

Figure 2.6 Aims and Outcomes of Entrepreneurship Education at Third Level

Type of EE	Bloom's Taxonomy	Progression	What Students Learn?
Education *in* Entrepreneurship (Learning to become an entrepreneur)	Creativity Evaluation Synthesis Analysis Application Comprehension Knowledge	**Growth:** coping with issues of expansion; ongoing learning and skill development	Can I become an entrepreneur? How to become an entrepreneur? How to manage the business?
Education *for* Entrepreneurship (Learning to become entrepreneurial)		**Start Up:** Actual venture creation, further development of competences, use of available supports	I need to take responsibility for my own learning, career and life; how to do it?
Education *about* Entrepreneurship (Learning to understand entrepreneurship)		**Creative Applications:** exploration of business ideas; creation of business plans	What do entrepreneurs do? What is entrepreneurship? Why are entrepreneurs needed? How many entrepreneurs do we have?
		Competency Awareness: the language of business; appreciation of small business issues; competency development	
		Basics: Understanding the basics of the economy and career opportunities	

Adapted from: Bloom (1956), Jamieson (1984), Gibb (1999), Consortium of EE (2004), Hytti & Kuopusjärvi (2004), Potter (2008), NCGE (2010)

This figure highlights the different aims of EE and identifies a need for entrepreneurship lecturers to convey not only knowledge about enterprise but to employ teaching and learning approaches which encourage learners to strengthen their entrepreneurial self-efficacy.

Gibb (1999) argued that traditional EE programmes have focused on delivering inputs into the entrepreneurial process but there is an absence of a concept frame relating to the entrepreneurial person. To address this deficit, he proposed an outcomes framework which identified eight trademark skills of effective entrepreneurial graduates, namely: (i) key entrepreneurial behaviours, attitudes and skills developed; (ii) empathy with the *life world* of the entrepreneur; (iii) key entrepreneurial values inculcated; (iv) motivated toward an entrepreneurial career; (v) understanding of the processes of venture creation, entry and associated tasks; (vi) generic entrepreneurship competencies developed; (vii) key minimum business 'how to's' acquired; and (viii) effective management of stakeholder relationships (*ibid*).

2.6 Pedagogical Approaches to Entrepreneurship Education

I want to talk about learning. But not the lifeless, sterile, futile, quickly forgotten stuff that is crammed in to the mind of the poor helpless individual tied into his seat by ironclad bonds of conformity. I am talking about LEARNING ... any learning in which the experience of the learner progresses along this line: "No, no, that's not what I want"; "Wait! This is closer to what I am interested in, what I need"; "Ah, here it is! Now I'm grasping and comprehending what I need and what I want to know!

Rogers (1969)

Whilst Roger's (1969) thesis may appear somewhat idealistic, it is an important consideration. Given the rush to introduce and embed entrepreneurship programmes at third level, educators have sometimes forgotten to examine what pedagogical approaches best support burgeoning or aspiring entrepreneurs (Hannon, 2006). The general consensus is that entrepreneurial learning requires experiential learning which Kolb (1984) defined as a process, where knowledge is created through the transformation of experience (Cotton & Gibb, 1998; O'Brien, 2007; Ryan, 2008). Kolb (1994) concluded that students learn by engaging in concrete experience, reflection, theory and pragmatism. Boussouara and Deakins (1988) advocated experience-based learning as the best method to acquire tacit knowledge associated with setting up and running a business and as a useful way of improving a technical person's business skills. Erikson (2003) suggested that entrepreneurship learning is dependent on an individual's exposure to experience, including observation of an entrepreneurial role model.

Links between HEIs and entrepreneurs, particularly if the entrepreneur is willing to engage with students, mentor business plans and/or help in the creation and analysis of case studies would encourage deep learning and aid experiential learning as espoused by Dewey (1938) and Kolb (1984). At the very least, it would result in vicarious learning *i.e.,* learning through the lived experiences of others.

Mullins (2006) recommended a six-step plan for teaching aspiring entrepreneurs, namely to: (i) discover opportunities; (ii) assess opportunities; (iii) develop a business plan; (iv) gather resources; (v) manage growth; and (vi) harvest value. He concluded that this six-step approach may be more tortuous than the sequential six steps represent and argued for the need for experiential learning. Both experiential learning and reflective practice are at the heart of EE, where the process is as, if not more, important than the outcome. Cope and Watts (2000), Kolb (1984), Friedrich *et al.* (2006) and Wilson (2008) proposed an action-based model that is cognitive in character and applies different principles of action theory namely heuristics, learning by doing and providing differentiated feedback. EE requires learning by doing through project-based learning, internships, case studies, increased international considerations, a more intense focus on strategy formation and implementation and consulting (Cope & Watts, 2000; Friedrich *et al.,* 2006; Wilson, 2008).

Cotton *et al.* (1998) recommended an emphasis on pedagogies that encourage learning by: (i) doing; (ii) experience; (iii) experiment; (iv) risk-taking and making mistakes; (v) creative problem solving; (vi) feedback through social interaction; and (vii) role playing. The key to learner and learning based pedagogy is actively engaging students through the use of case studies, problem-based learning, field-trips and engaging with entrepreneurs (Kreuger, 2007). This is relevant to lecturers as they must consider what knowledge content and structure to deliver and how can it be delivered in order to provide a critical learning experience. Solomon (2007) concluded that project-based experiential learning is widespread in EE. It takes many forms *e.g.,* business plans, student business start-ups, consultation with entrepreneurs, computer simulations, behavioural simulations, environmental scans, 'live' cases, field trips and enterprise clubs (Gartner & Vesper, 1994; Hills, 1998).

This brings into question what is the point of experiential learning or experience if people miss the meaning? Reflection should underpin experiential learning and the entrepreneurship lecturer should provide regular, structured, intentional and timely feedback on same (Schön, 1983). It brings to mind Friere's (1970) notion of pedagogy being built around 'praxis' which is reflecting and acting upon the world for the purpose of transforming it is done through praxis. This is an action-reflection cycle, where learning is not about abstract things but is about personal and concrete things that students need to think about, and the meaning they arrive at impacts on the way they will do things in the future (O'Grady, 2012). The constructivist tradition underpins effective EE as it acknowledges that students and lecturers are partners in knowledge creation and through which students make meaning from their knowledge. This suggests a need for students to assume responsibility for their own learning, not just within the classroom but through work experience, setting up their own business and through participation in Enterprise Societies.

A constructivist approach has a particular significance to EE given the symbiotic relationship between the student and the lecturer in the creation of a teaching-learning environment that involves the construction and exchange of personally relevant and viable meanings (Graham-Cagney, 2011). Constructivist and experiential programmes can promote learning by doing, reflecting upon and evaluating outcomes to consider what could have been done differently. Constructivism focuses on what learners do with information in order to develop knowledge and construct new meaning from this knowledge (ibid). A constructivist model assumes human construct knowledge structures that continue to evolve and it recognises that the acquisition of new knowledge forces a change in how the information content is organised and structured and enhances learning how to learn (Kreuger, 2007). This is particularly relevant to EE because the evidence suggests that successful entrepreneurs have above average skills with respect to self-directed learning (ibid). He described the evolution of entrepreneurs from a novice stage to expert stage based on new experience and new knowledge as depicted in Figure 2.7:

Figure 2.7 Constructivism and Entrepreneurial Cognitive Development
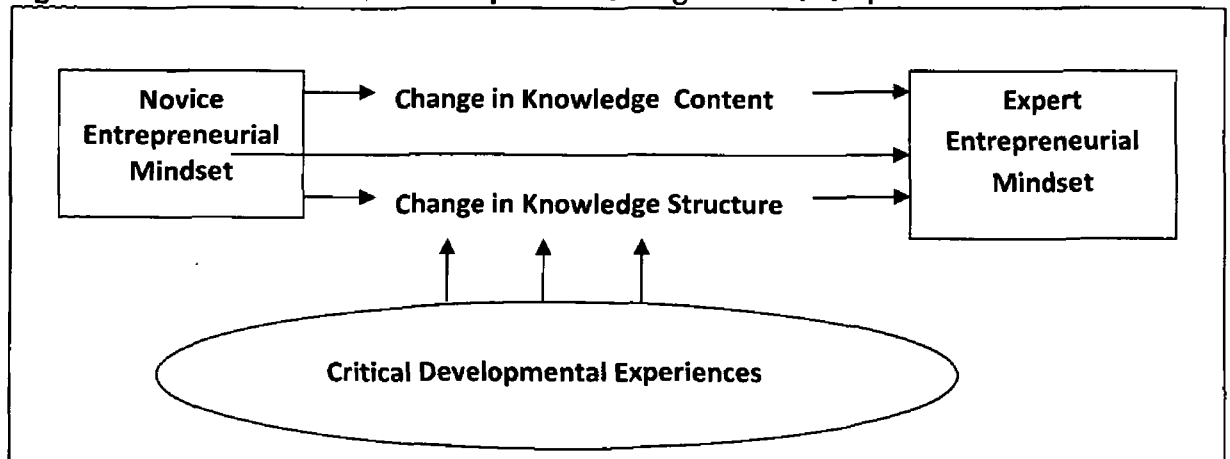
Source: Kreuger (2007 in Ryan, 2008)

Robinson (2012) acknowledged that learning is an active process through which a student constructs new meanings or makes sense of her/his experience through experiential, active learning which always trumps passive or receptive learning. In the context of mass higher education and large student numbers, there tends to be a reliance on the traditional lecture method, dry academic content, and few opportunities to engage the students (Cooney, 2008). Increasingly, HEIs use a combination of theoretical and practical approaches to EE, often reinforced by detailed analysis of entrepreneurial and solution grounded problems within realistic case and field studies (Timmons, 2003). Innovative and experimental programmes have emerged to deal with the issues and problems related to the efficiency, relevance and practical value of EE on offer (Smith *et al.*, 2006; Boyle, 2007; Matlay *et al.*, 2007).

Table 2.1 summarises popular pedagogical approaches to EE at third level:

Table 2.1 Pedagogical Approaches to Entrepreneurship Education at Third Level

Type of Approach	Main Activities
Lectures	Covering market analysis, venture creation, new product development, project management, financing & strategy
Business Plans & Competitions	Preparation by individuals and teams. Competitions and prizes for the best business plans
Case Studies	Presentations and discussions of real company/entrepreneur experiences of business creation, growth, adaptation and failure
Entrepreneur as Guest Lecturers	Entrepreneurs invited to present their experiences in lectures and discussions, in the classroom or in their enterprise
Student Business Start Ups	Students start real or virtual businesses individually or in teams
Student Societies	Student societies to discuss entrepreneurship issues, create entrepreneurial teams, obtain mutual support.
Placements in SMEs	Short-term assignment with small firms to assist with business development projects such as market or technology development
Feasibility Studies	Exploring the feasibility of business ideas, market potential investigations and competitor analysis
Communication Training	Presentation techniques, interpersonal communication
Consulting with SMEs	Student participation in consulting projects for micro enterprises
Support for Graduate Start Ups	Seed funding, mentoring, incubation, consultancy
University-wide EE	EE to faculties beyond the Business School
Entrepreneurship Degrees	Undergraduate /postgraduate degrees in entrepreneurship
Online Education	Use of blended learning to facilitate asynchronous learning
External Partnerships	Creation of entrepreneurship centres with financial support from business and public agencies. Advisory boards with external experts
CPD of Educators	Courses to help teachers to understand entrepreneurs' behaviour & to develop their teaching approaches to entrepreneurship

Adapted from Potter (2008), Colman *et al.* (2009) and NCGE (2010)

Whilst individual Schools or Departments may have preferred approaches to teaching, many do not prescribe nor dictate methodologies, rather, they encourage and promote a variety of approaches. There is a greater emphasis on excellence in teaching in HEIs which forms a more important factor than hitherto in staff promotion (Martin *et al.*, 2011; Atkins, 2012). There is a need to distinguish between what entrepreneurship lecturers want to teach and what graduate entrepreneurs want to learn. According to Martin *et al.* (2011), the *locus classicus* is Gibb's (1993) research contrasting the passive, conventional and didactic approach of HEIs and the active enterprising learning needs of entrepreneurs, as depicted in Table 2.2.

Table 2.2 HEIs' Approach to Teaching versus Entrepreneurs' Learning Needs

HEI/Business School Learning Focus	Entrepreneurs' Learning Needs
Critical judgment after analyzing large amounts of information	Gut-feeling decision making with limited amount of information
Understanding and recalling the information itself	Understanding the values of those who transmit their information
Assuming commonality of goals	Recognising the varied goals of different stakeholders
Seeking (impersonally) to verify the absolute truth by the study of information	Making decisions on the basis of trust and competence of people
Understanding the basic principles of the society in the metaphysical sense	Seeking to apply and adjust in practice to the principles of society
Seeking the correct answer with enough time to do it	Developing the most appropriate solution (often) under time pressure
Learning in the classroom	Learning while and through doing
Gleaning information from the experts or authoritative experts for the sake of genuineness	Gleaning information from any and everywhere and assessing its practical usefulness
Evaluation through written assessment	Evaluate through judgment of people and events through direct feedback
Success in learning is measured by knowledge-based exams	Success in learning is through solving problems, learning from failures and providing useful products and services to society

Adapted from Gibb (1993 in Manimala, 2008, p.53)

At graduate level, entrepreneurs are more interested in learning about acquiring knowledge that they can apply to the benefit of their business. This is important as it highlights the strategic nature of entrepreneurs' attitude to learning.

2.7 Creating an Entrepreneurial Learning Environment

> No matter how many books a person may have read, or how beautiful a business plan he produces, it's absolutely useless. Unless he has made mistakes and learned how to recalibrate in order to avoid future mistakes.
>
> **Redding (in Goossen, 2010)**

Culture and education are intrinsically linked and can be mutually reinforcing, therefore, education can shape cultural values, whilst a positive culture will help increase the effectiveness of EE initiatives. Handy (2001) maintained that entrepreneurs draw strength from a surrounding climate of experimentation and creativity. A positive culture can increase the effectiveness of EE by experimenting with and develop critical learning environments for students, where they can draw strength from a surrounding climate of experimentation and creativity (*ibid*).

Creativity and experiment are untidy and sometimes unwelcome to the logical mind, clusters of experiment can be cultivated, golden seeds can be sown wherever justified and young people can be encouraged to be inventive, all without upsetting the ordered progress of the mainstream organisation (Handy, 2001). As Leonard Cohen (1992) sang 'forget your perfect offering, there is a crack, a crack in everything - that is how the light gets in'. Robinson (2012) maintained that if one is not prepared to be wrong, one can never come up with anything original. Similarly, the National Council for Curriculum and Assessment (NCCA) (2010) concluded that to innovate requires a willingness to take risks because it can lead to failure. Learning to cope with and reflecting upon setbacks and failure are important factors in a student's learning. Consequently, lecturers need to encourage their students to take risks and to embrace failure as an important learning strategy.

The NCCA (2010) argued that innovation should be regarded as an iterative and ongoing process rather than a one-off activity. Essentially, the consequences of failing to innovate are more serious than an outdated education system that becomes irrelevant to learners (*ibid*). There is a need for an acceptance of failure as a right of passage or as the badge of honour as it is regarded in the US. It cannot be overstated that learning within a HEI takes place within a relatively low risk environment yet higher education is predicated on risk aversion. Many HEIs are risk-averse and lecturers are unlikely to prepare their students for business failure, even in its most abstract form. Dweck (2010) championed the notion of persistence and believed that teachers should praise students for the process they have engaged in, the effort they have applied which they cannot control. Lecturers should focus on the process rather than outcomes, where the value of the learning exceeds the failure or setback. Students should be encouraged to keep a reflective journal because through reflection, lecturers can help students to overcome the psychological barriers that have evolved within their national cultures regarding business failure and challenge the notion that failure is a 'cul de sac' in their learning and achievement. Such an approach could focus on improving students' self-confidence and self-efficacy by giving them the requisite skills and foundation to realistically assess and evaluate the risks associated with creating a new venture.

2.8 The Importance of Contextualised Learning in Entrepreneurship Education

Brockhaus and Horowitz (1986) concluded that whilst students' attitudes towards enterprise are positive, those who lack relevant experience in which to place knowledge and the context of immediacy surrounding the issue, are likely to dismiss dealing with such problems as common sense or irrelevant. After college, most graduates seek employment because authentic experience in the workplace provides opportunities for them to build upon their formal learning, to hone their entrepreneurial skills and to identify business opportunities. After a period in employment, some graduates may decide to pursue an entrepreneurial pathway. Authentic engagement is not widespread in undergraduate programmes because it has significant resource implications. However, its effectiveness in developing entrepreneurial skills, attitudes and intentions make it an important issue for policy and curriculum designers to address. The challenge for educators is to determine how authentic experience might be embedded in EE programmes, particularly at undergraduate level. Student placements provide opportunities to students to build upon their formal learning and identify real opportunities for commercial exploitation. Performing authentic tasks is one of the four sources of self-efficacy, the others being vicarious performance, social influence and emotional states (Bandura, 1997). The primacy of performing genuine tasks is crucial and important in the development of young, nascent entrepreneurs (ibid). The importance of work experience in developing competence and confidence cannot be overstated because they offer students the opportunity to gain an appreciation of the range and complexity of activities within a real-world environment.

Carlile and Jordan (2012) identified that HE management policies with rigid structures, modular systems, strict timetables, assessment and scripted curricula inhibit creative approaches to teaching, including student placements. Notwithstanding the challenges for programme leaders to secure suitable student placements, there is another weakness in student placement in that the focus has been largely placing students in MNCs and/or larger companies. This gives credence to the argument that HEIs are too much focused on large companies, rather than on SMEs or micro-enterprises.

Interaction between the student and the work environment, including the work performed together with the relationships established with fellow employees that provides a valuable learning opportunity. Mitra and Manimala (2008) recommended that graduates should work for some time with other organisations which they believed would be a relatively inexpensive way of gaining on-the-job training and developing implementation skills, an area that HEIs provide little assistance. Thus, the skills and attitudes associated with innovation and enterprise on which they come to rely as they identify their own opportunity and shape their enterprise around it, are nurtured for, on average, a decade or more through authentic experience, gained within the workplace.

Entrepreneurial experience gained prior to undergoing EE tends to improve the overall performance of entrepreneurs (Westhead *et al.*, 2005). There is a greater likelihood for such graduates to engage in successful business creation and apparently increases the attendance of highly ranked postgraduate Masters of Business Administration (MBA) programmes (Callan & Warshaw, 1995). Given MBA programmes mostly admit students with relevant prior work experience and knowledge and this explains better rates of success (Krueger & Brazeal, 1994). Carey *et al.* (2011) reported that Business graduates and students are increasingly disenchanted with career prospects as organisational employees given the intense competition, cost-cutting pressures, acquisitions, take-overs and 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 career option to traditional employment (Carey *et al.*, 2011). Kolvereid and Moen (1997) surmised that graduates with an Entrepreneurship major are more likely to start new businesses and have stronger entrepreneurial intentions than other graduates. It is generally accepted that if individuals lack self-confidence, they are less likely to form companies and are much less likely to be successful in businesses which they do start (Wood & Bandura, 1989). Within this debate, Cooper *et al.* (2007) asserted that the skills, attitudes, self-confidence and self-efficacy associated with entrepreneurship are cultivated through authentic experience and enhanced within the workplace.

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Vesper and Gartner (1997) and Leonhardt (1996) argued that graduates who benefit from EE have a higher propensity to become entrepreneurs and will emerge wellprepared to start their own venture or to be enterprising employees in small businesses. However, there is no conclusive evidence to suggest that this is correct. Embedding entrepreneurship in non-technical courses should help familiarise other students with the process of business creation and help to engender an entrepreneurial mindset. This should increase the business start-up rate amongst graduates of Business, technical and non-technical courses. However, there is evidence to the contrary as research by Mitra and Manimala (2008) showed that the performance of entrepreneurship graduates is not significantly higher from that of non-graduate entrepreneurs, except the former start a new venture a few years earlier than the latter.

2.9 The Role of Entrepreneurship Educators

If you want to build a ship, don't drum up the men to go to the forest to gather wood, saw it, and nail the planks together. Instead, teach them the desire for the sea.

Antoine de Saint-Exupery (1943)

In the development and delivery of appropriate EE, de Saint-Exupery's (1943) views are apposite to the discussion of the role of academics in both conveying not just knowledge about enterprise but also instilling a passion for the subject amongst their students. Education really needs scientific, technical and professional training but at the same time it needs dreams and utopia (Friere, 2002). Friere (1998) regarded education as democratic and egalitarian, based on trust, where dialogue becomes a horizontal relationship of which mutual trust between dialoguers is the natural consequence. Successful EE at third level is dependent on the presence of dynamic, enthusiastic educators to support and advise students to consider enterprise as an alternative and viable career option. Robinson (2011) likened educators to gardeners whose role is to plant the seeds of entrepreneurship and recognise the nature of organic development of students. Hederman (2011) suggested that the task of educators is to harness students' natural flair, simply by allowing some free play within our educational systems essentially an incubator of the imagination.

He believed that the role of the educator is to establish with the student that specific contact which will unlock the armour and allow the person to expand (*ibid*). Jones (2006, p.337) claimed that the role of the educator is to elicit energy and excitement, by resonance of her/his personality, to ensure that the learning environment does not dwell on and shifts from one mass of inert ideas to another, rather, it maintains a focus of underlying principles from which future generalisation is possible. A good lecturer is not only a pedagogical expert but also someone possessing a deep knowledge and understanding of the content *i.e.,* entrepreneurship as the content and process are to be taken forward and in tandem (Martin *et al.,* 2011). Crucial to the success of EE are enthusiastic educators with both the credibility and prior experience in enterprise development to foster a passion for entrepreneurship amongst students. The EU Survey of Entrepreneurship in Higher Education (2008) highlighted that the quality of EE is dependent on whether lecturers have real-world enterprise experience in order to fully appreciate and fully communicate the benefits and obstacles of entrepreneurial activities. Given this elusive aspect of EE, this is a key challenge for both lecturers and HEIs as few lecturers have both the rare combination of experience and knowledge of both entrepreneurship and pedagogy (*ibid*). In light of Bernard Shaw's (1903) assertion that those who can, do, whereas, those who can't, teach, it is difficult to understand what is the role or even the point of educators without some enterprise experience.

In essence, how can academics achieve a passion for entrepreneurship without having experienced it first-hand? Entrepreneurial experience affords lecturers greater credibility amongst students, however, on average, less than one third of all lecturers have such practical experience with entrepreneurship activities outside of academia (Martin *et al.,* 2011). The EU Survey of Entrepreneurship in Higher Education (2008) concluded that most EE in HEIs is still theory-based and only in few cases enriched or punctuated with personal, practical experience. Without such experience, lecturers may lose credibility amongst students, particularly amongst adult or graduate students, because effectively they have not 'walked the talk'. Their role is reduced to the transmission of theoretical knowledge *vis-à-vis* enterprise development.

Some lecturers compensate for their lack of first-hand experience by inviting guest lecturers to talk with students. The ideal solution is what Penaluna *et al.* (2008) and Coleman *et al.* (2009) referred to as a 'pracademic' (a lecturer who is also an enterprise practitioner or *vice versa*). HEIs are employing 'blended professionals' (Whitchurch, 2008) *i.e.,* professional staff who are not categorised as academics but who through their expertise in areas such as business, research make an increasingly significant contribution to HEIs. She introduced the concept of *'third space'* as an emergent territory between academic and professional domains which is colonised primarily by less *bounded* forms of professional identity (*ibid*). She argued that 'third space working' may be indicative of future trends in professional identities which may increasingly coalesce with those of academics who undertake project- and management-oriented roles, so that new forms of *third space* professionals are likely to continue to emerge (*ibid*). The emergence of social networking sites *i.e.* Facebook and LinkedIn provides the critical online environment to promote opportunities for 'third space working'.

In the absence of lecturers with entrepreneurial experience, entrepreneurs are well placed to teach and act as positive role models to inspire and encourage students towards entrepreneurship. The GEM Report for Ireland 2011 (2012) maintained that a person who knows someone who is a recent entrepreneur is more than twice as likely to be an entrepreneur. However, Martin *et al.* (2011) cautioned that depending on practitioners as guest lecturers is not necessarily a 'magic bullet', as it could lead to the development of knowledge linked to anecdotes or war stories that are removed from academic theories and concepts. Whitehead's (1929) concern that knowledge could be presented as scraps of information and contended that the issue is how knowledge is used, and specifically the time and place within which it is contextualised. The EU Entrepreneurship in Higher Education Report (2008) concluded that there is a shortage of human resources and funding for EE across Europe, making it impossible to meet the EE demand fully. Europe is lagging behind the US by a factor of four in terms of entrepreneurship chairs or professorships.

It advocated the provision of high quality CPD for educators *e.g.,* the International Entrepreneurship Educators Programme, established by Enterprise Educators UK (EE-UK) and the National Council for Entrepreneurship in Education (NCEE) (formerly known as the National Council for Graduate Entrepreneurship) *(ibid)*. If dedicated funding for CPD were made available, educators could receive training to develop their entrepreneurial knowledge of small business development, including: finance, law and IP management. Zahra and Welter (2008) recommended faculty exchanges *i.e.,* teaming experienced lecturers with less experienced educators to mentor them on entrepreneurship teaching and research. Training of this nature would help faculty to understand and teach entrepreneurship better and give students the requisite skills and foundation to realistically assess and evaluate the risks associated with creating a new venture.

2.10 The Use of Emerging Technology in Entrepreneurship Education

Prensky (2011) agued that adapting to the new context of change, variability and uncertainty is the biggest challenge that educators now face. Therefore, they cannot face the future with same old bag of tricks of the past (Robinson, 2009). Educators must be competent in the use of academic technology and also expand their teaching methodologies to include innovative approaches to teaching entrepreneurship. Classrooms are being characterised by the use of emerging technologies, where the lecturer acts as a facilitator of learning and encourages self-directed learning amongst students. It is important to highlight that not all learning takes place in the classroom given online and social media platforms are being increasingly used to support and deliver pedagogies within and outwith the classroom (Matlay, 2012). Lecturers and students are showing greater interest in how technology can bridge the gap between the classroom and the external community (Smith, 2009; Carey, 2009; Carey *et al.,* 2009; Harris *et al.,* 2009). Whilst students utilise digital technology in a variety of ways to support their learning, the integration of ICT into the actual teaching-learning interaction seems to be best developed in technology courses (Eurydice, 2010). EE should include interactive teaching methodologies and action-oriented innovative approaches, the deployment of innovative teaching strategies and the assessment of student entrepreneurial competency subsequent to EE.

Lecturers must become competent in the use of educational technology and also expand their teaching methodologies to include innovative approaches to teaching entrepreneurship. Prensky (2001) identified a dilemma where educators are regarded as 'digital immigrants' *i.e.,* late adopters of technology and are essentially innovation followers. Many of their students are regarded as 'digital natives' (*ibid*) and this changes the dynamic within the classroom. Essentially, the lecturer can no longer assume the role of 'oracle' or 'smug jug' and it is imperative that lecturers use innovative approaches in EE. The implementation of technology-facilitated learning is a complex undertaking that presents a series of challenges for HEIs, educators and learners. Wall (2009) concluded that it requires significant investment without any guarantee of success. There is a need for HEI management to provide leadershipand investment in e-learning because Zemsky and Massy (2004 in Wall, 2009, p.95) debunked a commonly held myth of e-learning 'if you build it, they will come'. Whilst much of the focus in e-learning has been on the level of technological delivery strategies, there is a need for a sophisticated understanding of pedagogical, teaching and assessment strategies strategies appropriate for the use of e-learning and in addition the CPD of faculty needs to be factored into any developments (Alexander, 2001 in Wall, 2009).

2.11 Evaluating the Effectiveness of Entrepreneurship Education

Whilst EE is frequently cited as a means of increasing the supply and quality of entrepreneurs entering the economy, very little is known about its effectiveness in generating sustainable entrepreneurial endeavours despite the pressure placed upon HEIs to deliver EE (Gibb *et al.,* 2006; McKeown, Millman, Reddy Sursani, Smith & Martin, 2006; Matlay, 2006; Potter, 2008). An anomaly exists in that students frequently state that they have benefitted from EE, yet few seem to start a business during their studies or immediately on graduation (Jones, 2010). Matlay (2000) concluded that there is insufficient empirically rigorous research to substantiate most Business Schools' claims that their students benefit significantly from EE and that upon graduation, they go on to set up profitable new businesses. Potter (2008) identified a lag time between the time of graduation and when graduates establish their business exacerbates this difficulty.

HEIs and SMEs must articulate, recognise and promote the type of skills and competencies necessary to drive enterprise development, particularly HPSUs. This aspect of training is often ignored by HEIs, industry and policy makers so there is a need for feedback from entrepreneurs of the essential skills and competences needed to grow a successful business. There appears to be ongoing debate as to whether HEIs can really make a significant contribution to the quality and quantity of entrepreneurial stock that operate within an economy (Matlay, 2006). The evidence concerning the contribution of EE, particularly at third level, to entrepreneurship is soft (Gibb *et al.*, 2006). Consequently, there is a lacuna of empirically rigorous research to substantiate HEIs' claims that their graduates benefit significantly from EE and set up profitable new businesses (Potter, 2008). Hannon (2006) claimed that whilst there has been a recent growth in EE in the UK and Europe, he raised two fundamental questions, namely: (i) how relevant is the current offering in terms of achieving desirable entrepreneurial outcomes and developing future graduate entrepreneurs? and (ii) what is the role of the educator in the development of graduate entrepreneurs?

Whilst evaluating the effectiveness of EE in HEIs is a particularly difficult and complicated endeavour given the many factors that influence the creation of a new venture cannot be directly attributed to EE (Hoffmann, May Vibholt & Larsen, 2008). It cannot be discounted as a facile exercise of measuring inputs and outputs, thus, it mirrors Einstein's (1879-1955) observation that what counts can't always be counted and what can be counted doesn't always count. According to Matlay (2006), much of the specialist knowledge in EE still relies upon anecdotal evidence or tenuous links between a government-driven expansion of the educational system and an overall increase in entrepreneurial success. Bridging the credibility gap between government rhetoric and harsh entrepreneurial realities is required in order to determine if EE has a positive impact upon the development of graduate businesses (*ibid*). McKeown *et al.* (2006) recommended an investigation of the effectiveness of EE at third level but Penaluna *et al.* (2012) cautioned that the commonly employed metric of business start-up appears less valid in the context of evaluating its effectiveness.

Potter (2008) recommended that evaluation rather than simple measurement of inputs and outputs should be an important policy imperative and would suggest that graduates' entrepreneurial behaviour needs to be monitored over time. As far as I am aware, graduate entrepreneurs have largely been neglected in previous research regarding EE at third level, thus, providing a cogent rationale for this research.

2.12 Key Themes of the Literature

The complexity of this research is compounded by the fact that the germane literature draws from different philosophies and disciplines including, business, enterprise, economics, education, leadership, philosophy, psychology and sociology. It appears that these areas of literature have not been integrated before to investigate and examine graduate entrepreneurs' perspectives of EE at third level. This suggests the novelty of this research and its contribution to theory, practice and policy. The theoretical framework was informed by synthesising the extant literature from different philosophies and disciplines. Respectful of the existing research in the field of EE, this research aims to add to the body of knowledge by giving voice to graduate entrepreneurs' perspectives of the benefits and limitations of EE at third level and its impact on their formation as entrepreneurs. In doing so, it will address the absence of the perspectives of key stakeholders in EE at third level. The theoretical framework for EE at third level is informed by the work of the following theorists and researchers, as depicted in Table 2.3.

Table 2.3 Theoretical Framework for EE at Third Level

Themes	Key Theorists
Entrepreneurial HEIs: Changing paradigm of HEIs; the dichotomy of ideologies on role of HEIs; understanding the whole integrative, systemic nature of policy, economic development and the entrepreneurial process, and how these relate to EE at third level; Creating an entrepreneurial ecosystem; links with wider enterprise community; triple-helix model. Understanding the importance of HEI leadership in creating an entrepreneurial ecosystem.	Leydesdorff & Etzkowitz (1998); Clark (1998); Van der Sidje (1999); Etzkowitz & Leydesdorff (2000); Barry (2004); Neck *et al.* (2004); Potter (2008); Hannon (2010); Cooney (2011); Atkins (2012); Green (2012); McGowan (2012); HETAC (2012).
Entrepreneurial staff: Emergence of *pracademic i.e.,* lecturers who can straddle the academic and practical domains; Lecturers with first-hand knowledge and experience of enterprise development; Facilitators of student learning; Co-creator of knowledge; Sign-poster of opportunities and contacts.	Neck *et al.* (2004); Hannon (2006); Brennan *et al.* (2007); Potter (2008); Penaluna *et al.* (2008); Hannon (2010); Martin *et al.* (2011); Cooney (2011); Hederman (2011); Atkins (2012); Green (2012); McGowan (2010, 2012).
Entrepreneurial students and graduates: Students and graduates with the knowledge, skills and competence to become job creators; Having the self-efficacy and self-confidence to set up their own business; ; Co-creator of knowledge; Self-directed learners.	Wood and Bandura (1989); Bandura (1997); Hannon (2006); Potter (2008); Martin *et al.* (2011); Gibb *et al.* (2009); Carey & Matlay (2011); Green (2012); Atkins (2012); McGowan (2010, 2012).
Dynamic learning environment: Moving away from business plan to more experiential, problem-based learning; innovative approaches to teaching and learning; multi-disciplinary approach; guest lecturers; utilising social media; messy, creative and chaordic learning environment; assessment focusing on process; peer assessment/critique; pracademic *i.e.,* lecturers with first-hand knowledge and experience of enterprise development; facilitating and sign-posting learning; students as co-creator of knowledge; Life-wide learning within and outwith the classroom; importance of authentic experience.	Kolb (1984); Van Clouse (1990); Gibb (1993); Guglilmino & Kaltt (1993); Handy (2001); Honig (2004); Kreuger (2007); Mitra (2008); Cooney (2008); Ryan (2008); Smith (2009); Carey (2009); Carey *et al.* (2009); Harris *et al.* (2009); McGowan (2010); Hederman (2011); Green (2012); Atkins (2012); Eurydice (2010); Carey *et al.* (2011); McGowan (2012); Matlay (2012).
Part of broader entrepreneurial ecosystem: Understanding the whole integrative, systemic nature of policy, economic development and the entrepreneurial process, and how these relate to EE at third level.	Goddard *et al.* (1994); Barry (2004); Neck *et al.* (2004); McGovern and McGowan (2007); Innovation Task Force (2010); Prendergast (2011); Atkins (2012); Green (2012); McGowan (2012); HETAC (2012).

Source: Current Research

2.13 Identification of the Research Questions

Prior to choosing an appropriate research methodology, it is imperative to state clearly the research aim, objectives and associated questions. This review of the literature highlighted a lacuna of qualitative research detailing graduate entrepreneurs' perspectives of EE at third level, particularly in Ireland. This cohort has been largely ignored and this provides both a legitimacy and rationale for this research project. This Literature Review has identified the following research questions which are aligned to the research objectives and the theoretical framework, as depicted in Table 2.4.

Table 2.4 Aligning the Research Questions to the Research Objectives

Research Question	RO1	RO2	RO3	RO4
1. What are HEIs doing to promote entrepreneurship amongst students?	✓	✓		✓
2. What is the focus of EE at third level?	✓	✓	✓	✓
3. Is there a difference in the approach to EE at undergraduate and at graduate level?	✓	✓	✓	✓
4. What are the benefits and the limitations of EE?	✓	✓	✓	✓
5. What factors can affect the efficacy of academics teaching entrepreneurship?	✓	✓	✓	✓
6. What factors may affect the efficacy of graduate entrepreneurs to be entrepreneurial? Is education central to this self-efficacy?	✓	✓	✓	
7. How are HEIs, SMEs and EDAs working together to promote student and graduate entrepreneurship?	✓	✓	✓	✓

These research questions will form the basis of the primary research and the methodological issues will be considered in greater detail in Chapter 4. The most appropriate approach when designing a research methodology is to match the methods to the research questions because this enhances the methodological rigour and places the research questions at the heart of the study (Quinn-Patton, 2002).

2.14 Conclusion

This chapter highlighted that the traditional definition of entrepreneurship as new business creation is being replaced with a broader meaning *i.e.,* entrepreneurial activities within self-employment, employment, social enterprise and life (Blenker *et al.,* 2011). It is no longer appropriate for HEIs to regard entrepreneurship as an arcane activity for a minority of HEI students. EE needs to be more inclusive in order to attract a broader cohort of students, particularly from traditionally unrepresented faculties *e.g.,* Humanities and Social Sciences. This chapter charted the emergence of entrepreneurial HEIs and the role of HEIs in driving the enterprise agenda, increasing the rate of entrepreneurial graduates and activity, thus, contributing to economic development. HEIs can promote and support campus and graduate entrepreneurship through undergraduate and graduate EE. Whilst the concept of EE at third level is gaining legitimacy, there is a lacuna of empirical evidence to substantiate HEIs' claims that EE leads to greater entrepreneurial outcomes *e.g.,* more graduate entrepreneurs. Notwithstanding the difficulties in evaluating the effectiveness of EE, much of the extant literature and research relating to EE has concentrated on EE from the perspective of lecturers and HEIs and has to a large extent excluded the voice and the lived experience of graduate entrepreneurs. This study aims to bridge this gap through an examination of graduate entrepreneurs' perspectives of EE at third level in their formation as entrepreneurs. There is a need for a more adroit examination of EE at third level because long-term funding for EE, particularly graduate EE, will be contingent on its perceived effectiveness and value. Even though the perspectives of graduate entrepreneurs do not feature strongly in the literature, I believe that it is important to place them at the heart of this study in order to gain a more nuanced and balanced understanding of EE provision at third level. Given their experience, they were well placed to discuss and evaluate current EE provision at third level. Chapter 3 will provide a contextual framework for this research *vis-à-vis* Irish enterprise policy and the role of higher education, particularly Institutes of Technology (IoTs), in enterprise development.

Chapter 3 Contextual Framework: Enterprise Policy in Ireland

If enterprise is afoot, wealth accumulates. If enterprise is asleep, wealth decays.
John Maynard Keynes (1930)

3.0 Introduction

A key determinant of a country's economic wellbeing is in its success in stimulating indigenous enterprise development, promoting innovation and a culture for entrepreneurship to flourish. McClelland (1961) contended that a society with a generally high level of need for achievement produces more energetic entrepreneurs who, in turn, produce more rapid economic development. It is little wonder that international governments' focus on the enterprise agenda has been considerably heightened and economic policies are being redefined to place the entrepreneur at the heart of their efforts (Innovation Task Force, 2010). Lee, Florida and Acs (2004) claimed that understanding the factors that promote or mitigate new firm creation is crucial in regional economic development efforts because a high level of new enterprise development impacts positively on a regional economy. Ireland has been transformed from a protectionist, predominantly agricultural economy to one of the most open economies in the world, with a vibrant ICT and bio-technology sector, as well as continuing to grow and add value to its traditional agricultural strength internationally (Ó'Foghlú, 2010). This chapter provides a contextual framework for understanding the importance of entrepreneurship to contemporary Irish economic policy and the emerging role of HEIs in enterprise development. It specifically charts the evolution of Institutes of Technology (IoTs) and examines their role in graduate enterprise and HPSU development, with a particular focus on the Enterprise Platform Programme (EPP).

3.1 The Importance of Entrepreneurship to Economic Development

The OECD (2009) recognised that: (i) a vibrant small medium enterprise (SME) sector is essential for promoting sustained economic and social development; and (ii) SMEs form the backbone of the worldwide economy. This builds on Acs *et al.'s* (1999) conclusion that the dominant source of new jobs comes from entrepreneurial, fast-growth businesses or 'gazelles'.

Birch's (1979) seminal research in which he discovered that over 80% of new jobs were being generated in small (entrepreneurial) rather than large US firms and new young firms were the *engines of growth* in the US economy. Similarly, some 98% of private sector organisations are SMEs and these figures are largely representative of the EU (Stevenson *et al.,* 2001). Innovation has increasingly become a primary indicator of competitive advantage, performance and survival (Hazelkorn, 2002). The relationship between a nation's prosperity and ability to engage in innovation is best summarised by Colombo (1988, cited in McBrierty and O'Neill, 1991) who maintained that innovation is not an option for an industrial society, it is an obligation; economies proving themselves to be hesitant in this climate of rapid and dramatic change lose ground internationally and this can start a perverse spiral of economic decline. A knowledge economy is built on abundant rather than scarce resources and the creation of sustainable employment 'from the neck up'. Over the past decade, the importance of a physical location for a business has diminished because companies can *now* access and service national and global customers and markets through appropriate technology *e.g.,* social media, email, video-conferencing or Skype. It appears that the companies that are growing fastest are those selling ideas or services, not those with the most physical assets. Examples of such companies include Google, Facebook, Net-à-Porter, Notonthehighstreet.com and Daft.

Lee *et al.* (2004) posited that there are three elements required for success in knowledge-based economies, namely: (i) a critical mass of talented creative people; (ii) a critical mass of the technologies with which talented people can engage; and (iii) tolerant societies within which this class will thrive and with them the societies and economies they inhabit. The creative class constitutes a new economic class who is leading the societal shifts just as the early bourgeoisie of Western Europe led the movement away from the monarchy and the old feudal order (*ibid*). The creative class plays a key role in the transformation of societies and economies from production to knowledge-based. If there is not a critical mass of organisations developing and applying technology, then the creative class will not have sufficient employment and career mobility to interest them (*ibid*).

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Acs and Armington (2006) cautioned that investments in R&D and higher levels of human capital development are necessary conditions for growth in a knowledge economy but they are not sufficient if not accompanied by entrepreneurship. The link between entrepreneurship, innovation and creativity is particularly apparent in economies where there is a strong economic and political agenda for creating a knowledge economy. There is a positive and robust correlation between entrepreneurship and economic performance in terms of growth, firm survival, innovation, employment creation, technological change, productivity increases and exports (EC, 2004). Increasing the supply of entrepreneurial talent to create vibrant indigenous businesses that are deeply rooted in the local economy will generate employment for local and national economies (Stevenson et al., 2001; Henry, Carlsson & Karlsson, 2003). Irish GEM researchers, Fitzsimons and O'Gorman (2007), highlighted increased evidence to suggest that entrepreneurial activity is associated with economic growth, and in particular, that the relationship between the level of entrepreneurial activity and economic growth depends on a country's stage of development. The level of entrepreneurship differs considerably across EU countries and both the causes and consequences of entrepreneurship are a matter of extensive scientific debate as well as of great policy importance (Verheul, Wennekers, Audretsch & Thurik, 2001; O'Gorman, 2007).

In the EU, the SME Observatory Survey (2003) concluded that one of the main engines for economic growth has been the growth in SMEs and named them the real giants of the European economy. It is little wonder that the EU has been placing greater emphasis on entrepreneurship, enterprise creation and SME development. Paradoxically, EU policy was for too long biased towards big business. Furthermore, entrepreneurship was rarely stated as an economic policy objective of EU governments and at best, it was a by-product of the economic development process (Malosse, 2001; Stevenson et al., 2001). The Lisbon Agenda (2000) aimed to address this deficiency by transforming the EU into the most competitive and dynamic knowledge-based economy in the world by 2010. It called for EU countries to place a greater emphasis on knowledge and innovation and cited entrepreneurship as one of the new basic skills that should be provided through lifelong learning.

The promotion of entrepreneurial attitudes and skills through education at all levels has been at the centre of the political agenda of the EU. The overall objective of the Lisbon Agenda (2000) was to shape Europe into the most dynamic and competitive knowledge-based economy in the world by 2010. These policy objectives were reiterated at the 2002 Barcelona meeting of EU heads of government, with particular focus on upgrading knowledge and increasing technology diffusion at the regional level in the belief that this may prove to be a particularly efficient route to economic growth (O'Gorman, 2007). Despite their best efforts, most EU countries have not lived up to the EU's goal of becoming "the world's most dynamic knowledge-based economy by 2010". Hence, in 2005, the EU re-launched the Lisbon Agenda and established the Competitiveness and Innovation Framework Programme with a budget of €4.2 billion to increase indigenous competitiveness and innovation across the regions of Europe through research, education and technology diffusion (O'Gorman, 2007). The Green Paper for Entrepreneurship in Europe (2004) raised two fundamental questions about Europe's entrepreneurial future, namely: (i) how to produce more entrepreneurs? and (ii) how to get more firms to grow?

Birch (1987) contended that the key to job creation is entrepreneurial firms, therefore, governments who provide the proper environment for start-ups and existing firms to expand and grow will flourish, whereas those that fail to provide such an environment languish (O'Gorman, 2007). Wennekers and Thurik (2001) and De (2001) posited that a government can stimulate a culture or social capital to create an appropriate institutional framework to address the supply side of entrepreneurship. However, they concluded that it is not the role of government to create jobs. Instead, the government's role is to stimulate an entrepreneurial culture or ecosystem and to create an appropriate institutional framework at a national level to address the supply side of entrepreneurship (Innovation Task Force, 2010). Governments, therefore, have a fundamental role to play in creating policies and favourable conditions for enterprise to grow and flourish.

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3.2 The Role of Government in Enterprise Development

Verheul, Wennekers, Audretsch, and Thurik (2001) suggested that government intervention within the field of enterprise is inspired by the importance of the small business sector for economic growth and job creation. Whilst Cotton and Gibb (1998) and Atherton (2003) emphasised the benefits of supporting start-up companies by developing a general enterprise culture, Westhead and Birley (1994) argued against concentrating resources on the development of small firms by stating that enterprises thrive in a free enterprise economy. They argued that supporting start-up companies through subsidies and grants could actually distort resource allocation (*ibid*). Jenssen and Havens (2002) concurred and concluded that these same entrepreneurs would have been successful even without the support of the enterprise support programmes. Regardless of these concerns, it is clear that entrepreneurship can be fostered by government intervention (Henry *et al.*, 2003). If a government wants to promote entrepreneurship, it must focus on the factors that make individuals entrepreneurs and not just the traditional approach of providing financial assistance and hoping for a positive outcome (Jenssen *et al.*, 2002).

Stevenson *et al.* (2001) defined entrepreneurship policy as policy measures: (i) taken to stimulate entrepreneurship; (ii) aimed at the pre-start, the start-up and post-start-up phases of the entrepreneurial process; (iii) designed and delivered to address the areas of motivation, opportunity and skills; and (iv) with the primary objective of encouraging more people to start their own businesses. Whilst the basic principles of setting up and running a business are the same worldwide, entrepreneurship is deeply embedded in national culture and draws on previous experiences of individuals and their societies (Zahra *et al.*, 2008). Enterprise policy is influenced by a nation's and indeed a region's specific needs at a given point in time. Verheul *et al.* (2001) offered an integrated framework which provides a better understanding of the different roles that entrepreneurship plays in different countries at different times. They posited that a government is able to influence the rate of entrepreneurship through five different groups of determinants of entrepreneurship, as depicted in Table 3.1.

Table 3.1 Government Policies and Interventions for Enterprise Development

G1	Government intervention on the **demand** side of entrepreneurship; influencing the number and type of entrepreneurial opportunities.
G2	Government intervention on the **supply** side of entrepreneurship; influencing the number and type of potential entrepreneurs.
G3	Government policy aimed at influencing the availability of resources, skills and knowledge of individuals.
G4	Government policy aimed at influencing the preferences *i.e.,* values and attitudes, of individuals.
G5	Government policy (directly) aimed at the decision-making process of individuals.

Source: Verheul *et al.* (2001)

These policies deal with the input factors of entrepreneurship, *i.e.,* labour, finance and information and given certain opportunities and individual characteristics, this type of government intervention directly influences the risk-reward profile of entrepreneurship (Verhuel *et al.*, 2001). Jenssen *et al.* (2002, p.178) concluded that the focus of public enterprise policy may be aimed at: (i) entrepreneurs in general or targeted groups of entrepreneurs in the development of the concept, the planning, and/or the establishment phase(s); (ii) newly established businesses/small businesses of entrepreneurs in general or of targeted groups of entrepreneurs; and (iii) the national, regional, and local entrepreneurial environment *i.e.,* culture and infrastructure.

Cooney and O'Gorman (2007) argued against a government seeing entrepreneurship and the entrepreneurial process as separated, corralled, measurable entities as this can lead to a lack of integration of enterprise policies into a nation's fabric or a lack of coherency *i.e.,* different policies for different aspects of the entrepreneurial process. Despite arguments against governments interfering or dabbling with market forces, the fact remains that they have intervened and will continue to intervene in crafting policies to facilitate and foster SME development. However, O'Gorman (2007) argued that such a generic definition of entrepreneurship policy does not convey the reality in most countries, where the focus is on those firms that have the most potential to succeed *e.g.,* Enterprise Ireland's focus on the development of HPSUs. The following section will chart the evolution of enterprise policy and government initiatives to promote entrepreneurship in Ireland since the formation of the State.

3.3 The Evolution of Enterprise Policy in Ireland

For the first ten years of independence from Britain in 1922, Ireland operated a free trade policy under its new government but it was heavily dependent on Britain as its main export market with over 90% of exports going to that market (Kennedy, 1995). In 1932, the newly formed government argued for self-sufficiency on ideological and political grounds and introduced protectionism as a means of ending an over-reliance on Britain as a trading partner. A key feature of Ireland's protectionism was the Control of Manufacturers Acts (1932) which allowed for a majority Irish capital holding in Irish companies and aimed to eliminate British control of Irish industry (Drudy, 1995; Garvin, 2004). In essence, FDI meant British-owned companies, the presence of which, were anathema to the government as they represented a failure on the part of Ireland to establish itself as a viable economic entity (Ruane & Gorg, 1996; O'Gorman, 2007). Whilst the protectionism may have been justified for political and/or ideological reasons, it was economically naïve and had disastrous consequences for the emergent economy. Garvin (2004 in Cooney O'Gorman, 2007) maintained the fledgling government distorted the economy by wholesale subsidisation of economic activities. This led to a stifling of trade and a subsequent suppression and retardation of indigenous enterprise. In defence of this policy, Bianchi and Labory (2006) argued that most countries tend to be protectionist and interventionist at the earlier stages of their development. it is only when a country reaches a certain level of maturity that industrial policy becomes less interventionist and market forces are more relied upon, culminating in what they call a 'new industrial policy' (*ibid*). The policy of protectionism remained in place until the introduction of the Anglo-Irish Free Trade Agreement in 1965. Ireland lacked a vibrant industrial base with the then government rejecting industrialisation through import substitution and monetary experimentation and placed emphasis on the agricultural sector specialising in the livestock and dairy sectors (O'Grada, 1997). Given a lack of plentiful natural resources and of a strong industrial base, Ireland's economic growth could not be considered to be self-sustaining through internal growth and development (O'Gorman, 2007). In 1949, the government established the Industrial Development Authority (IDA) to specifically attract FDI to Ireland (Sweeney, 1999).

It was not until the mid-1960s that FDI became significant due to its adoption as a key industrial policy by the then-Taoiseach (Prime Minister), Seán Lemass TD. This was largely because T.K. Whitaker, Secretary of the Department of Finance (1955-1965), had a vision of changing Ireland from an insular to an open economy. He called for an end to protectionism, foresaw the opportunities economic trade and growth would create and designed incentives to attract FDI in export-oriented, manufacturing industries. FDI is largely credited with Ireland's economic development and the Whitaker-Lemass' policies have succeeded in shaping economic policy for decades thereafter (O'Gorman, 2007). According to Ferriter (Irish Times, 8 September 2012):

> some people believe that the Lemass-Whitaker partnership had been exaggerated somewhat and that maybe their departure wasn't as radical as presented but you have to compare it with what went before. Emigration was the only option for so many thousands of people. Culturally and psychologically their policies amounted to an acceptance that the government had got it wrong to date … de Valera thought of it as an extension of Fianna Fáil policy, but the reality was he knew feck-all (sic) about economics.

O'Grada (1997) concluded that the Lemass era established some patterns that would prove enduring, namely: (i) a commitment to outward-looking policies; (ii) a less restrictive fiscal stance; (iii) a willingness to experiment; and (iv) economic growth that would make Ireland a largely urban society and would erode the importance of agriculture and the farming lobby. The IDA played a significant role in transforming Ireland from a rural-based, agricultural economy to an industrial economy and reduced Ireland's dependency on the UK market. The Buchanan Report (1969) provided a direction for Ireland's economic and industrial development which largely focused on FDI. It recommended a focus on nine regional development centres to support regional growth to avoid: (i) a rural-urban drift whereby workers migrate from rural to urban areas in search for higher paid employment; and (ii) an overconcentration of FDI, and employment, in certain areas (Meyler & Strobl, 2000). Since Ireland joined the European Economic Community (EU) in 1973, it has been a poster child of the benefits of EU membership, particularly to member states which joined in 2004 *i.e.*, formerly part of the Eastern bloc. Ireland has become the gateway to the EU market for many US multi-nationals and its FDI strategy is the envy of many other countries in Europe.

A decade later, the Telesis Report (1982) recommended that enterprise policy change from being predominantly regionally focused to attracting strategic industries (O'Gorman, 2007). The confluence of economic policy with its emphasis on FDI and manufacturing industry and educational policy through the 1970s, 1980s and early 1990s served the State well. The IDA's success in attracting FDI can in part be attributed to a combination of factors, namely: (i) low levels of corporation tax of 12.5%; (ii) the availability of a highly educated workforce (particularly through the expansion of higher education in the 1990s to over 50% participation in higher education); (iii) an English speaking population and workforce; (iv) membership of the Eurozone and proximity to EU markets; (v) a positive attitude in government and among the people towards Europe and its institutions; (vi) a well-established diaspora to draw returning workers from and immigrants from other EU states; (vii) a stable democratic political environment and a stable industrial relations environment underwritten by a 'partnership process' (involving key stakeholders such as unions and employers' representatives in long term national plans with pay restraints); and (ix) a *globalised society i.e.*, an outward looking people who are interested in travel and who see themselves as part of a bigger world (Ó'Foghlú, 2010).

Despite the IDA's success in securing prestigious FDI since the early 1950s, there is a growing concern that there is an over-reliance on multinational companies (MNCs) to fuel growth in the economy and not enough focus on promoting indigenous enterprise (O'Hearn, 1998; O'Sullivan, 2000; Morgenroth & O'Malley, 2003; Grimes & Collins, 2006; Cooper, 2009). FDI is of strategic importance to Ireland because, on average, FDI companies pay more than their Irish counterparts, the duration of each job is longer, thus offering workers greater security and the intangible, spillover effects in terms of know-how, exposure to international business and in-house training (O'Brien, 2011). However, FDI is fickle by nature and understandably, MNCs' loyalty remains to their parent companies and countries, thus, changes to corporation tax, rising costs or adverse trading conditions can result in MNCs exiting the Irish market to relocate to lower cost countries. Recent examples of companies deserting Ireland to relocate in lower cost countries include Dell Computers in Limerick (2009) and Talk Talk in Waterford (2011).

The current instability within the Eurozone has resulted in increased pressure from larger EU countries such as France and Germany to increase Ireland's corporate tax rate and to create a standard EU corporate tax rate. This could have serious implications for Ireland in attracting overseas investment and endanger its position as a FDI tax haven. The reality is that as countries lose competitiveness, they will seek to retain indigenous companies and disincentivise them from investing overseas. The instability within the international economy has sharpened government focus on the development of indigenous enterprise to drive economic regeneration. The government is committed to creating the conditions in which enterprise can flourish and jobs can be created (National Recovery Plan, 2011).

3.3.1 The Focus on Indigenous Enterprise

It is only if we are educated, skilled and enterprising enough to produce goods and services commanding a high margin of gross profit or added value that we can expect high and rising living standards.

TK Whitaker (Irish Times, 9 September 2008)

As early as the late 1980s and early 1990s, there has been concern that the government was overly focused on attracting and supporting FDI to the detriment of indigenous enterprise. Sterne's (2004) research provided an in-depth analysis of the IDA's role in facilitating the growth of MNCs at the expense of the indigenous sector. Even though regional economic development was articulated in enterprise policy, there has been a greater emphasis on attracting and supporting FDI which by their nature have opted to locate in urban centres of large concentrations of population (O'Gorman, 2007), a trend which is mirrored across urban centres in Europe. The Culliton Report (1992) encouraged the government to focus on indigenous industry and a significant outcome of this report was the enactment of the Industrial Development Act (1993). This resulted in the restructuring of the IDA to include two new statutory agencies to foster, support and develop indigenous enterprise, namely: (i) Forbairt (now known as Enterprise Ireland) and (ii) Forfás, the national policy advisory board for enterprise, trade, science, technology and innovation. In 1992, against a backdrop of chronic unemployment and net emigration, the then government established the City and County Enterprise Boards (CEBs) in every county and major city in Ireland.

This was a fundamental shift in government policy towards nurturing of the micro-enterprise sector *i.e.,* businesses with less than ten employees and the services sector which up until then did not receive State aid (O'Gorman, 2007). The rationale was to establish a system of local enterprise agencies, where decision-making would be devolved to local CEBs comprising local business people, political representatives, and social partners (Hanley & O'Gorman, 2004). Their role differed from Forbairt, now known as Enterprise Ireland (EI), as they were mandated to assist the micro-enterprise sector, whereas the latter was charged to assist enterprises of over ten employees. EI's core mission is to accelerate the development of world-class Irish companies to achieve strong positions in global markets resulting in increased national and regional prosperity. These initiatives helped to rebalance economic policy from an over-concentration on FDI and MNCs towards the burgeoning indigenous SME sector. Downey (2002) recommended a shift made from an economy characterised by FDI and importation of technology to one where research and innovation become important drivers of sustained competitiveness. From 1997 to 2007, Ireland enjoyed unprecedented growth in its economy. This was attributed to modernising trends in societal norms and shifts in attitudes to create a social climate, favourable to enterprise development. By the mid 2000s, Ireland had become one of the most entrepreneurially active countries in the EU with the cultural climate for entrepreneurship had improved significantly.

The GEM Report for Ireland 2011 (2012) concluded that despite the continued recession, there was a definite increase in the number starting new businesses each month and entrepreneurs continued to be held in high esteem. Relative to other countries, a high proportion of early stage entrepreneurs in Ireland have serious growth ambitions for their new businesses, are engaged in medium/high technology sectors, and expect to have at least half of their customers in export markets (*ibid*). Whilst recognising that entrepreneurs are not homogeneous and that their aspirations and expectations for their new businesses differ, it is encouraging to see that 20% of early stage entrepreneurs in Ireland expect to have significant jobs growth (at least twenty jobs) within five years. There is a higher proportion of entrepreneurs in Ireland with high growth ambitions than is the norm across other countries.

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The majority of new businesses in Ireland are small yet some 18% of Irish entrepreneurs have, or expect to have, at least half of their customers in export markets which is well ahead of the OECD and EU averages (*ibid*). Interestingly, some 11% of all early stage entrepreneurs are active in sectors which may be defined as medium or high technology. This is a very high proportion and is higher than the averages across the OECD and EU. These data are very encouraging because they indicate a confluence of policy with the increase in growth oriented, knowledge-intensive, export-led businesses. Conversely, the GEM Report for Ireland 2011 (2012, p.21) concluded that:

> The negative change in the environment for entrepreneurship in Ireland continued to have an impact on the general perception of entrepreneurship as an attractive career option, with a continuation in the relatively low numbers perceiving opportunities to start a business or aspiring to be an entrepreneur. The high level of necessity entrepreneurship also continued. More than one in four early stage entrepreneurs did not expect to become employers. The entrepreneurial gender divide continued, compounded by the relative lack of ambition among women entrepreneurs. There was a very sharp increase in the number of owner managers whose businesses failed. At a time of continued difficulties in accessing finance, there were fewer informal investors and those that were active were investing smaller amounts.

Porter (2002) maintained that national prosperity depended on innovative capacity, which must include a strong R&D investment and strong links between industry and HEIs. However, he observed that whilst steps to achieve a knowledge society in Ireland had been identified, the key challenge was to generate consensus about the need to achieve this strategy and commit to the process of implementation (*ibid*). The government recognised that knowledge had become the most important factor of production and knowledge assets are the most powerful producer of wealth. The key to facilitating greater dispersal of wealth and economic activity is for the regions to develop a capability which will differentiate them from other regions and attract wealth-generating activity to capitalise on such capability. The National Spatial Strategy 2002-2020 (2002) recognised that the potential for developing regional economic activity must be driven by advantages derived from exchange of information, collaboration, innovation, adoption of best practices and mobilisation of finance and skills, collectively termed 'entrepreneurship'.

It recognised that the potential for developing regional economic activity must be driven by advantages derived from exchange of information, collaboration, innovation, adoption of best practices and mobilisation of finance and skills, collectively termed 'entrepreneurship' (*ibid*). The key to facilitating greater regional balance and dispersal of wealth and activity is for the regions to develop a capability to differentiate them from other regions and attract wealth generating activity to capitalise on such capability. This recognition has led to a greater emphasis on developing strategic links between HEIs and regional SMEs and industry with greater government investment in R&D, innovation and commercialisation of research and HPSUs. The Enterprise Strategy Group (2004) concluded that the success of Ireland's economy lies in building knowledge and expertise to achieve leadership positions in target markets. Whilst there was an exponential level of economic growth and strong employment creation in the period from 1995 to 2007 with annual economic growth averaging some 7.5%, this was largely regarded as a 'catch up' phase for the Irish economy (Power, 2009, p.74). On foot of this growth, the labour market was transformed in a dramatic fashion, the number of people in full-time employment rose from 1.3m to 2.1m and unemployment figures fell from 12.2% to 4.4% at the start of 2007 (Power, 2009, p.74).

According to Cooper (2009), the availability of very cheap money to borrow kept the Celtic Tiger going, despite a reverse in the positive balance of trade figures and a decline in manufacturing as the currency benefits evaporated. The availability of labour from EU accession States filled vacant jobs and stemmed excessive wage growth (*ibid*). By 2006, Ireland was one of the richest countries in the world. How did this happen? Lewis (2011) concluded that there are many theories, namely: (i) the elimination of trade barriers; (ii) the decision to grant free public higher education in 1994; and (iii) the persistent lowering of corporate tax rate, beginning in the 1980s which turned Ireland into a tax haven for foreign corporations. Up until the early 1990s, there was no defined or focused policy for SMEs in Ireland and support to small businesses up to that time was extremely fragmented, and very much focused on large businesses with export potential.

Even though the EU provided an overall framework for entrepreneurial activity and support, and in particular, developed policies and objectives aimed at stimulating further wealth creation in Europe and its regions, each country has the latitude to develop its own enterprise policies. Forfás (2000) highlighted the need to increase the proportion of new jobs created in the internationally traded services sector and in high-skill, knowledge-based sectors. The two agencies charged with implementing policy developed by Forfás are EI (indigenous enterprise development) and IDA (FDI). The Forfás-commissioned Ahead of the Curve Report (2004) argued that by placing enterprise at the heart of government and by implementing a coordinated approach to enterprise policy, Ireland had the opportunity to outpace competitor countries in swiftness, efficiency and responsiveness. However, it sounded warning bells that indigenous exports had not grown significantly in real terms over the past decade *i.e.,* 1994–2004 (inclusive) (*ibid*). Forfás (2007) outlined plans to make Ireland a strong entrepreneurial culture, recognised for the innovative quality of its entrepreneurs, and acknowledged by entrepreneurs as a world-class environment in which to start and grow a business.

Until the publication of the Smart Economy Report (2008) and Innovation Task Force Report (2010), there was no articulated government vision for entrepreneurship to engender a shared sense of mission across the various stakeholders and no champion for entrepreneurship within government. There was no forum to drive entrepreneurship policy and initiatives in a coherent manner. The government has supported many initiatives aimed at inspiring entrepreneurship and supporting start-ups, however, such initiatives were generally uncoordinated and were not informed by a coherent policy. There was little congruence between government aspirations for the generation of a knowledge economy and the practicalities of focused enterprise development. Enterprise policy is largely centralised and whilst there may be some element of local interpretation of national policy by regionally and/or locally based policy implementers *e.g.,* CEBs to meet local needs. Over the past decade, Ireland's traditional competitive advantages have been eroded, hence, the need for a shift of emphasis from an over-reliance on FDI to one where enterprise, R&D and innovation becoming drivers of sustainable economic competitiveness.

Fitzsimons and O'Gorman (2007) posited that Ireland needs more entrepreneurs but they conceded that not all entrepreneurs have the same economic impact. They questioned the merits of providing unnecessary and often wasteful support to small firms or new start-ups that *would never engage* in internationally traded activities (*ibid*). Contemporary policies are focused on fostering knowledge-intensive businesses in strategic areas with export potential (Smart Economy Report, 2008; Innovation Task Force Report, 2010; Jobs Initiative, 2012; Science Foundation Ireland, 2012). Please note, an abridged chronology of enterprise policy in Ireland is provided in Appendix C.

3.3.2 A Strategic Focus on High Potential Start Ups

Bygrave and Reynolds' (2001) research highlighted that approximately 11% of HPSU entrepreneurs expected to create 20 or more jobs over the next five years which compared to only 2% of necessity entrepreneurs who each expected to create similar job numbers *i.e.,* 20+ jobs. Ireland is not unique in developing economic policies focusing on developing and supporting HPSUs. Whilst the aim to promote HPSUs or 'superstars', as Drucker (1995) named them, is laudable, it raises a fundamental question: is this focus on HPSUs replacing another government's obsession with FDI? EI's remit is to support HPSU entrepreneurs and to ensure that emerging technologies and business ideas with export potential become a commercial reality and work with such companies to achieve scale at the earliest stage of development. According to Frank Ryan (2010), CEO of EI, the impact of HPSUs should not be underestimated, not just in terms of regional job creation, but also in terms of their capacity to grow rapidly, achieve international scale and competitiveness, thereby, contributing to export led growth and the revitalisation of the Irish economy. Hart, McGuinness, O'Reilly, and Gudgjn's (2000) study of public policy and SME performance in Northern Ireland concluded that a greater concentration of effort on firms with growth potential would appear to have been successful. They argued that one way for Northern Ireland's State EDA to maximise the benefits of its resources was to 'pick winners' *i.e.,* supporting companies who have demonstrated some degree of movement along a growth trajectory (Hart *et al.,* 2000). However, Porter (2007) maintained that picking winners and attempting to nurture them through subsidies and protection, rarely succeeds.

The concept of EDAs picking winners is not unique to Ireland given there is a similar pattern in most EU countries. Whilst there is little consensus amongst researchers as to the validity of supporting just high flyers, many EDAs are focusing more on 'backing winners' which Freel (1998) rationalised by stating that there are innumerable factors influencing growth of firms at different times of their development. Freel's (1998) research was based on a longitudinal study of a small sample size of six companies and it showed that developing a predictive model was implausible. However, public policy continues to be developed based upon the increasingly untenable proposition that we can 'back winners'. The notion of picking or 'backing winners' has gambling connotations and involves both risk and uncertainty as investment in start-up companies and/or SMEs is not an exact science. The government is holding tight to the notion that you can 'back winners' *i.e.*, HPSUs and that investment should be prioritised for them.

Henry, Hill and Leitch (2003) suggested that there is a need for intervention in the process of new venture creation. However, Massey (2003) posed two questions, namely: (i) is it the case that firms that use assistance programmes become more effective and contribute to the economy as a whole; and (ii) is it that these firms are going to succeed anyhow? Storey (1992; 1994) concluded that supporting such firms gives them an unfair advantage over others. Conversely, O'Gorman (2007) argued given the general lack of clarity on policy objectives, it is extremely difficult to measure the effectiveness of government intervention given a lack of defined methodology. The lack of specific performance metrics only serves to complicate further the evaluation process (Henry *et al.*, 2003; Storey, 1998). The challenge for EDAs is to decide which companies will benefit the most from their assistance. Porter (2002) concluded that Ireland's prosperity depends on innovative capacity which must include a strong R&D investment and linkages between industry and HEIs. He called for significant Exchequer investment in Science and Technology, to drive and sustain the development of indigenous enterprises, particularly that of HPSUs.

3.4 Higher Education and the Knowledge Economy

The 19th century, the educationalist Vere Foster (1818–1900) attested that *"a nation's greatness depends on the education of its people"*. However, a century later, Wolf (2002) posed two key questions, namely: (i) does education matter in the ways in which government, the world over, believe that it does? and (ii) are education policies well-conceived? He concluded that the answer to both questions must be no because two naïve beliefs have a distorting influence, namely (i) there is a simple, direct relationship between the amount of education in a society and its future economic growth rate; and (ii) a government can fine-tune education expenditures to maximise that self-same rate of growth (Ó'Foghlú, 2010). Barry (2004) suggested that this has generated a range of mechanistic and redundant national and regional policies seeking to convert new ideas to commercial reality and transfer them to the private sector. Conversely, Figel (2005) claimed that countries need to invest more and better in their people and that there is a direct correlation between the level of education of the workforce and the ability of a country/region to be successful in today's world.

There is increasing government pressure being placed upon HEIs to develop innovation and demonstrate relevance to national and international competitiveness agenda (Lambert 2003, Williams and Kitaev 2005, Mittelstadt *et al.*, 2008; Blenker *et al.*, 2011). Irish HEIs are instrumental in the development of an innovation intensive economy, particularly in those sectors where Ireland competes for international trade and investment in *e.g.*, ICT, Biotechnology. In the future, it is expected that Ireland's key export sectors will be pharmaceuticals, medical device industries and the life sciences sector (IDA, 2012). The Higher Education Authority (HEA) (2003) argued that the move to become a knowledge-based innovation society would be driven and sustained by further investment and performance in HEI-led R&D and innovation. It highlighted the need for strategic development of the knowledge development and transfer functions at individual Institute level through the implementation of a strategy for the commercialisation of R&D (*ibid*). Garvin (2012) maintained that in half a century higher education in Ireland went from the belief that it had nothing to do with economic development to what he regarded as the equally absurd assumption, being all about economic development: 'from one foolish barbarism to another'.

Until the publication of the Culliton Report (1992), little credence was given in Irish economic policy to the intrinsic links between economic growth and the education system. A seminal change in Ireland's economic development policy came with the recognition of the importance of education in strengthening the enterprise sector which led to significant restructuring of the education system by endeavouring to move away from what Culliton (1992) described as a bias towards liberal arts and traditional professions to a greater emphasis on the importance of productive enterprise within our society (Industrial Policy Review Group, 1992; in *Charting Our Education Future*, 1995). There has been a significant restructuring of the higher education system including a greater investment in the sector; greater collaboration with industry; greater investment in HEI-led R&D; and the enactment of the Regional Technology Colleges (RTC) Act (1992). Despite many exciting initiatives, collaboration between enterprise and academia has been limited and this is attributed to low levels of investment in R&D, a lack of proactive initiatives by HEIs to engage with industry, poor capacity or resources within enterprises to source, integrate and exploit new ideas and a lack of framework for determining IP rights (Forfás, 2004). Every developed country relies on the quality of its people to achieve sustainable increases in living standards and the quality of the Irish education system has been a critical foundation for Ireland's economic and social progress (NCC, 2009). The HEA (2012) concluded that Ireland has achieved a remarkable expansion of higher education opportunities over recent decades which resulted in a steady improvement in the educational profile of its workforce relative to international benchmarks.

Whilst Ireland's younger workforce is amongst the most educated in the OECD, the educational attainment levels of older workers are poor by international standards (*ibid*). According to the HEA (2012), whilst the disciplinary profile of higher education corresponds closely with international norms, since the collapse of Irish public finances, the perception of its quality internationally has suffered. However, since the mid-1960s education has been highly valued and it is regarded as a central plank in the social, cultural and economic development of Irish society. A key impetus to this good reputation of Irish education came about when the then-Minister for Education, Donogh O'Malley, introduced free secondary education for all students.

According to Ferriter (Irish Times, 8 September, 2012):

> The long-term effects of that (decision) were huge. By the time of the late '80s/early '90s, the amount of people with a third level qualification doubled. Donogh (sic) referred to the number of kids leaving school with only primary education as a 'dark stain' on the national conscience. You couldn't be a modern, prosperous nation if you had so many kids with no access to education after 13 years of age.

This decision has resulted in Ireland attaining one of the highest educational participation rates in the world with over 81% of Irish students completing second-level education and over 60% entering higher education (OECD, 2010). Ecofin (2009) noted that whilst Irish expenditure on higher education was slightly less than the EU average, Ireland produced more graduates per 1,000 inhabitants than any other EU country and they were considered amongst the most 'highly employable' in Europe (Aubyn *et al.*, 2009; Quinn, 2011; Lillis & Morgan, 2012). Free tuition fees for undergraduate study have been in place since the late 1980s but in 2012, the contribution by students to third level *i.e.,* capitation fee will have increased to some €2,250 per annum. The reintroduction of third level fees is an emotive subject and will be strongly contested by the Union of Students of Ireland (USI) and parents (Lillis *et al.,* 2012). The full introduction of fees would redraw social class boundaries creating a lower middle class to benefit from the grants scheme and reinforce social polarisation on the basis of social class, skill and occupational segregation by limiting access to higher education for lower socio-economic groupsl. It would be myopic of HEIs not to explore alternative income streams rather than relying totally on the Exchequer - they need to become more entrepreneurial. The Hunt Report (2011) stated that HEIs will play a central role in making Ireland a country recognised for its innovation, competitive enterprise and continuing academic excellence. It highlighted the need for HEIs to: (i) encourage greater inward and outward mobility of staff and students between HEIs, business, industry, the professions and wider community; (ii) respond positively to the CPD needs of the wider community to develop and deliver appropriate modules and programmes in a flexible and responsive way; (iii) recognise civic engagement of their students through programme accreditation, where appropriate; and (iv) put in place structures and procedures that welcome and encourage the involvement of the wider community in a range of activities, including programme design and revision (*ibid*).

This requires mobilising HEIs towards a more responsive approach to the demands of local enterprise through greater access to each HEI's expertise, core competencies, embedded knowledge and research capability of academic staff and students. The new ideas uncovered through research will help the country grow out of these difficulties and into a more prosperous era, therefore, enabling innovative thinking is to be the raw material of prosperity (O'Brien, 2011). The Culliton Report (1992) and the subsequent Science, Technology and Innovation Advisory Council Report (1995) called for increased investment in R&D, and for recognition of the link between a healthy public sector research system and economic growth. Ó'Foghlú (2010) posited the IDA recognised the fact that as Ireland's costs had increased and new members joined the EU with lower cost bases, globalisation allowed more dramatic outsourcing to low cost countries such as China and India.

It was obvious that Ireland could no longer pursue an FDI strategy based purely on low cost manufacturing. Instead it needed to move up the value chain to become a knowledge-based economy (ibid). This strategy is congruent with the Lisbon Agenda (2000), wherein the creation of the knowledge economy was articulated as a primary economic target for the EU with a specified target of 3% GDP investment in R&D by 2010 (including public and private sector investment). This approach is promoted by the IDA and others and requires the development of research in HEIs to forge links with which to encourage the new form of FDI i.e., attracting multinational R&D to Ireland. In tandem, the educational system was catalysed by success in EU-funded research programmes in the late 1980s and early 1990s and lobbied for a more developed national research funding system (ibid). Harney (2002) said that in light of the significantly increased levels of R&D being carried out, Irish HEIs provide the seedbed for similar new companies to emerge from HEIs and laid down the challenge of turning that potential into worldclass companies. Ó'Foghlú (2010) argued that whilst statistically more is spent on research in business (BERD) than in higher education (HERD), what is certainly missing in Ireland are entities that span the gap between academia and industry. Cogan (2003) argued that Ireland missed out on institutions such as technological universities and industry laboratories that are a feature of the industrial landscape in most European countries.

Ireland's chosen path to industrialisation *i.e.,* the over-concentration on FDI masked the deficiency in the research infrastructure, and in the intermediaries that help bridge the gap between enterprise and the research base (*ibid*). The Science Foundation Ireland (SFI) and the HEA's Programme for Research in Third Level Institutes (PRTLI) and Technological Sector Research Programme have succeeded in meeting this aim. The Strategy for Science, Technology and Innovation 2006-13 (2006) contained a number of important targets which will impact on the higher education sector, namely: (i) doubling the number of PhD graduates within a four year completion cycle; (ii) attaining the requisite intellectual critical mass in key strategic areas such as ICT and the Biosciences; (iii) advancing the quality of postgraduate and PhD training; and (iv) strengthening the arrangements for industry collaboration to support knowledge transfer (*ibid*). There was a significant increase in Exchequer funding for research in the past decade and the National Competitiveness Council (NCC) (2009) recommended the full implementation of the *Strategy for Science, Technology and Innovation 2006-13* despite reduced Exchequer funding. This would result in high levels of Exchequer spending on R&D, to be provided on a competitive basis, to help to bridge the gap between facilities available to Irish researchers and researchers in leading knowledge economies. According to the National Strategy for Science, Technology and Innovation (2011), it is excellence in research and increased innovation in the enterprise sector that will accelerate Irelands's economic restructuring. Subsequently, in 2012, the government agreed to target 14 areas of scientific research that have the greatest potential to create jobs and companies which will receive the bulk of the €500 million available from EDAs through the national science budget. These priorities are depicted in Table 3.2.

Table 3.2 Priority Research Areas

Future Networks and Communications	Data Analytics, Management, Security and Privacy
Digital Platforms, Content and Application	Connected Health and Independent Living
Medical Devices	Diagnostics
Therapeutics: Synthesis, Formulation, Processing and Drug Delivery	Food for Health
Sustainable Food Production and Processing	Marine Renewable Energy
Smart Grids and Smart Cities	Manufacturing Competitiveness
Processing Technologies and Novel Materials	Innovation Services and Business Processes

Source: Forfás (2012, p.10-12)

These research areas were identified by a group involving academics, civil servants and industry, brought together in 2010 to determine the future course of State funded research here. The report also recommended the State support six platform science and technology areas, namely: (i) biomedical science; (ii) nanotechnology; (iii) advanced materials; (iv) micro-electronics; (v) photonics; and (vi) software engineering, which, in turn, will support research in the priority areas (*ibid*). As previously stated, interactions between business and HEIs lie at the heart of successful national and regional innovation policies, however, despite many exciting initiatives, collaboration between enterprise and academia has been limited in Ireland. The Enterprise Strategy Group Report (2004) attributed this to low levels of investment in R&D, a lack of proactive initiatives by HEIs to engage with industry, poor capacity or resources within enterprises to source, integrate and exploit new ideas and a lack of framework for determining IP rights. A key challenge facing the Irish higher education sector is to optimise the benefits of R&D through the commercialisation of research, entrepreneurial spin-offs and spin-ins and facilitating a more proactive approach and response to the needs of SMEs.

Each HEI needs to open its doors to local entrepreneurs, albeit in a targeted manner, and offer greater access to its core competencies, namely, staff expertise, embedded knowledge and research capability. Stronger HEI-SME partnerships create opportunities for graduate employment, whereas, student placements in SMEs enhance the career prospects of students by adding entrepreneurial skills to core subject (domain knowledge) expertise. Additionally, through collaborative research projects with SMEs, HEIs can attract additional funding and enhance the impact of HEI-based research on SMEs and regional innovation. The development of high quality, effective networks involving HEIs, entrepreneurs and EDAs in the Etzkowitz *et al.* (1999) triple helix model tradition is becoming more common. Whilst entrepreneurs and academics should be natural partners, Barry (2004) cautioned that HEI culture is not geared to business collaboration and industry has little understanding of the culture of higher education. Government expectations of HEIs in driving economic development must be tempered with reality given the significant differences in culture, objectives, timelines and expectations between both communities.

Furthermore, within the HEI sector in Ireland there are organisational and structural differences between the universities and the Institutes of Technology (IoTs). The following section traces the evolution of the IoT sector since the 1960s.

3.5 The Evolution of the Institute of Technology Sector

Institutes of Technology (IoTs), formerly known as Regional Technical Colleges (RTCs), have been a feature of Irish higher education since the late 1960s and early 1970s. Their origins can be traced to the Mulcahy Report (1967) which envisaged the function of the then RTCs as educating for trade and industry to support regional industrial development. Their establishment coincided with the publication of the Buchanan Report (1968) which advocated a regional emphasis in industrial development policy so as to avoid a rural-urban shift and the over-concentration of foreign firms in core areas. RTCs planned to bridge the gap between second and third-level education by providing the final two years of technically oriented post-primary education, courses for junior and senior apprentices, technicians and adult learners. Throughout the 1970s, full-time enrolments in IoTs continued to grow to 10,000 by the early 1980s with most of this provision at sub-degree level. Since their establishment, IoTs have been engaged in the provision of teaching and learning, and increasing regional access and participation in higher education through a range of courses from apprentice programmes to higher technical/technological undergraduate and postgraduate education. A key point in the evolution of their mission was enunciated in the RTC Act (1992) Section 5 (1):

> to provide vocational and technical education and training for the economic, technological, scientific, commercial, industrial, social and cultural development of the State with particular reference to the region served by the college.

Research, consultancy and development work were no longer considered optional or desirable activities of the sector but were regarded as core functions under the RTC Act (1992). The confluence of economic and industrial policy with its emphasis on FDI and manufacturing industry and educational policy through the 1970s, 1980s and early 1990s in respect of the IoTs served the State well. By 2001, admissions to the IoTs accounted for almost 50% of the admissions to higher education.

At the same time, there was an increasing range of degree and post-graduate programmes relevant to the needs of the regions. Despite accusations of 'mission drift' (Skillbeck, 2002; OECD, 2004), a substantial proportion of the education provision continues to be at sub-Degree level and the IoTs have responded directly to national skills shortages with a range of block release, accelerated and flexibly delivered programmes. IoTs have demonstrated agility in responding to economic changes in a regional, national and international context and have developed a strong reputation for engaging in applied and basic research and knowledge transfer programmes with industry. There is considerable variation between the thirteen IoTs in terms of their size, profile, research traditions and track record, knowledge transfer and postgraduate activity. Each IoT is unique in serving a specific region with variations in the industrial base, population and spatial strategy. Harney (2002) described IoTs as the main engines for growth in the regions, providing new knowledge and ideas which are translated into commercial entities, thereby, exploiting the intellectual assets and enhancing regional and national economic growth.

IoTs are required to be more responsive to the needs and demands of industry by developing strategic partnerships with industry and EDAs to harness the embedded knowledge of individual Institutes. IoTs will have to become more entrepreneurial, source alternative income streams, achieve significant improvements in productivity and efficiency in their programme delivery. Instead of being rewarded for being entrepreneurial and generating additional income, IoTs have been penalised for being entrepreneurial given any additional revenues generated are deducted from their annual budgets. This is a fundamental flaw in Irish higher education policy and emphasises the need at HEA level to reward and incentivise all HEIs who succeed in generating income from research, lifelong learning, international students, campus enterprise and other entrepreneurial initiatives.

3.5.1 Research in the Institute of Technology Sector

IoTs have been recognised in the government's Strategy for Science, Technology and Innovation as representing an important resource in regional economic development and regional innovation.

Whilst there has been an exponential growth in research within the IoT sector during this period, this was largely regarded as a *catch up* phase for IoTs versus the university sector which in some instances have had over 150 years head start in pursuing the research agenda. IoTs were only effectively allowed to pursue a research agenda since the enactment of the RTC Act (1992). Section 5 (1) (c) of this Act provided for IoTs to '*engage in research, consultancy and development work and to provide such services in relation to these matters as the governing body of the college considers appropriate'.* Despite their relatively short history of engaging in research, IoTs have built a strong reputation in engaging in applied and basic research and knowledge transfer initiatives with industry and SMEs. The growth in research has been exponential *i.e.,* research awards have increased from €6.4 million (1996) to €90 million (2010), whilst IoT investment in R&D has increased from €5.7 million (1996) to €32.4 million (2010) which represents a growth rate of 15-16% p.a. (IOTI, 2010). Under the National Development Plan 2000-2006, the Department of Education and Skills targeted the development of capacity for research and enterprise within the IoT sector through the following initiatives:

Table 3.3 Initiatives to Seed Research and Entrepreneurship in IoTs

Strand	Theme	Objective
1	**Postgraduate R&D Skills Programme**	To increase the supply of graduates with the necessary skills, to provide the advice and technical support which industry requires, to become, and to remain competitive.
2	**Enterprise Platform Programme**	To provide systematic enterprise development training programmes in the technological sector and to provide graduates with the necessary skills to establish and run their own businesses.
3	**Core Research Strengths Enhancement Programme**	To establish new research strengths, including self sustaining research teams within the IoTs, and to develop the strategic and planned long-term development of research capabilities in the IoTs.

Source: IOTI (2011)

3.5.2 Enterprise Development Initiatives in the Institute of Technology Sector

IoTs' contribution to enterprise development includes a number of initiatives, namely: (i) EE at undergraduate and postgraduate level; (ii) Technology Transfer activities; (iii) academic spin-offs; (iv) commercialisation of R&D; (v) campus incubators; and/or (vi) synergistic links with SMEs. Over the past decade, IoTs have concentrated on (i) the development of the physical infrastructure to support enterprise development and (ii) the development of HPSUs through the Enterprise Platform Programme.

These initiatives have achieved significant results and acclaim for the sector. The Council of Directors of the IoTs (2003) recommended that IoTs should, in collaboration with EDAs, be given a leading role in a knowledge and technology transfer function in their region. They recognised that innovation is at the heart of productivity, growth and social gain and that national and regional competitiveness are related to the capacity to transfer the potential of technological discoveries into innovation with products, processes, services and systems. In order for IoTs to become champions of campus and regional enterprise development, the sector must become more entrepreneurial in its outlook, more entrepreneur-focused and develop strategic alliances with its enterprise development partners to optimise the potential for campus and graduate enterprise development. This presupposes that at individual Institute level there would be an appreciation of entrepreneurship and a commitment to linking new knowledge and entrepreneurship (Fenton, 2005).

3.5.3 Physical Enterprise Infrastructure in the Institute of Technology Sector

EI funded IoT campus incubators to pursue the two principles of incubation, namely: (i) to have a positive impact on its community's economic health by maximising the success of emerging companies; and (ii) to become a dynamic model of a sustainable, efficient business operation. Given they are located within an IoT environment, they are closely linked to their host Institute's academic staff. Campus incubators have evolved from providing clients with basic bricks and mortar incubation space and limited access to the host Institute's staff and resources to providing value added support services and strong links to the host Institute. Their effectiveness is dependent on the presence of a dynamic, full-time manager to support and advise client companies and forge relationships between clients and academic staff, EDAs, students and graduates (Fenton, 2005). Without a dedicated manager, there is a risk of campus incubators becoming no more than glorified workspaces and the potential for high-level synergies between clients and the host IoT would be squandered (ibid). There is significant potential for synergies between a campus incubator and an IoT, both located in close proximity of each other.

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Whilst tenants place a high value on a campus incubator facility, they place greater emphasis on the value added support services *e.g.*, training, mentoring and networks, association with a reputable IoT, access to IoT staff, expertise, facilities, manager's expertise and enterprise networks (*ibid*). Many of these support services and networks would be inaccessible to clients if they were to remain outside the campus incubator. Campus incubators provide an enhanced platform for the development of enterprise and academic networks and partnerships. Whilst the development of the physical entrepreneurship campus is a welcome addition to IoTs, equally important is the development of the human capital.

3.5.4 Enterprise Platform Programme

The Enterprise Platform Programme (EPP) was formally established in 2000 as Strand II of the Department of Education and Science Technological Sector Research Initiative. It was explicitly concerned with the provision of systematic enterprise development training programmes for graduate entrepreneurs. IoTs could apply through a competitive application process for funding to operate an EPP within their institution. EPPs operate as a one-year rapid incubation programme for graduate entrepreneurs with a strong business concept through the provision of training in the skills required to start her/his own business. EPPs aim to provide systematic enterprise development training programmes in IoTs to graduate entrepreneurs and aims to train them in the skills required to establish and run their own business (Fitzsimons & Murray, 2005). Given the limited number of places on EPPs each year, the selection criteria are rigourous *i.e.*, the business concept must: (i) be knowledge-based and innovative in nature; (ii) have job creation and export potential; and (iii) have been well-researched prior to application (Fitzsimons *et al.*, 2005). Essentially, EPPs are more than enterprise training programmes given participants are provided with valuable incubation space within a campus incubator and the following support services to participants: (i) training; (ii) business mentoring (iii) advice of a dedicated EPP manager; and (iv) networking opportunities. Each EPP employs a dedicated programme manager with either a dedicated or central administrative support.

Heretofore, EI's investment in EPPs was driven by research which proved that incubated firms have shown substantial differences in pre- and post-incubation sales and payroll growth, whilst others have significantly lower failure rates amongst incubated firms (Sherman, 1999; Molnar, De Pietro & Gilette, 1996; Campbell, 1989). In 2008, Prospectus management consultants reviewed all EPPs and concluded that since their establishment, IoTs have delivered systematic enterprise training to 869 individuals through thirteen EPPs. EPP participants established some 660 new businesses in addition to 191 HPSUs resulting in the creation of some 3,000 jobs (*ibid*). EPPs have provided a pipeline of entrepreneurs for campus incubators and EI-funded commericalisation of research and development (CORD) programme. Table 3.4 provides an overview of the EPP:

Table 3.4 Overview of Enterprise Platform Programme

Aim	To provide systematic enterprise development training programmes in the technological sector and to provide graduates with the necessary skills to establish and run their own businesses.
Overview	Provides funding to IoTs to enable them to setup systematic enterprise development training programmes. EPPs equip graduate entrepreneurs with the skills necessary to bring a business or enterprise idea to a sufficient stage of development to be either launched in the market place, or, in the case of businesses which have recently commenced trading, to strengthen their market/trading position. EPPs adopt a dual approach through the provision of formal education/training in enterprise/product development on the one hand, strongly reinforced by enterprise specific advice and counseling through a network of industry / business mentors on the other. In this way, EPPs aim to contribute to the establishment of indigenous enterprises and the potential to develop entrepreneurial skills in graduates who will contribute to the development of the economy.
Duration	12-month programme
Cost	Each pilot (participant) place in an EPP is valued at a maximum of €16,500. Costs in respect of the trainee grant element of the programme are set at €6,600 per annum. Other eligible costs include programme management supervision costs, programme training costs, materials, course fees, external consultancy/mentoring costs, travel.
Evaluation	• Quality of the programme to build new businesses; • Quality of the programme to train and develop graduate entrepreneurs; • Experience and competency of the management team and programme deliverers, including breadth and depth of the overall team; • Physical infrastructure; • Additional benefits and factors associated with the proposed programme.

Adapted from: Prospectus (2008)

EI offers additional funding towards salary costs to participants that are on EPPs and where the entrepreneur has the capability to establish an enterprise with the potential to grow significantly. EI's Commercialisation of Research and Development (CORD) funding aims to bring a new product idea/business venture from HEIs to market or to bring a new product idea or business venture from concept to market. Under this programme EI funds 50% of a participant's salary up to a maximum of €38,000 for one year (HEA, 2008). In essence, the CORD programme provided a financial safety net for participants making it easier to make the transition from employment to self-employment. It meant that participants received a monthly stipend which they could invest in the development of business. Figure 3.1 indicates the total number of CORD grants awarded to EPP participants from 2000 to 2008 (inclusive).

Figure 3.1 The Number of CORD Grants Awarded to EPP Participants 2000 – 2008
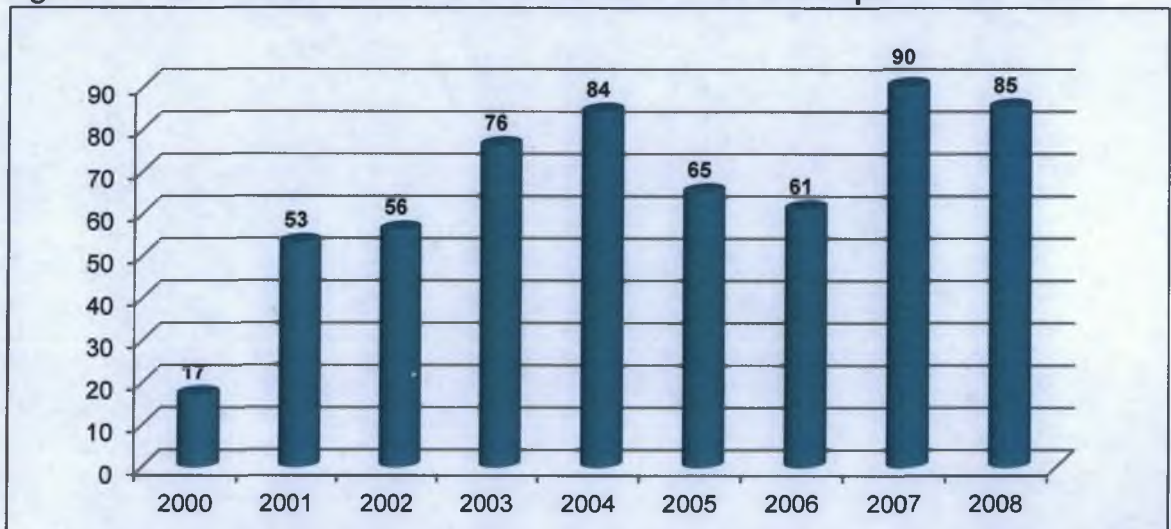
Source: Enterprise Ireland (2010) and HEA (2010)

A total of 587 CORD grants have provided additional support to participants on EPPs from 2000 to 2008 (inclusive). In essence, this represents 67.5% of all participants on EPPs which meant that over two thirds of EPP participants were deemed as Enterprise Ireland clients. Figure 3.2 highlights the value of EI funding to EPP participants through CORD during the same period (2000 – 2008).

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Figure 3.2 The Value of EI CORD Funding to EPP Participants 2000/08
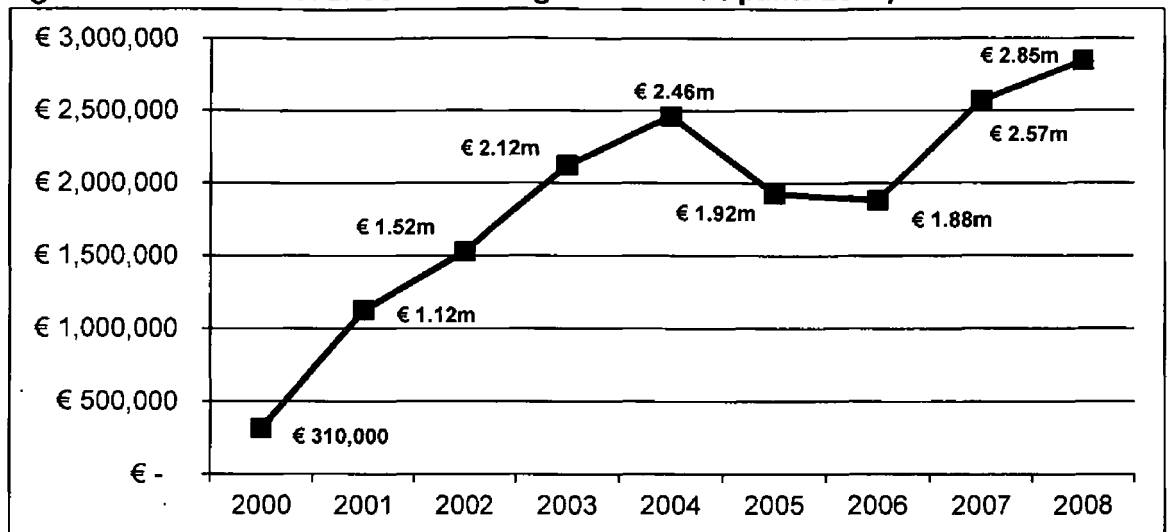
Source: HEA (2008)

The aggregate investment in CORD funding for EPP participants from 2000 to 2008 was €16.7 million which equates to €28,500 per EPP participant funded by EI. Enterprise Ireland noted that the EPPs have had a significantly positive effect on the generation of HPSUs outside the Greater Dublin Area (GDA), namely: (i) 33 HPSUs were established in 2006 and 2007 through EPPs and 23 of those (70%) were outside the GDA (HEA, 2008). In aggregate terms, 2,826 new jobs have been created from businesses established by participants on EPPs. EPPs, therefore, provide a pipeline of entrepreneurs for hot-desks and some start-up companies for incubation centres in IoTs. However, there was insufficient evidence to quantify the transition of EPP participants to campus incubation centres. Many IoTs and EPP managers concluded that the EPP provides a focal point in IoTs for engagement with local enterprise (*ibid*).

3.6 The Future Landscape for Irish Higher Education

The HEA commissioned a national strategy group to review and plan for the development of the HE to 2030. The resultant Hunt Report (2011) articulated its vision for the Irish HE sector and highlighted the institutional benefits of greater engagement with the wider community groups are significant, not least in the establishment of a platform for the advancement of social, civic and economic entrepreneurship. Achieving this will help them become more relevant and responsive, and will also enhance their diversity and distinctiveness as institutions (*ibid*).

What does this mean to both the university and IoT sectors? The Irish higher education sector operates as a binary system with HEIs operating according to diverse missions, despite a unified reporting structure to the HEA (Ó'Foghlú, 2010). Ireland has a variety of higher education institutional types and this has caused some confusion regarding the distinctions between universities and IoTs. The OECD (2004) raised concerns about 'mission drift' of some IoTs and recommended the steps required for greater coordination and development of the tertiary education system in order to bring all HEIs under a common authority. In 2007, a key change in the HE system was that the IoTs, previously administered directly by the Department of Education and Skills (DoES), were re-designated to fall under the remit of the HEA.

The Hunt Report (2011) recommended that IoTs should commence a process of evolution and consolidation; amalgamated institutions reaching the appropriate scale and capacity could potentially be re-designated as 'technological universities'. The HEA (2012) was at pains to point out that this means conserving all of the best aspects of the binary system such as the differentiated emphasis in different parts of the system on regional engagement, research intensity, part-time provision and labour market orientation. HEIs must also respond to the demands for new types of provision and performance enhancement through more sophisticated mission differentiation (*ibid*). The three primary objectives of the Hunt Report (2011) are to: (i) improve student experience; (ii) improve impact on society and economy; and (iii) improve international recognition of the quality of Irish higher education outcomes. The HEA (2012, p.5) posited that:

> Through the education and training of graduates, and the creation and distribution of knowledge, higher education should contribute to the development of a dynamic, fair, productive and creative society. Higher education should provide graduates with a breadth of knowledge, skills and competencies to meet the needs spectrum of private enterprise, public purpose and social innovation. Higher education should meet the requirements of the national research, innovation and enterprise agenda with an appropriate prioritisation of investment to achieve optimal social and commercial impact. Higher education should be regionally and community-engaged, as one means of ensuring the currency of the teaching and research underway, and of enabling competitive regional development.

The Hunt Report (2011, p.56) highlighted the central role to be played by HEIs in Ireland in nurturing creativity and entrepreneurship and called for the following changes both at the programme level and the institutional level:

> The undergraduate curriculum needs to place more emphasis on generic skills, especially those required for the workplace and for active citizenship. Creativity and entrepreneurship must be encouraged to a much greater extent; and institutions should facilitate reflective learning, applied knowledge, practical laboratory experience, and scientific skills. Various surveys, nationally and internationally, show that students, academics and employers believe that higher education has an important role to play in preparing students for the workplace and for their role as citizens, and that undergraduate education should explicitly address the generic skills required for effective engagement in society and the workplace.

As part of the consultation process for the Hunt Report (2011), employers identified key challenges exist to allow greater flexibility and engagement with enterprise and to produce graduates with relevant practice skills to enable them add value to business and to cater for a changing profile of worker who will change and learn on a life-long basis. It is evident that there is a need both for significant organisational and mindset changes within HEIs in order for them to become more entrepreneurial in practice and outlook. At the strategic level of the organisation, HEIs should be internally adaptive in order to be externally responsive and to develop strong engagement with the wider community (*ibid*). This will require: (i) strong institutional leadership; (ii) change in the culture and internal business processes of institutions; (iii) recognition of the importance of engagement activities in resource allocations, in promotion criteria and in the assessment of progress at institutional, regional and national level; and (iv) enhanced institutional engagement with community groups, industry and other stakeholders is a core feature of EE and enterprise activity (*ibid*). The Hunt Report (2011, p.118) argued that there would be:

> Greater freedom to innovate with more customised employment relationships for those HEIs which progress towards a more entrepreneurial and autonomous model of operation.

HETAC (2012) acknowledged that cultural change is a typical part of any change programme and will require flexible, responsive systems embedded at the institutional level. The challenge for Irish HEIs will be to address the dual demand for greater quantity and greater quality and in doing so, to develop and sustain a national skills base that is underpinned by adaptable and creative minds capable of taking a lead in global cultural and technological trends *(ibid)*. The current Minister for Education and Skills, Ruari Quinn (2011) questioned how do we position our higher education system to best meet the expectations of students and their parents, business and the wider society in a fast changing Ireland and in a fast changing world? It is worrying for a country that purports or aspires to be knowledge-based, there has been a substantial decline in government funding for higher education. Investment in education is critical to Ireland's economic recovery (Lillis *et al.,* 2012).

Quinn (2011) challenged HEI leaders to create a higher education system that responds to Irish needs and sets the tone and pace of higher education reform internationally. International experience has shown that reform in the education sector is seldom, if ever, quickly achieved but the publication of the Hunt Report (2011) and the subsequent HEA document *Towards a Future Higher Education Landscape* (2012) have provided greater momentum for higher education reform. This reform is informed by contemporary policy relating to entrepreneurship, engagement, the commercialisation of research, and internationalisation of HE (Innovation Task Force, 2010; Forfás, 2012). Economic regeneration is contingent upon HEIs' ability to develop an education and research system that is relevant and responsive to societal needs, capable of sustaining a base for high quality research and innovation (HEA, 2012). Ireland's ambitions are entwined with its ambitions and capacity for enhancing the responsiveness and quality of the higher education sector (Quinn, 2011). Government aspirations and rhetoric must be matched with strategic and sustained investment in HEIs, otherwise the opportunity costs will be incalculable.

3.7 Conclusion

From both a societal and economic perspective, Ireland needs to develop graduate entrepreneurship because it cannot afford another brain drain like those that devastated the country in the 1950s and 1980s. Whilst graduate entrepreneurship may be one component of a multi-pronged approach to rejuvenating the economy, it must be supported by entrepreneur-centric policies and practices. This chapter highlighted the contribution of the IoT sector to enterprise development through the development of the physical infrastructure and the support of HPSUs through EPPs. Both initiatives have achieved significant results and acclaim for the IoT sector but little is known about the effectiveness of EE in terms of graduate enterprise development. This reinforces the rationale for this study. Chapter 4 outlines the conceptual framework and the philosophical assumptions underlying this research. It also details the methodological approach adopted to address the research aim, objectives and questions.

Chapter 4 Conceptual and Methodological Framework

4.0 Introduction

There is a lacuna of literature and empirical research relating to graduate entrepreneurs' perspectives of EE at third level in their formation as entrepreneurs. This chapter synthesises the influence and contribution of key theorists and policies in the field of enterprise and EE and proffers a conceptual framework for EE at third level. It provides an examination and justification of the philosophical positions that influenced the research design, approach, methodologies, data and sampling collection methods adopted in this study. A detailed outline of the methodological approach employed is also provided from the perspective of reliability, validity and generalisability, as well as highlighting the ethical concerns and the limitations of the overall research programme. It provides a review of the research questions within the context of (i) the conceptual framework; (ii) the data analysis framework; and (iii) discussion of the research findings which will be detailed in the following three chapters.

4.1 Conceptual Framework: Entrepreneurship Education at Third Level

The conceptual model for EE at third level has evolved directly from the key literature and policies highlighted in the previous two chapters. It is informed by social constructivist research traditions drawing upon ideas from philosophy, psychology, sociology, business and education. Whilst EE is a relatively new phenomenon in Irish higher education, it is evident that good practice in EE at third level is founded on a constructivist approach to education *i.e.,* combining theoretical and experiential learning in an environment where the educator and student are regarded as partners in the construction of knowledge. Notwithstanding the different approaches to EE, as espoused by Blenker *et al.* (2011), this research focuses on entrepreneurship through the prism of new venture creation. The conceptual framework comprises five core concepts as depicted in Figure 4.1.

Figure 4.1 Conceptual Framework: Entrepreneurship Education at Third Level

Part of a Broader Entrepreneurial Ecosystem

Entrepreneurial HEI and Leadership

Dynamic Learning Environment

Entrepreneurial Staff

Entrepreneurial Students & Graduates

Source: Current Research

The rationale for inclusion of these five core concepts is that essentially they act as core pillars of EE at third level. Pettigrew (1985) advocated a broad based Literature Review approach, suggesting that *'kaleidoscopic reading'* could offer a researcher some imaginative insights into the research topic. Seminal and current literature and policy pertaining to EE was conducted at all points throughout the research which enhanced my own knowledge and understanding of the subject. A review of extant literature provided some imaginative insights into current and good practice in entrepreneurial HEIs and EE at third level. The core concepts of this conceptual framework can be meaningfully integrated and weaved into the design and delivery of EE programmes at third level. Table 4.1 provides a summary of each of the core concepts and key informants of the conceptual framework.

Table 4.1 Key Theorists Informing the Conceptual Framework

Themes	Key Theorists
Entrepreneurial HEIs: Changing paradigm of HEIs; the dichotomy of ideologies on role of HEIs; understanding the whole integrative, systemic nature of policy, economic development and the entrepreneurial process, and how these relate to EE at third level; Creating an entrepreneurial ecosystem; links with wider enterprise community; triple-helix model. Understanding the importance of HEI leadership in creating an entrepreneurial ecosystem.	Leydesdorff & Etzkowitz (1998); Van der Sidje (1999); Etzkowitz & Leydesdorff (2000); Clark (1998); Barry (2004); Neck *et al.* (2004); Potter (2008); Hannon (2010); Cooney (2011); Atkins (2012); Green (2012); McGowan (2012); HETAC (2012).
Entrepreneurial staff: Emergence of *pracademic i.e.,* lecturers who can straddle the academic and practical domains; Lecturers with first-hand knowledge and experience of enterprise development; Facilitators of student learning; Co-creator of knowledge; Sign-poster of opportunities and contacts.	Neck *et al.* (2004); Hannon (2006); Brennan *et al.* (2007); Potter (2008); Penaluna *et al.* (2008); Hannon (2010); Martin *et al.* (2011); Cooney (2011); Hederman (2011) Atkins (2012); Green (2012); McGowan (2010, 2012).
Entrepreneurial students and graduates: Students and graduates with the knowledge, skills and competence to become job creators; Having the self-efficacy and self-confidence to set up their own business; Co-creator of knowledge; Self-directed learners.	Wood and Bandura (1989); Bandura (1997); Hannon (2006); Potter (2008); Martin *et al.* (2011); Gibb *et al.* (2009); Carey & Matlay (2011); Green (2012); Atkins (2012); McGowan (2010, 2012).
Dynamic learning environment: Moving away from business plan to more experiential, problem-based learning; innovative approaches to teaching and learning; multi-disciplinary approach; guest lecturers; utilising social media; messy, creative and chaordic learning environment; assessment focusing on process; peer assessment/critique; pracademic *i.e.,* lecturers with first-hand knowledge and experience of enterprise development; facilitating and sign-posting learning; students as co-creator of knowledge; Life-wide learning within and outwith the classroom; importance of authentic experience.	Cooney (2008); Honig (2004); Kolb (1984); Gibb (1993); McGowan (2010); Handy (2001); Hederman (2011); Green (2012); Atkins (2012); Van Clouse (1990); Gibb (1993); Guglilmino & Kaltt (1993); Kreuger (2007); Mitra (2008); Ryan (2008); Smith (2009); Carey *et al.* (2009); Harris *et al.* (2009); Eurydice (2010); Carey *et al.* (2011); McGowan (2012); Matlay (2012).
Part of broader entrepreneurial ecosystem: Understanding the whole integrative, systemic nature of policy, economic development and the entrepreneurial process, and how these relate to EE at third level.	Goddard *et al.* (1994); Barry (2004); Neck *et al.* (2004); McGovern and McGowan (2007); Innovation Task Force (2010); Prendergast (2011); Atkins (2012); Green (2012); McGowan (2012); HETAC (2012).

Source: Current Research

This conceptual framework was used to inform the research objectives and questions and influence the overall research design.

4.2 Position of the Researcher

A researcher's beliefs shape her/his ontology *i.e.,* what can be said to exist in the world which influences how s/he perceives her/himself in relation to her/his environment, including other people (Graham-Cagney, 2011). Hearne (2009) posited that a critical researcher attempts to use her/his work as a form of social or cultural criticism whilst accepting certain basic assumptions.

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I have a teaching and research-based background in EE resulting from fourteen years working within the IoT sector as: (i) Industrial Liaison Manager IT, Tralee (1998 to 2004); and (ii) Head of Department of Adult and Continuing Education at Waterford Institute of Technology (2004 to date), as detailed in Table 4.2.

Table 4.2 Overview of Researcher's Experience in Enterprise Development

Initiative	Responsibility
New Programme Development	I designed the following courses aimed at owner managers of SMEs and nascent entrepreneurs: (i) Higher Certificate in Business in Enterprise Development; (ii) Certificate in e-Marketing and Promotion and (iii) Certificate in Small Business Finance.
Postgraduate Research	In 2005, completed a Masters by Research *'Towards Best Practice in Campus Incubation: The Case of Institutes of Technology'*. I have supervised Masters dissertations, namely (i) EE at second level; (ii) entrepreneurship training as part of the Enterprise Platform Programme. I am currently co-supervising a Masters dissertation Towards Good Practice in Entrepreneurial HEIs
Committee Membership	Through membership of the following committees, I was at the heart of academic policy and strategic decision making with regard to teaching, learning and assessment; entrepreneurship, innovation and IP policies: Genesis Enterprise Programme, WIT's Academic Council, Commercialisation Committee, Tom Crean Business Centre.
CPD of Teachers	I designed and delivered the Enterprise and Innovation module, a 10-credit module of the MA in Management in Education. This module is aimed at teachers across the spectrum of education *i.e.,* primary, secondary, further and higher level. Details provided in Appendix K.

Source: Current Research

My professional experience has given me a valuable insight into the IoT's role in enterprise development and places me in a unique position to access the key stakeholders in EE within the sector. I was responsible for managing IT Tralee's enterprise development activities and the provision of supports to graduate entrepreneurs, spin-in companies and EDAs. As Head of Department of Adult and Continuing Education, I have gained a thorough insight into: (i) undergraduate and postgraduate programme development; (ii) academic quality assurance; (iii) postgraduate research supervision; and (iv) working with adult learners. I have been able to attend at national/international conferences; participate in regional/national HE and enterprise fora; and network with a broad network of enterprise enablers.

My Masters by research dissertation, *Towards Best Practice in Campus Incubators: The Case of Institutes of Technology* (Fenton, 2005) concluded that despite the development of the physical campus enterprise infrastructure, there was an apparent disconnect between capital and human capital development. In some cases, campus incubators were located off-campus and there were tenuous links between undergraduate and postgraduate students and campus incubators which catered mainly for spin-in as opposed to spin-out companies *(ibid)*. Janesick (2000) maintained that there is no value-free or bias-free design in qualitative research because it is predisposed to factors of perception, preconceptions and person values (Yin, 1994). As the primary research instrument, it was imperative that I consider potential bias in the design and implementation of the research and this will be detailed later in this chapter.

4.3 Research Aim, Objectives and Questions

Creswell (2005) posited that the identification of a research problem consists of specifying an issue of study, developing a justification for studying it and suggesting the importance of the study for selective audiences. In defining the research problem the starting point for all research undertakings is to focus clearly on the fact that the ultimate purpose is to add something of value to the body of accumulated knowledge (Remenyi, Williams, Mooney & Swartz, 1998). The overarching research aim is to examine graduate entrepreneurs' perspectives of EE at third level in their formation as entrepreneurs. It aims to provide a deeper and more critical level of investigation of graduate entrepreneurs' perspectives of EE at both undergraduate and postgraduate level, particularly in the IoT sector. The inherent research objectives are:

1. **To contextualise the role of HEIs in enterprise development and entrepreneurship education with a specific focus on the Irish Institutes of Technology;**
2. **To examine graduate entrepreneurs' perspectives of entrepreneurship education at third level *i.e.,* at undergraduate and, where applicable, at graduate level;**
3. **To conduct a detailed case study of a bespoke graduate enterprise programme;**
4. **To examine enterprise enablers' perspectives of the role of HEIs in fostering and supporting graduate enterprise development through entrepreneurship education, at institutional, regional and national level.**

The research focused on thirty graduate entrepreneurs *i.e.,* 15 who participated in SEEPP and 15 non-SEEPP graduate entrepreneurs and was triangulated by qualitative research amongst 15 enterprise enablers *i.e.,* eight SEEPP lecturers, and seven EDA personnel. This population of interest represents a 'black box' of critical data in ascertaining the role of HEIs in fostering graduate entrepreneurship. Merriman (2001) recommended narrowing the purpose of the study into specific questions in order to address the phenomenon under investigation. Research questions guide the entire research process and the research objectives define the boundaries and scope of a research study (Zikmund, 2000). This research seeks to answer the following research questions:

1. What are HEIs doing to promote entrepreneurship amongst students?
2. What is the focus of EE at third level?
3. Is there a difference in the approach to EE at undergraduate and at graduate level?
4. What are the benefits and the limitations of EE?
5. What factors can affect the efficacy of academics teaching entrepreneurship?
6. What factors may affect the efficacy of graduate entrepreneurs to be entrepreneurial? Is education central to this self-efficacy?
7. How are HEIs, SMEs and EDAs working together to promote student and graduate entrepreneurship?

This research required an in-depth investigation of graduate entrepreneurs' perspectives of EE at third level in their formation as entrepreneurs. This will be addressed through a critical analysis of the process of 'meaning making' located in the discourses of graduate entrepreneurs *i.e.,* both SEEPP participants and Non-SEEPP graduate entrepreneurs.

4.4 The Research Process

Saunders, Lewis and Thornhill (2009) likened the research process to layers of an onion *i.e.,* multiple layers representing key decisions in determining the research design and the heart of the process is data collection and analysis. Figure 4.2 depicts Saunders *et al.*'s (2009) 'research onion' which influenced the research of this study.

Figure 4.2 The Research Process
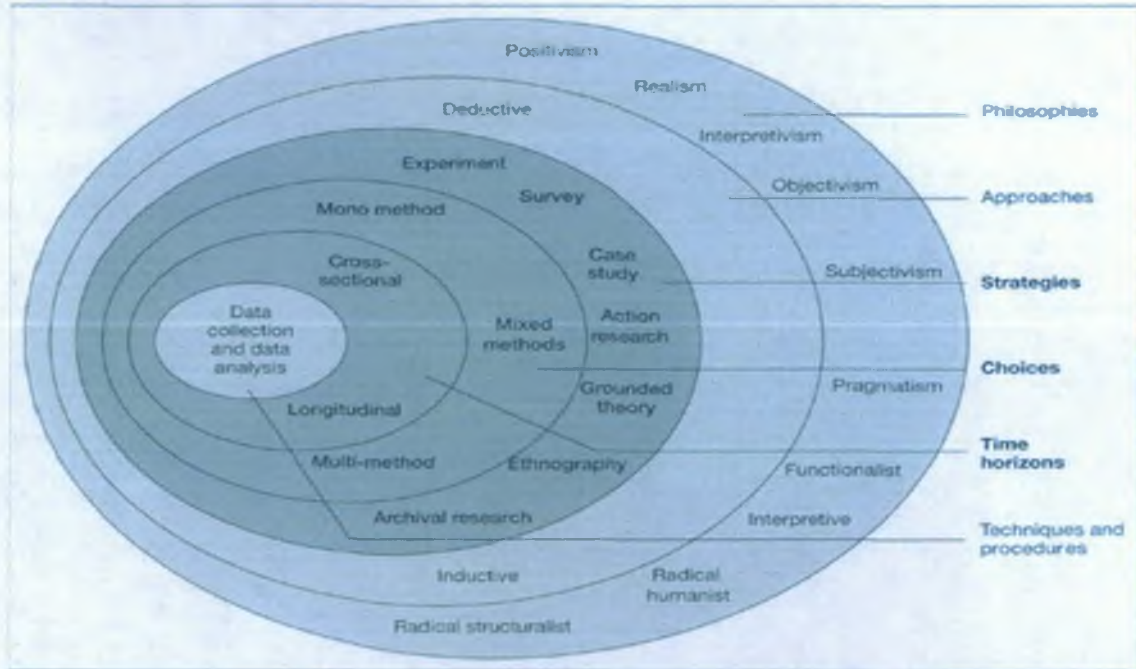
Source: Adapted from Saunders *et al.* (2009, p.108)

It is necessary to examine each layer in order to explain and justify the methodological approach adopted for this study.

4.4.1 Selection of Appropriate Research Paradigm

The task of designing an appropriate research methodology is critical to the success of the research itself (Quinn-Patton, 2002). This research is concerned with graduate entrepreneurs' perspectives of EE at third level and as such has its roots in Business, Education and the Social Sciences. It was important to make informed decisions about the best approach to the primary research and to understand the philosophical origins of same. Research philosophy considers the overall research framework, the type of data and information to be collected, the respondents to be interviewed and the key stakeholders involved in the research.

Research philosophy has been divided into two polarised schools of thought *i.e.,* positivism and phenomenology. A simplistic explanation suggests that quantitative methods are associated with positivist research, whereas, qualitative research is associated with phenomenology.

Table 4.3 Research Assumptions: The Subjective/Objective Dimension

Subjective Approach		Objective Approach
Nominalism The social world is created by the individual concerned	**Ontology** What can and does exist	**Realism** A single reality exists independent of the individual's view
Voluntarism Free will plays a role in the relationship	**Human Nature** Relationships between human beings and their environment.	**Determinism** Relationships are determined by external environmental forces
Interpretivism Knowledge has to be personally experienced	**Epistemology** The nature of knowledge.	**Positivism** Knowledge can be acquired
Ideographic Emphasises the analysis of subjective accounts revealed through qualitative explanation gleaned inside a given situation	**Methodology** How research is/will be constructed	**Nomothetic** A deductive approach that seeks explanation through the analysis of casual relationships to allow the testing of hypotheses and the *construction of generalised* laws

Adapted from Burrell and Morgan (1979) and Reinl (2011, p.110)

Denzin and Lincoln (2008) maintained that the subjective and objective approaches are defined by key assumptions relating to ontology and epistemology which influence the methodology employed by researchers. An ontological stance conveys what the researcher believes regarding social and physical reality (Chua, 1986). Ontology comprises two dichotomous positions, namely: (i) nominalism and (ii) realism. The former views the social world as being created by the individuals themselves, whereas, realism believes that a single reality exists, whereas, the latter is concerned with a hard knowable reality that exists independently of an individual's appreciation/perspective of it (Burrell *et al.*, 1979). The research questions embody my ontological position and can, thereby, influence the design of the study (Bryman, 2004). Epistemology refers to assumptions about knowledge, how it can be obtained and how it can be communicated to others (Reinl, 2011). Kolb (1984) highlighted the need for epistemological enquiry in relation to learning, as learning and knowledge are related processes.

Similar to ontology, epistemology offers two contrasting views, namely: (i) positivism whether knowledge can be acquired; and (ii) interpretivism where knowledge has to be personally experienced. Gibb (2005) recommended moving away from cognitive notions towards the recognition of the importance of emotions, feelings and motivation in the learning process and he recognised that this is a fundamental epistemological challenge.

Quinn-Patton (2002) concluded that the positivist philosophy is characterised by a belief in absolute truths, in the external nature of reality and its objective measurement. Quantitative research methods use a deductive form of logic which entails the development of theories and hypotheses prior to the testing through empirical observation (Gill & Johnson, 1991). They also involve the systematic testing of a hypothesis using experiments and the use of precise operational definitions in order to minimise the possibility of confusion in communication (Quinn-Patton, 2002). Concepts, variables and hypotheses are selected in advance of the research and remain fixed throughout the study. The key advantages of a positivist approach are optimising generalisability and minimising bias thus ensuring statistical validity of results and the replication of research findings. Creswell (1994) recommended a quantitative research approach for short-term studies because it offers a low-risk, fixed method of research without ambiguities and possible frustrations.

Given the aim of this research, a positivist approach was not deemed appropriate as an overall research philosophy given the degree of control over subject matter required was deemed impossible. The interpretivist viewpoint acknowledges that individuals are different, therefore, facts and values are intertwined (Walsham, 1995). The researcher's aim is not to pursue a definitive or an absolute truth, rather the aim ought to appreciate the different constructions and meaning that people place upon their experience (Easterby-Smith, Thorpe & Lowe, 1994). Similarly, phenomenology believes that what we know of reality is not objective and external but it is socially constructed. This favours the implementation of qualitative research methodologies and interpretative analysis which rely on many different sources of data, all filtered through the researcher.

Interpretivism, as an epistemological perspective, is congruent with the aim and objectives of this research and is reflected in the chosen methodological approach.

4.5 Methodological Considerations

Within a qualitative research design, the aim is to develop and construct a complex, holistic picture and this requires a lengthy study. A qualitative methodology uses inductive logic *i.e.*, the reverse of deduction in that it involves movement away from the 'plane of observation' of the empirical world to the development of explanations and theories about what has been observed (Gill & Johnson, 1991). The categories emerge from respondents rather than being pre-determined by the researcher prior to commencing the research. There is little consensus on the precise procedures involved in the approach to data collection but typically, textual information constitutes the core of the data, whether it is the transcriptions of interview records, field observations, or official organisational documents (Easterby-Smith *et al.*, 1991). Qualitative research is subject to the researcher's own interpretation and possible bias. This is because the researcher is the primary instrument for data collection and analysis. Methods to counter bias are adopted through the use of triangulation *i.e.*, the use of different research methods in the same study to collect data on the same phenomena. The validity of any findings is based on the assumption that any potential bias of the researcher would be neutralised when used in conjunction with other sources, investigators and methods which can result in a multitude of different approaches depending on traditional perspectives of the research discipline (Denzin, 1988). Thomas (2003) argued that when it comes to the choice between quantitative and qualitative research, the significant issue is not whether certain research problems are better suited to a *quantitative or qualitative approach*. Rather, it is whether the method a researcher employs can yield convincing answers to the questions that the investigation seeks to explore (*ibid*). The aim of qualitative research is to understand the meaning of the lived experience normally using small subject groups within intensive, in-depth contact between the researcher and the interviewees. Wisker (2001) maintained that qualitative research is carried out when one wishes to understand intangibles such as meanings or look at, describe and understand experience, ideas and values.

Blackburn and Kovalainen (2009) recommended an interpretivist social mechanism approach to build theory in this context and this influenced my decision to adopt the interpretivist approach. I believed it best matched the overall research aim and objectives and my own skills as a researcher. The closeness required for this research study would be at variance with the positivist viewpoint (Hill & McGown, 1999). Furthermore, I chose a case study methodology comprising of both quantitative and qualitative data, derived from: (i) online questionnaires; (ii) semi-structured interviews; (iii) participant observation; and (iv) documentation. By using a combination of data collection methods, I believed that I could build a holistic picture of graduate entrepreneurs' perspectives of approaches to EE in Ireland. The present research aimed to build a depth of knowledge rather than a breadth of knowledge. The choice of research philosophy also influenced by my own preferences and experience which according to Strauss and Corbin (1998) is a valid criterion for choice of research methodology. It is unusual to find research which does not combine both or some aspects of both research approaches (Creswell, 1994). As Schoenberger (1991) suggested, the qualitative material amplifies and enriches the information derived from the quantitative data. Thus, by using mixed-methods for data collection, I could use the best of both philosophical approaches, which ultimately would give greater rigour, credence and credibility to the research findings.

Given the exploratory nature of this study, a combined philosophical approach was deemed the most appropriate within the context of this research because of: (i) my own position and background; (ii) my ease of access to key research cohorts; and (iii) the congruence with the research questions. Moreover, a case study approach would also best capture the perspectives of graduate entrepreneurs vis-à-vis EE at third level. The rationale for the selection of the research methodology, appropriate to the research cohorts, will be outlined in the following section.

4.6 Research Methodology

Research methodology is the study of methods and deals with the philosophical assumptions underlying the research process, and a method is a specific technique used for data collection under those philosophical assumptions.

This study was undertaken from the perspective of a phenomenological research paradigm, therefore, I gave careful consideration to the choice of a suitable research methodology to address the research questions within a constructivist paradigm. The choice of research methodology took cognisance of the information required from the primary research as well as the basic definitions and assumptions of the principal research paradigms *i.e.,* quantitative and qualitative. The most appropriate approach when designing a research methodology is to match the methods to the research questions because it enhances the methodological rigour and places the research questions at the heart of the study (Quinn-Patton, 2002). Once the research questions have been identified, a researcher goes about developing the research design and strategy (Graham-Cagney, 2011). Quinn-Patton (2002) advocated that the choice of research design should be influenced by its ability to answer the research question posed in a reliable, valid and generalisable fashion. The choice of an overall research design is crucial to the overall success of the research itself and any research design will consist of some imperfect interplay of resources, capabilities, purposes, possibilities, creativity and personal judgement by the people involved (*ibid*).

4.7 Research Design: Case Study Methodology

One of the most popular forms of qualitative research are case studies which are defined by Robson (2002, p.178) as a strategy for doing research involving an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence. The attractiveness of case studies is due to well-devised and well-written case studies offering 'real stories' which enable both the reader and the researcher better opportunities to relate to the data and to understand it better (Myers, 2009). Babbie (1995) suggested that case studies provide a comprehensiveness of perspective because they focus directly on the social phenomenon and provide insights which are not normally apparent with other methods (Pettigrew & Whipp, 1991). One of the key proponents of case study research, Yin (2003, p.13), defined a case study as an empirical enquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident.

Stake (2005, p.449) posited that case study is not a methodological choice but a choice of what is to be studied by whatever methods we choose to study the case and offered a simple rule to 'place your best intellect in the thick of what is going on'. Stake (2005) maintained that the brainwork is observational but more importantly it is reflective and characterised by researchers spending extended time on site and personally in contact with the activities and operations of the case. This would allow the researchers to reflect upon and revise meanings of what is going on in the field (*ibid*). Given the subjective character of case studies, propositional and experiential knowledge can be enhanced, therefore, it is both a process of inquiry about the case and the product of that enquiry. Its contribution to scientific generalisation is more concerned with theory building rather than theory testing. Merriman (2009) offered insights into how case studies illuminate the reader's understanding of the phenomenon being examined. He concluded that qualitative case studies are valued for their ability to capture complex action, perception, and interpretation (*ibid*). Using a case study approach to qualitative research, the researcher can explore a single entity phenomenon bounded by time and activity and collect detailed data by using a variety of data collection methods during a sustained period of time (*ibid*).

A case study approach is ideally suited to the needs and resources of a small-scale researcher as it allows a focus on just one or a small number of examples (Creswell, 1994; Blaxter, Hughes & Tight, 1996). It allows an investigation to retain the holistic and meaningful characteristics of real life events such as organisational and managerial processes, international relations and the maturation of industries (Yin, 1994). A case study approach aims to deepen rather than broaden knowledge, it focuses on particulars and aims to gain a detailed insight and understanding into a subject that is not readily distinguishable from its context. What is gained in insight can sometimes be lost on generalisability, however, case studies provide a comprehensiveness of perspective because they focus directly on the social phenomenon and are used mainly because they provide insights which are not normally apparent with other methods (Pettigrew *et al.*, 1991; Babbie, 1995). Whilst a case study is a distinctive form of inquiry, it is argued as being limited by those who favour an empirical research approach (Stake, 2005; Yin, 2003; Hearne, 2009). Yin (2003) distinguished between single case study designs and multiple case designs.

The use of the latter is informed by the replication of logic *i.e.,* multiple experiments and is often viewed as more compelling and robust (Hearne, 2009). Yin (2009) argued that multiple case study research offers a deeper understanding of processes whilst facilitating theory building and theory testing. However, he also posited that a single case-study design can be representative, typical, and revelatory in its uniqueness on a particular topic and context. Glaser and Strauss (1967) questioned the single case study approach, arguing that, to get to the important construct, a researcher needs to see different instances of it, at different times and with different people. Yin (2009) concluded that a single case study could prove to be appropriate if the researcher is investigating a previously unresearched topic. There is some debate as to whether single case designs adequately address the concerns of validity, reliability and generality. However Yin (2009) maintained that analytical generalisation could be used whether one's case involves one or several cases. Whilst Pettigrew (1985) claimed that a single case study could produce equally effective theory as multiple cases, McLeod (2003) cautioned that it is important to show that the findings of a single-case study are not idiosyncratic but have applicability to other cases and contexts. In terms of style, Hammersley (1985) described three styles of case study research, namely: (i) a study of typical cases, where cases selected represent a larger whole; (ii) a study of test cases, where the researcher is attempting to test out a particular theory; and (iii) a study of unique or non-representative cases, where the focus is on the differences rather than similarities. Robson (2002) contended that in using case study as a flexible research strategy, the details of the design typically emerge during the data collection and analysis.

4.7.1 Delimitations of the Case Study

Merriman (2009) argued that the single most defining feature of case study research lies in delimiting the object of the study. Creswell (2005) suggested that a bounded system can be an activity, event, process, or people separated for research in terms of time, place, or some physical boundaries. The focus of this research is understanding graduate entrepreneurs' perspectives of EE at third level within a specific geographic location, namely the South East region.

Case selection is a fundamental decision in research design and I concluded that a single case study would provide an in-depth overview of entrepreneurs' perspective of a bespoke graduate enterprise programme *i.e.,* SEEPP. The analysis of SEEPP provides the necessary synthesis of the general information and sets the foundation for the qualitative research. A single case study allowed me to investigate graduate entrepreneurs' and enterprise enablers' perspectives of EE at third level. The combination of several research methodologies to study the same phenomenon is often referred to as triangulation and is more often than not used to overcome problems of prejudice and validity (Jack & Raturi, 2006).

Table 4.4 Triangulation Types

Triangulation Type	Description
Data Triangulation	The research is strengthened by using multiple means of data collection and analysis involving time, space and persons
Investigator	Consists of multiple rather than single observers
Multiple	The researcher combines in an investigation multiple observers, theoretical perspectives, data sources and methodologies
Theory	The researcher uses more than one theoretical scheme in the interpretation of the phenomenon
Methodological	The researcher uses more than one qualitative or quantitative data sources or methods in a single study

Adapted from Jack and Rutari (2006) and Wall (2009)

In summary, in order to develop a comprehensive and holistic picture of graduate entrepreneurs' perspectives of EE at third level, I conducted extensive primary research amongst graduate entrepreneurs *i.e.,* 15 SEEPP participants, 15 graduate entrepreneurs and 15 enterprise enablers *i.e.,* eight SEEPP lecturers/ mentors and seven EDA personnel. In all, I conducted 45 in-depth semi-structured interviews in order to ensure the validity of the research and to provide a balanced and triangulated perspective of EE at third level.

4.8 Knowledge and Theory Development

Yin (2003) argued that theory development is an essential part of the design phase given the case study's aim is to develop or test theory. Graham-Cagney (2011) suggested that case studies can bring about the discovery of new meaning, extend the reader's experience, or confirm what is known. Eisenhardt (1989) argued that an essential feature of theory building is comparison of the emergent concepts, theory, or hypothesis with the extant literature and this is especially important and valuable if the results of the emergent theory conflict with the literature findings. Merriman (2001) contended that interpretive case studies are used to develop conceptual categories to illustrate, support, or challenge theoretical assumptions held prior to the collection of data. A case study, like an experiment, does not represent a sample, and in doing a case study, the goal will be to expand and generalise theories (analytical generalisation) and not to enumerate frequencies (statistical generalisation) (Yin, 2003). Whilst case studies can make theoretical statements, they must be supported by evidence and the nature of generalisabilty has to be clarified within the case study (Cohen, Manion & Morrison, 2004).

The current case study contains elements of intrinsic and instrumental case study design (Cohen *et al.,* 2004; Stake, 2005). This is instrumental because it will serve to advance the meaning by illuminating the particular issue of examining graduate entrepreneurs' perspectives of EE at third level. Stake (2005) contended that a case study can be a disciplined force in setting public policy as vicarious experience is an important basis for refining action options and expectations in evaluation and educational policy-making (Hearne, 2009). This research aims to generate knowledge and from a purely theoretical perspective, this single-case study will facilitate an analysis of graduate entrepreneurs' perspectives of EE at third level. The value of this research will be to build knowledge as the insights gained will advance the development of theory, practice and policy in the field of EE at third level.

4.9 Data Collection and Sources of Data

Henry (2000) suggested that in the collection of data for case studies, data should be derived from two sources, there ought to be a formal assembly of evidence distinct from the final case study report and there should be a clear chain of evidence *i.e.,* links between the questions asked, the data collected and the conclusions drawn. Yin (2009) suggested that data and evidence for case studies may come from multiple sources, as shown in Table 4.5.

Table 4.5 Sources of Evidence for Case Studies

Source	Strengths	Weaknesses
Documentation	Stable- can be reviewed repeatedly Unobtrusive- not created as a result of the case study Exact- contains exact names, references and details of an event Broad coverage- long span of time, many events, and many settings	Irretrievability - can be low Biased selectivity Reporting bias Access- may be deliberately blocked
Archival Records	Same as above for documentation Precise and quantitative	Same as above for documentation Accessibility due to privacy reasons
Interviews	Targeted- focuses directly on case study topic Insightful- provides perceived causal inferences	Bias due to poorly constructed questions Response bias Inaccuracies due to poor recall Reflexivity - participant gives what interviewer wants to hear
Direct Observations	Reality- covers events in real time Contextual- covers context of event	Time consuming Selectivity- unless broad coverage Reflexivity- event may proceed differently because it is being observed Cost- hours needed by human observers
Participant-Observation	Same as above for direct observations Insightful into interpersonal behaviour and motives	Same as above for direct observations Bias due to investigator's manipulation of events
Physical Artefacts	Insightful into cultural features Insightful into technical operations	Selectivity Availability

Source: Yin (2009)

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4.9.1 Secondary Data Collection

I chose documentation as a secondary data source given that most research projects require the analysis of documentary evidence in order to supplement information obtained from other methods (Robson, 2002). Secondary data sources can be categorised as either deliberate or inadvertent *i.e.*, deliberate sources include documents deliberately produced to preserve evidence for the future, whereas inadvertent sources are those which are used by the researcher for a purpose other than that for which they were originally intended and may include hand-outs, newspapers and minutes of meetings (Henry, 2000). The authenticity of the documentation was guaranteed by using official institutional documentation, namely: prospecti; strategic plans; policy documents; press reports; national policy documents; reports; academic journal articles; and newspapers. Given that all these documents were in the public domain, it was reasonable to assume that what is conveyed within each document is factually correct. It is worth stating that as these documents were written for dissemination, they may have highlighted the strengths and concealed the weaknesses of the institution and SEEPP itself. Therefore, any bias arising from the documentation was countered using triangulated data collection methods *i.e.*, it was verified during the semi-structured interviews and e-questionnaires with SEEPP lecturers, mentors and SEEPP participants.

4.9.2 Exploratory Research

The primary research cycle began with exploratory research which aimed to gain insights and ideas and it is a valuable means of finding out what is happening, to seek new insights, to ask questions and to assess phenomena in a new light (Churchill, 1999; Robson, 2002). Exploratory research is preliminary research undertaken before more extensive research is conducted and can assist in clearly defining research questions, thereby, allowing me to familiarise with the research process and is, therefore, the foundation for successful research. Whilst there was no formal data collection prior to commencement of this research, I conducted preliminary research using a semi-structured interview with the SEEPP Manager.

This exercise proved to be invaluable both for *information* exchange and later verification of my findings and informed the main research programme in the following ways: (i) it highlighted existing research and literature in this field of study; (ii) it indicated developments and trends in graduate EE within their own Institute and the IoT sector in general; (iii) it identified good practice in graduate EE, both nationally and internationally; (iv) it highlighted the challenges facing each Institution in supporting graduate entrepreneurship; (v) it identified potential challenges to future funding for graduate entrepreneurship programmes: and (vi) named the external partners and initiatives in place to support graduate EE. As part of the exploratory research phase, I was able to test the semi-structured interview format and ascertain if the questions were relevant and clear and I was able to deduce if repetition was evident. The SEEPP Manager recommended amending both the online questionnaire and semi-structured interview so as to avoid repetitive, ambiguous or closed questions. Throughout this research, I liaised closely with the SEEPP Manager who was influential in guiding the research in the following ways: (i) he acted as a gatekeeper to SEEPP participants; (ii) he had close contact with SEEPP alumni and EDAs; (iii) he was aware of changes and trends in national policy and funding with respect to enterprise; and (iv) he had a theoretical and practice-based understanding of EE. Mindful of his heavy workload, I emailed him the interview agenda and schedule of questions in advance so that he could prepare for the interview. This interview lasted approximately three hours and it gave me a detailed overview and insight into SEEPP from his perspective. The questions asked as part of the semi-structured interviews with the research cohorts are provided in Appendices H and I respectively.

4.9.3 Primary Data Collection

The primary data collection comprised the use of online questionnaires and semi-structured interviews and is summarised in the following subsections: (i) online questionnaires and (ii) semi-structured interviews. The protocol and steps taken will be detailed in the following sections.

4.9.3.1 Online Questionnaires

Parfitt (1997) suggested the content of a questionnaire needs to be firmly rooted in the research objectives or hypothesis under investigation. Thus, questionnaire design must strive to reduce non-response and to reduce or avoid measurement error (Dillman, 2000). A well-crafted questionnaire includes a cover letter outlining the objectives and significance of the research and stating the importance of responding (Barry, 2004). The questionnaire should not be excessively long that it would be off-putting to respondents, yet it is designed in such a manner so as to achieve the research objectives. Essentially, there are two types of questions, *i.e.,* either open-ended or closed: the former allows the respondent freedom of response by not providing a menu of pre-determined responses, therefore, they do not have to adapt to preconceived answers. Having understood the intent of the question, respondents can express their thoughts freely, spontaneously and in their own language (Frankfort-Nachmias & Nachmias, 1992). Conversely, a closed-question is one where the respondent must choose a response from a list of pre-determined of answers *e.g.,* (i) Yes or No answers; (ii) rating on a Likert scale; (iii) responding with a simple fact; and (iv) tick the relevant box(es) from a range of response categories. In terms of expediency and efficiency, I decided that an online questionnaire (e-questionnnaire) was the most appropriate research instrument for the initial research of all SEEPP participants (2001–2010).

In terms of design, the fundamentals of e-questionnaire design are basically the same as traditional questionnaires, be they postal or administered by a researcher. Online questionnaires have a number of distinct advantages, namely: (i) the speed and efficiency of dispatch; (ii) knowledge that the target respondent has received the e-questionnaire; (iii) potential speedy response rate; and (iv) they allow the researcher to make timely interventions and/or prompt a greater response rate. Whilst cognisant of the obvious disadvantages of online questionnaires, I believed that the advantages outweighed the disadvantages in this instance. The SEEPP Manager emailed each of the potential respondents outlining my background, the purpose of my research, explaining that it was part of my Doctoral research and emphasised the importance of their response to the success of my research.

As part of the online questionnaire, I requested that the respondents who may be interested in participating in further research would provide their names and contact details so that I could contact them at a later stage. One of the justifications of using a case study is the time factor. The response rate in week one was 15%. The SEEPP manager sent a reminder email to the non-respondents and requested that they submit their response on or before the end of the second week. By the end of week three, I decided to close the online questionnaire because at that time, the response rate was 30% which exceeded an acceptable and valid 25% response rate as espoused by Dillman (2011).

4.9.3.2 Semi-structured Interviews

Interviews are the most commonly used because they facilitate both qualitative and quantitative data collection. They have a major advantage over questionnaires in terms of their adaptability and the researcher is forced to accept responses from questionnaires at face value, whereas interview responses may be developed and clarified (Bell, 1991). Interviews allow face-to-face contact between the interviewer and interviewee so that the researcher can ask more probing and searching questions, clarify responses whilst mindful of the tone of the respondent. Conversely, interviews have some disadvantages, namely: (i) they can be tainted by potential interviewer or interviewee bias; (ii) the quality of the research data is dependent on the interaction between the interviewer and interviewee; and (iii) the quality of the research data depends on the clarity of the interviewer's questions, style and their prior knowledge of the subject matter. Interviews may take several forms and these include open-ended, focused and survey. Open-ended interviews tend to be the most common type of interview used in case studies *i.e.*, where interviewees are asked for the facts as well as their own opinions about certain issues (Yin, 2009). A focused interview is where the interviewee is interviewed for a short period of time, although the style of interview may be informal *i.e.*, conversational using open-ended questions, a set format is followed. A formal survey type of interview, on the other hand, involves questions which are more structured. My preferred choice of interview format was a semi-structured interview because it facilitated in-depth interviews and a fluent discussion and allowed me to explore additional comments raised by the interviewees.

I chose semi-structured interviews because they would (i) provide opportunities to obtain the desired information; (ii) are structured enough to allow for comparisons to be drawn between each entrepreneur's responses; and (iii) give the researcher the freedom to explore views or opinions in more detail (Lie, 2003). I decided upon this approach in order to gain information provided in the interview process and to allow participants the chance to discuss their opinions in a relatively informal and unrestricted manner. The semi-structured interviews with all interviewees consisted predominantly of open-ended questions, designed to extract the views of each interviewee and not focus on my own views or opinions.

I agreed the following protocol with the interviewees, namely the use of a dictaphone to record the salient points of the interview, the key issues to be addressed namely their own background, their experience of EE, key learning points and the key research questions using a template of semi-structured questionnaire. The semi-structured interview was informal during which I took detailed notes and wrote up the key points of the interviews at a later stage. The participants were encouraged to discuss and expand on the topics raised. The semi-structured interviews allowed me to probe deeper and ask more searching questions which yielded more honest and frank answers from the respondents. Where the interviews took place in the interviewee's place of business, it was followed a brief tour of the interviewee's business. This proved to be very insightful as it allowed me to make further observations and to follow up with more informal questioning of the interviewee based upon these observations. Subsequent telephone interviews, shorter in duration, were conducted with some interviewees in order to verify certain information and to expand on issues raised throughout the face-to-face interview.

4.10 Selection of the Research Cohorts

The criteria for the selection of the research cohorts are as follows:

Table 4.6 Criteria for Selection of Research Participants

Research Cohort	Criteria for Selection
Graduate Entrepreneurs (SEEPP Participants)	• Must be a graduate of a HEI • Must have established their business in South East region in the period 2001-2010 (inclusive) • Must have participated on SEEPP 2000-2010 • The business must still be operational
Graduate Entrepreneurs (Non-participants of SEEPP)	• Must be a graduate of a HEI • Must have established their business in South East region in the period 2001-2010 (inclusive) • The business must still be operational
SEEPP Lecturers and Mentors	• Must have lectured or mentored SEEPP participants in the period 2001-2010 (inclusive)
Enterprise Development Agency Personnel	• Must have had direct links with SEEPP through SEEPP management, participants, lecturers and/or mentors

Source: Current Research

The following sub-sections provide details of the main research cohorts and participants.

4.10.1 Graduate Entrepreneurs

In all, I completed 30 in-depth semi-structured interviews with graduate entrepreneurs in the South East region over a sixteen month period. The semi-structured interviews were designed to gain detailed information about their perspectives of EE at third level. Wherever possible, all interviews took place in the graduate entrepreneur's business and lasted approximately one hour. Initially, I conducted semi-structured interviews amongst 15 graduate entrepreneurs who had participated on SEEPP within the period 2001-2010 (inclusive). The interviewees were chosen because: (i) they expressed interest in participating in further research as part of the e-questionnaire; and/or (ii) they were referred by the SEEPP manager and/or EDA personnel. In advance of each interview, I telephoned each entrepreneur on a shortlist of potential participants to request an interview with her/him as part of my part of my Doctoral research. I explained the objectives of my research and why their input would be important in understanding the educational needs of graduate entrepreneurs. Some entrepreneurs suggested that they be given an interview agenda in advance to assist them in preparing for the interview and I agreed to this request.

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The semi-structured interviews were designed to gain detailed information about graduate entrepreneurs' perspectives of EE. The entrepreneurs described their own experience as participants of SEEPP and discussed the key benefits and limitations of the programme to them during the initial stage of their business development. They made suggestions as to how SEEPP could be adapted in order to enhance the learning experience of future SEEPP participants. As is typical of semi-structured interviews, I varied the order of the questions and sought further information and clarification on answers, as necessary (Denscombe, 1998). The questions asked as part of the semi-structured interview are detailed in Appendix H. Additionally, I conducted 15 semi-structured interviews with non-SEEPP graduate entrepreneurs who were identified with the assistance of the EDA personnel and entrepreneurship lecturers. In advance of contacting them to participate in this study, I ensured that they all met the selection criteria *i.e.,* they were all graduates and they all had established their business within the South East region during the period 2001-2010 (inclusive).

In advance of each interview, I telephoned each entrepreneur to request an interview with her/him as part of my part of my Doctoral research and outlined the main objectives of my research. Typically, interviews took place in their business or in a mutually convenient location. Throughout the interview, the respondents were given the scope to describe their journey to self-employment, they charted their previous work and/or business history and explained their motivation for starting their business; why they decided not to participate in SEEPP and they discussed their links with HEIs and how they support or had supported their business, if at all. This provided me with a valuable insight into the mindset of graduate entrepreneurs who chose not to participate in SEEPP or a formal graduate enterprise programme and their rationale for this decision. As with the semi-structured interviews with SEEPP participants, I asked a set of standardised questions but where necessary, I varied the sequence of questions to reflect the flow of the discussion. The format for the semi-structured interview with the graduate entrepreneurs is provided in Appendix H.

4.10.2 Enterprise Enablers

Mellalieu (2006) posited that an entrepreneur or enterprise enabler is a key agent to identify entrepreneurial talent and is to be found amongst the professions of teachers, consultants, advisors, and informal investors. Enterprise enablers share several of the talents of pure entrepreneurs and can intervene directly to help their 'entrepreneur prospects' overcome obstacles, and build their confidence in pursuing entrepreneurial ventures (*ibid*). As a necessary co-requisite to implementing successful educational initiatives to develop entrepreneurs there must also be processes for identifying and developing enterprise enablers. According to Thompson (2006), enterprise enablers are the critical component in developing appropriate learning environments and the processes for educating, training, coaching, mentoring, and educating entrepreneurs. They have a strategic role to play in developing and sustaining regional systems of innovation linked with entrepreneurship and HEIs. In order to balance this research, I believed that it was imperative to gain access to this cohort of EDA personnel in order to gain their perspectives on EE provision at third level. I conducted 15 semi-structured interviews with enterprise enablers, *i.e.*, eight SEEPP lecturers and seven EDA personnel. The latter play a key role in the development and implementation of enterprise policy both nationally and regionally.

I was fortunate to be able use my professional network of contacts to gain access to potential research participants. I had met some of them in a professional capacity and the others I had met at various conferences and networking events. I rang each person to request an interview with him/her as part of my research. I outlined the main objectives of my research and the contribution which I believed their input could make to same. I suggested that the interviews could take place in her/his workplace at a time, convenient to him/her. The interviews were designed to gain detailed information about their perspectives of the role of HEIs in supporting and developing graduate entrepreneurship through EE. Each participant provided unique, and in some cases, similar insights into EE at third level and offered interesting and practical suggestions for enhancing EE and graduate enterprise programmes within HEIs. They cited national policy in relation to enterprise development which dictated their remit and gave examples of international good practice in EE, particularly at graduate level.

Similar to the other semi-structured interviews, I asked a set of standardised questions but varied the sequence of questions in line with the flow of conversation. An outline of the semi-structured interview with the seven enterprise enablers is provided in Appendix I.

4.10.3 Summary of Data Collection and Fieldwork

The aim of this research was to examine graduate entrepreneurs' perspectives of EE at third level and this required a mixed methods approach. Prior to commencing the fieldwork, I developed an audit trail in order to document the whole research process and to enhance the rigour of the research (Robson, 2002 in Hearne, 2009). The data presented in this case study research were derived from the following main sources: (i) participant-observation; (ii) semi-structured interviews; (iii) focus groups; and; (iv) documentation. It is worthwhile noting that this research was conducted in post Celtic Tiger Ireland, where the national unemployment rate was 14.8% and the regional rate was 19.7% (CSO, 2012). It is within the time frame and context of these adverse economic conditions *i.e.,* recession, that the fieldwork for this research took place. Table 4.7 provides a succinct overview of the fieldwork for the primary research.

Table 4.7 Summary of Primary Data Collection Fieldwork

Stage 1	Stage 2	Stage 3
Entering the Field	**Online Research**	**In the Field**
Exploratory Research with SEEPP Manager	Distribution of E-Questionnaires to former SEEPP Participants	15 with former SEEPP participants 15 with graduate entrepreneurs 15 with enterprise enablers i.e., SEEPP lecturers and EDA personnel
1 x Semi-structured interview with the SEEPP Manager	**50** x online questionnaires completed by graduate entrepreneurs *i.e.,* past participants of SEEPP 2001-2010 (inclusive).	**15** x Semi-structured interviews with entrepreneurs *i.e.,* former SEEPP participants **15** x Semi-structured interviews with entrepreneurs *i.e.,* non-SEEPP participants **15** x Semi-structured interviews with enterprise enablers *i.e.,* seven EDA personnel and eight SEEPP lecturers.

Source: Current Research

In this section, I have given a full account of the main data collection procedures and verified the research findings through multiple data collection procedures, reference to supporting documentation and ongoing dialogue with the respondents.

4.11 Data Analysis

Seidman (1998) suggested that when researchers employ qualitative analysis methods that most interview questions require an open-ended response that are coded for emergent themes across participants. The common term used for codifying data is coding units and they can be summarised in Table 4.8.

Table 4.8 Examples of Coding Units

Coding Unit	Example
Words/Phrases	Examine minutes of HEI executive board meetings for the word(s) "entrepreneurship" or "enterprise".
Theme	Examine minutes of HEI executive board meetings for occasions where discussions involved graduate entrepreneurship.
Item	Examine newspapers for articles relating to start-up businesses and entrepreneurs.
Time	Measure the time allocated in broadcast news allocated to enterprise and entrepreneurship.

Adapted from Wall (2009, p.121), Collis and Hussey (2003, p.256)

Miles and Huberman (1994) recommended that data analysis involves reviewing a set of field notes either transcribed or synthesised in order to scrutinise the information meaningfully whilst keeping relationships between the parts intact. Grbich (2007) stated that the most commonly used analytical tools in enumerative content analysis are: (i) word frequency; (ii) ranking the order of words; and (iii) key words in context. Qualitative analysis of the 45 semi-structured interviews was based on word frequency and key words in context. It is worth noting that I designed and structured the semi-structured interviews into coherent themes to reflect the conceptual framework for EE in third level. It also provided a framework for the data analysis. Throughout the primary research, the data analysis was concurrent with the process of data collection *i.e.,* one informed the other in what Graham-Cagney (2011) described as a cyclical process. A detailed description of the case emerges from the analysis that draws on multiple sources of data within the context of EE at third level.

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All of the data derived from the semi-structured interviews and on-line questionnaires were coded and grouped using approaches recommended by Robson (2002). The semi-structured interviews, content and thematic analysis was used to analyse the data which involved using a coding system to assign meaning to the data collected. Whilst each interview from each cohort was coded separately, I was able to use a common coding system which allowed me to compare and contrast answers from the different research cohorts. Table 4.9 summarises the primary research questions, cohorts and data sources and content analysis.

Table 4.9 Data Analysis Outputs Relating to Research with Graduate Entrepreneurs

Research Questions	e-survey with SEEPP Participants	Semi-structured Interview with Graduate Entrepreneurs	Semi-structured Interview with Enterprise	Field Notes & Reflective Log
What are HEIs doing to promote entrepreneurship amongst students?		✓	✓	✓
What is the focus of EE at third level?		✓	✓	✓
What were the benefits and limitations of EE?	✓	✓	✓	✓
Is there a difference in the approach to EE at undergraduate versus postgraduate level?		✓	✓	✓
What factors can affect the efficacy of academics teaching entrepreneurship?		✓	✓	✓
What factors may affect the efficacy of graduate entrepreneurs to be entrepreneurial? Is education central to this self-efficacy?		✓	✓	✓
How are HEIs, SMEs and EDAs working together to promote student and graduate entrepreneurship?		✓	✓	✓

Source: Current Research

Given context and location play a central role in graduate enterprise development, I opted to use a case study approach which allowed me to deepen rather than broaden my knowledge of EE at third level. I concluded that a single-case study approach best facilitated both the quantitative and qualitative nature of the research and was suitable for the emergent nature of this research.

4.12 The Legitimacy, Reliability and Validity of the Research Data

Schön (1987, in Graham-Cagney, 2011) concluded that empirical material is collected and co-produced in the interaction between the researcher and participants in the 'swampy lowlands' of the interplay of specific research contexts. Whilst interpretive research provides rich description (Geertz, 1973), it can cause problems for researchers in terms of the reliability, validity and generalisability of the data. In order to validate my findings, I liaised closely with the SEEPP Manager at each phase of the research to develop and summarise the key themes emerging from the semi-structured interviews with the graduate entrepreneurs and the enterprise enablers.

I made every effort to ensure the validity and reliability of the data collected by analysing all the semi-structured interviews in a standardised manner as I transcribed the answers on a template document directly after each interview. I maintained detailed field notes and I kept a reflective diary throughout the research process, as recommended by Cunliffe (2004), Glaser and Strauss (1967), Janesick (2000) and Stake (1995). This proved to be an invaluable resource and reference during the analysis, synthesis and writing up stages of this research. Walsham (1995) identified four distinct generalisations that can be made from interpretive cases, namely: (i) the development of concepts; (ii) the generation of theory; (iii) the drawing of specific implications; and (iv) the contribution of rich insights. In terms of generalisabity, Easterby-Smith *et al.* (1994) maintained that from a phenomenological perspective, the research focuses on the likelihood that ideas and theories generated in one setting could be easily applied to other settings. Conversely, Creswell (2003, p.206) advised that in qualitative inquiry, the intent is not to generalise to the population, but to develop an in-depth exploration of a central phenomenon. In order to best understand this phenomenon, the qualitative researcher purposefully or intentionally selects individuals or sites. This is known as purposeful sampling or non-probability sampling. Tobin (2011) maintained that this differs from probability sampling where every member of the population has an equal chance of inclusion in the research. The sampling design adopted in this present study was purposeful sampling, where I handpicked the research participants.

I considered this to be the most appropriate form of participant selection given the small size of the populations of interest *i.e.* graduate entrepreneurs and the enterprise enablers in the South East region. Cohen *et al.* (2004, p.103) argued that such a design strategy is valid because researchers 'can up pick a sample that is satisfactory to their needs'.

4.13 Ethical Considerations

Ethics are regarded as a set of principles that guide appropriate conduct in a given situation and are generally informed by a code or set of principles (Robson, 2002). There are a number of ethical questions which researchers and participants should explicitly address before commencing the research process. Developing a positive relationship between the researcher and participants requires time, a respect for the principles of autonomy, confidentiality, informed consent and the publication of the research findings (Graham-Cagney, 2011). This research was conducted amongst an adult population and each respondent consented to her/his involvement in the study. From the outset, it was imperative to develop a relationship with the participants based on honesty and openness. Assurances were given throughout the interview process that all answers would be strictly confidential and participants were requested to sign an informed consent form. The purpose of which was to indicate that they had read the terms and conditions of the research and were agreeable to comply with them. When compiling the research findings, I was careful to protect the identity of the participants, however in doing so, I did not edit their responses nor did I try to hide any uncomfortable truths or valuable insights. Throughout this research, I adopted the following ethical framework, appropriate to this study, as detailed in Table 4.10.

Table 4.10 Ethical Framework

1	It is important for the researcher to reveal her/his identity and background
2	The purpose and procedures of the research should be fully explained to the participants at the outset
3	The research and its ethical consequences should be seen from the participant's and the Institution's viewpoint
4	Possible controversial findings need to be anticipated and, where they arise, handled with great sensitivity
5	The research should be as objective as possible: this will require careful though being given to the design, conduct and reporting of the research
6	Informed consent should be sought from all participants; all agreements reached at this stage should be honoured. Sometimes, it is desirable to obtain informed consent in writing
7	Participants should have the option to refuse to take part and know this, and the right to terminate their involvement at any stage and also know this
8	Arrangements should be made during initial contacts to provide feedback for participants who request it: this may take the form of a written summary of findings
9	The dignity, privacy and interests of the participants should be respected and protected at all times
10	When ethical dilemmas arise, the researcher may need to consult with other researchers

Source: Hearne (2009, p.144)

4.14 Limitations of the Research Methodology

This research was undertaken within a unique, regional environment influenced by the policies, priorities and ethos of the host institution, WIT, and the regional economic conditions. Budgetary constraints limited the primary research to one HEI in Ireland and it did not include either other regional, national or international case studies. As with the practice of conducting research in general, there is potential for researcher bias and equally, there is potential also for respondent bias. Every effort was made to counter bias through triangulation and this facilitated the integration of research findings from both the quantitative and qualitative research from the perspectives of graduate entrepreneurs and enterprise enablers. This allowed me to develop a comprehensive database of their perspectives in order to enhance the rigour and richness of the research. Notwithstanding these limitations, this study differed from the traditional focus on EE from the perspective of providers *i.e.*, lecturers and HEIs to provide a deeper understanding of how graduate entrepreneurs learn and how HEIs and lecturers can refine EE in order to meet the diverse needs of potential and new graduate entrepreneurs.

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It made a contribution to: (i) knowledge; (ii) practice; and (iii) policy and it highlighted further research to advance the field of EE research. This will be considered in detail in Chapter 9.

4.15 Conclusion

This chapter outlined the key concepts of the conceptual framework for EE at third level which informed the overall research study. It also justified the methodological approach chosen to address the research aim, objectives and questions and concluded that a qualitative research approach would be congruent with the overall aim. I concluded that an examination of graduate entrepreneurs' perspectives of EE at third level requires a qualitative research approach and a methodology to support it. This chapter highlighted the limitations of this research and clarified my role in the research process and the steps taken to counter potential researcher bias. Ethical considerations pertinent to the research were outlined and the quality of the data was considered against reliability, validity and generalisability criteria. The data analysis and research findings will be presented within the following three chapters.

Chapter 5 Profile of Graduate Entrepreneurs

5.0 Introduction

It is clear from the review of the extant literature that there is an absence of graduate entrepreneurs' perspectives of EE at third level which this research seeks to address. The findings chapters are arguably the most important part of this study because they analyse the data collected during the field research to review them in light of extant literature, policy and the conceptual framework for EE at third level. This research explored the five key themes of the conceptual framework for EE at third level in order to answer the research questions and provide a framework for the data analysis. They will be refined as case insights emerge from each section of the data analysis. In order to contextualise the research data and analysis, this chapter provides a profile of the graduate entrepreneurs who participated in this study, namely: (i) 50 respondents to the e-questionnaire administered to SEEPP participants; (ii) 15 graduate entrepreneurs who participated in SEEPP; and (iii) 15 graduate entrepreneurs who established their business in the South East region but did not participate in SEEPP. This chapter comprises six sections, namely: Section 5.1 provides a contextual overview of the South East region of Ireland and an overview of SEEPP. Section 5.2 provides a profile of the graduate entrepreneurs who responded to the e-questionnaire. Section 5.3 presents a profile of the 15 SEEPP participants who participated in the semi-structured interviews and examines their motivation for starting their own business and choosing to participate in SEEPP. Section 5.4 presents a profile of the other 15 graduate entrepreneurs who participated in the semi-structured interviews and examines their motivation for starting their own business and their decision not to participate in SEEPP. Section 5.5 presents a synthesis of the three sections to provide commonalities and disparities in graduate entrepreneurs in the South East region. Section 5.6 presents the conclusions to this chapter.

5.1 Research Context: Contextual Overview of South East Region

The focus area for this research is the South East region of Ireland comprising five counties, namely: Carlow, Kilkenny, South Tipperary, Wexford and Waterford. The region faces a particular challenge in terms of job creation with an above average unemployment rate, on-going structural adjustment within the regional economy and the region's unique locational factors, including a dispersed urban configuration with a less than dominant regional Gateway and for many parts of the region, international accessibility limitations (Forfás, 2011). Figure 5.1 depicts the geographical location of the South East region:

Figure 5.1 South East Region of Ireland

Source: CSO (2011)

The occupational profile of the region, similar to all other regions in Ireland, has been affected by the economic downturn. The number of people employed in craft and related occupations has declined by 49% in the region since Quarter 2 of 2007 which indicates a significant overreliance on construction related occupations in the region compared to the rest of Ireland and has significant implications for the design and targeting of labour activisation measures (Forfás, 2011). The region employs proportionally fewer in professional and associate professionals/technical occupations relative to the national average (Forfás, 2011).

Table 5.1 Employment/Unemployment in South East Region

	Labour Force Participation	Labour Force with Higher Education Qualification	Total Unemployment	% of Unemployed with less than Third Level Qualification	% of Unemployed ≤ 35 years
Regional Average	58.1%	34%	18.2%	85%	51%
National Average	60.3%	40%	14.3%	78%	

Source: CSO (2011) & Forfás (2011)

Table 5.1 shows persons aged 18-35 years account for 51% of the total regional unemployment, even though this age cohort only accounts for 38% of the region's total labour force. This highlights a significant over-representation of younger people amongst the unemployed relative to their contribution to the labour market (Forfás, 2011). Only 31% of graduates are retained within the region: Waterford and Wexford have higher graduate retention rates of 39% and 38% respectively whereas less industrial counties such as Carlow, Kilkenny and Tipperary have lower retention rates. Given that the region has a small industrial base, 69% of the region's graduates find employment outside of their county of origin (Forfás, 2011). This regional 'brain drain' has been exacerbated by the grave problem of unemployment facing the South East region of Ireland (Forfás, 2011). The region lost key employers, namely Waterford Crystal in January 2009 and the Talk Talk call centre in October 2011 with a combined direct job loss of some 1,500 people. The region has a current employment rate of 18.9% compared with the national average of 14.3% (CSO, 2012), as it is characterised by low levels of FDI and it has a small industrial base compared to other regions *e.g.,* GDA. The closure of Talk Talk prompted the Minister for Jobs, Enterprise and Innovation, Mr. Richard Bruton T.D., to commission Forfás to prepare an employment action plan for the region. The resultant South East Region Employment Action Plan (2011) highlighted the need to increase the share of export manufacturing and internationally traded services, to develop 'new' sectors and to upgrade the skills base in the South East region (Forfás, 2011). National enterprise policy has articulated the need for balanced regional development so as to avoid a rural-urban shift and the over-concentration of FDI in core areas (Buchanan Report, 1968; National Development Plan 2000-06, 2000).

There has been a greater emphasis on attracting and supporting FDI which by its nature has a tendency or expressed desire to locate in urban centres with large concentrations of population and access to economies of scale, particularly the GDA (O'Gorman, 2007). Over the past decade, the region has attracted little, if any, FDI in comparison with other regions. It is becoming increasingly apparent that there will be no knight in shining armour, ostensibly in the guise of FDI, to create much needed employment. This reality has highlighted the importance of enterprise and called for a commitment to the continued upgrading of the region's existing base of enterprise (Forfás, 2011). There is an economic and social imperative for all stakeholders within the region to stem the tide of (e)migration and to foster a culture of entrepreneurship. This requires government rhetoric to be matched with a coherent, integrated regional enterprise policy, particularly graduate entrepreneurship, to flourish. Graduate entrepreneurship is gaining credence as a solution to job and wealth creation and the two regional IoTs *i.e.,* in Waterford and Carlow are called upon to play a strategic role in providing graduates with the requisite entrepreneurial skills to compete successfully in the national and global knowledge economies. Stimulating and supporting graduate entrepreneurship is one strategy of a multi-pronged solution to rejuvenate the beleaguered South East economy. It is essential for the key stakeholders in education and enterprise development to work together in an integrated manner to strengthen the enterprise base which, in turn, will restore optimism, employment and economic growth to the region.

5.1.1 Case Profile: South East Enterprise Platform Programme

SEEPP is a year-long rapid business incubation programme which aims to develop the entrepreneurial skills of graduate entrepreneurs in the South East region. It was established in 1998 and has been in operation in the region ever since with the exception of 2000 due to an absence of funding. The programme is operated by WIT's School of Business and is funded by EI to provide assistance to HPSUs. SEEPP offers participants: (i) business management and development education and training tailored to the needs of start-ups; (ii) funding direction; (iii) mentoring; (iv) networking; and (v) incubation facilities.

It aims to: (i) nurture and support innovative start-ups in the region; (ii) support the creation of sustainable, regional employment; (iii) support companies in developing new export markets; (iv) develop companies that can transfer to the EI HPSU division; (v) develop the participant's business skills; (vi) support innovation networks and knowledge sharing; and (vii) assist the participants to evaluate current and future business opportunities. SEEPP is delivered over one academic year and provides participants with an applied learning environment in which they can hone their business development skills relevant for each stage of the start-up validation and planning process. On successful completion of SEEPP, many participants launch their business or at least complete a well-researched, investment-ready business plan. SEEPP, thus, plays an important role in developing participants' business skills through business management skills training, one-to-one support and mentoring.

Given the weak regional industrial base, there are limited opportunities for knowledge transfer or other forms of collaboration between larger and small enterprises. SEEPP plays a strategic role in the promotion of high-growth indigenous enterprise which is essential to the sustainability of the region's economy. SEEPP recruits some 18 start-up entrepreneurs per annum and preference is given to HPSU entrepreneurs. The main criteria for SEEPP participation is that an applicant's business concept must be innovative, scalable and have export potential. This recruitment policy is congruent with EI's primary focus of supporting HPSUs. SEEPP is non-sector specific and attracts graduate entrepreneurs from diverse backgrounds and with varied industry experience. Since its inception, SEEPP participant companies have created over 300 jobs and SEEPP has been a vehicle to increase HPSU development in the region (SEEPP, 2011). Table 5.2 shows the number of SEEPP participants who received CORD funding from the period 2002 to 2010 (inclusive). Unfortunately, data regarding the number of SEEPP participants in receipt of CORD funding in 2001 were unavailable.

Table 5.2 SEEPP Participants Receiving CORD Funding

Year	Number of SEEPP Participants	Number of CORD Recipients	% of Participants receiving CORD Funding
2002	17	8	47%
2003	17	14	82%
2004	22	10	45%
2005	20	8	40%
2006	18	13	72%
2007	17	8	47%
2008	18	6	33%
2009	21	6	28%
2010	18	6	33%
Total participants	168	79	47%

Source: SEEPP (2011)

Up until 2010, SEEPP had the second highest rate of transfers from EI CORD supported companies to the EI's HPSU division (Corry, 2010). There is significant collaboration between SEEPP, Enterprise Ireland (EI), the six CEBs, South East Business Innovation Centre (SEBIC) and other enterprise stakeholders charged with developing indigenous enterprise and employment. EI personnel work closely with SEEPP management in: (i) the recruitment of SEEPP participants; (ii) the evaluation of their applications for CORD funding; and (iii) attendance at milestone review meetings with participants. Whilst the percentage of SEEPP participants securing CORD funding has varied over the past decade, SEEPP has the second highest national rate of transfers from CORD to EI's HPSU division. Similar to any regional development focused funded government support programme, there are benefits and limitations for participation. Table 5.3 highlights the main benefits of SEEPP participation to graduate entrepreneurs.

Table 5.3 Benefits of SEEPP Participation

	Funding	Training & Mentoring	Links with WIT	Peer Support	Network
One-to-one business development meetings with SEEPP manager to focus on developing the business internationally		✓			
Links with tenant businesses in Arc Labs to assist the entrepreneur in building teams and collaborative groups to accelerate business growth					✓
Mentoring sessions to speed up the start-up process and assist in strategic decision-making		✓			
Access to WIT and TSSG staff for business advice			✓		
Sharing ideas with other SEEPP participants at a similar same stage of business development					✓
Regular structured business reviews to refine the value proposition for the business		✓			
Support in identifying sources of relevant funding and assistance with application process		✓			
Potential to work with WIT MBA students to research aspects of the promoter's business or target markets			✓		
Opportunity to pitch to potential investors during the annual SEEPP Enterprise Awards					✓
Hot-desk within WIT's campus incubator Arc Labs			✓		
Access to WIT libraries, facilities, video-conferencing, meeting rooms			✓		
Opportunity to access CORD funding towards R&D costs	✓				

Adapted from Ryan (2008)

Walsh (2008) concluded that SEEPP provided participants with a comprehensive package of supports, however, resources are not currently in place to continue this to any significant extent after the programme ends. In order to address this inherent weakness of SEEPP, she recommended that an individual end-of-programme evaluation of each SEEPP participant take place in order to identify those with greatest growth potential, thus, requiring additional support (*ibid*). Many SEEPP participants fall into a grey area between different EDAs, so it would be most beneficial if these evaluations were attended by representatives of the EDAs, in order that a collaborative approach to further enterprise supports mentioned could be facilitated from the outset (Walsh, 2008). Chapter 6 will explore in greater detail SEEPP participants' perspectives of both the benefits and limitations of SEEPP participation.

This will provide a more balanced and nuanced overview of EE at third level, particularly regarding at graduate level. Having provided a contextual background to both the South East region and SEEPP, the research findings that follow will profile graduate entrepreneurs in the region.

5.2 Section 1: Results of E-Questionnaire amongst SEEPP Participants

This section provides a profile of SEEPP entrepreneurs who established their business during the period 2001 to 2010 (inclusive). The data were collected through e-questionnires using Survey Monkey, an online market research platform. The SEEPP Manager emailed all former SEEPP participants outlining the purpose and expected outcomes of the study and he encouraged them to complete the e-questionnaire (see Appendix G). The criteria used for selection of the research cohort assumed that they: (i) were all graduates of a HEI; (ii) had established their business in the South East region in the period 2001-2010 (inclusive); and (iii) had an operational business at the time of the study. Initially, the SEEPP participants were given ten working days to complete the online questionnaire, however, by the end of week one, the response rate was 20%. This prompted me to request that the SEEPP Manager send a reminder email to encourage former SEEPP participants to complete the e-questionnaire. The total number of responses was 50 and this represents approximately a 33% response rate. Whilst a greater response rate was anticipated, for the purpose of this research, it was deemed an acceptable response rate to an e-questionnaire (Dillman, 2011). Whilst participation in this research was voluntary, the SEEPP Manager's endorsement of this study was instrumental to its implementation. The e-questionnaire was designed for analyzing the following data: (i) a profile of SEEPP participants *vis-à-vis* their age, education, family background and work experience; (ii) their awareness of SEEPP, their motivation for SEEPP participation, their experience of SEEPP *vis-à-vis* the support services and training provided, and their level of satisfaction with the programme; and (iii) the current status of their business and their links with WIT post SEEPP participation. This section of the e-questionnaire examined SEEPP participants' background in terms of their gender, age, highest level of educational attainment, family background in business and work experience prior to SEEPP participation.

5.2.1 Gender Profile of SEEPP Participants

The research reveals that 34 of the 46 respondents were male, whereas 12 of the 46 respondents were female. These figures reflect the average male: female participation in SEEPP over the past decade and they largely concur with the GEM Report's (2012) conclusion that Irish men are 2.5 times more likely to be an early stage entrepreneur than women. It is clear from these findings that an entrepreneurial gender divide persists. Whilst it was beyond the scope of this research to determine why such a gender divide exists, a conceivable explanation for the low level of female participation in SEEPP is that women do not perceive themselves as eligible of meeting the exacting SEEPP criteria *i.e.,* HPSU entrepreneurs.

5.2.2 Age Profile of SEEPP Participants

The age profile of SEEPP participants are summarised in the following table:

Table 5.4 Age Profile of SEEPP Participants

Age Group	Numbers	Percent
25-34	5	10.9%
35-44	18	39.1%
45-54	18	39.1%
55-64	5	10.9%

Missing: 4

These data show that 36 of the 46 respondents *i.e.,* some 78% were aged between 35 and 54 years of age and five respondents were aged between 25 and 54 and 55-64 years of age respectively. This finding has resonance with previous research conducted by Cooper (1973; 2006), Harrison *et al.* (2004), Madjid (2006) and Roberts (1991) who claimed that the majority of individuals start ventures, particularly in technology-oriented sectors, do so in their mid-to-late thirties.

5.2.3 Educational Background of SEEPP Participants

Respondents were asked about their highest level of educational attainment and it is evident from Table 5.5 that SEEPP has succeeded in attracting a cohort of highly educated graduate entrepreneurs.

Table 5.5 Highest Level of Educational Attainment of SEEPP Participants

Qualification	NFQ Level	Numbers	Percent	Non Graduates	Undergraduate	Postgraduate
PhD	10	3	6.5%			✓
Masters	9	11	23.9%			✓
Postgraduate Diploma	9	5	10.9%			✓
Professional Qualification	8	3	6.5%		✓	
Hons Degree	8	14	30.4%		✓	
Ord Degree	7	5	10.9%		✓	
Higher Cert.	6	3	6.5%		✓	
Leaving Cert.	4 & 5	1	6.5%	✓		
Junior Cert.	3	1	2.2%	✓		
Other		2		✓		
Total				4	8	36

Missing: 2

What is notable from this research data is that SEEPP succeeded in attracting some 91.2% of participants who had a third level qualification. More specifically, 36 (78.2%) of the 48 respondents had at least an Honours degree and 18 of the respondents had a postgraduate qualification. When asked if they had studied entrepreneurship before commencing SEEPP, only 10 of the respondents said yes, whereas 36 of them said that they had not. This suggests that entrepreneurship was not embedded in higher education curricula at the time of their undergraduate study. Given the age profile of the respondents, a more likely explanation is that entrepreneurship was not offered at that time. This gives credence to Wilson's (2008) observation that entrepreneurship only really substantially began to enter higher education curriculum in Europe in the mid-1990s. When asked when they studied entrepreneurship at college, six SEEPP participants said yes, however, there was a diversity of experience of EE at third level. Only one student had studied entrepreneurship in first year, two had studied it in second year, two had studied it in third year and one had studied it in the final year of their undergraduate study.

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This would confirm Hills' (1998), Gibb (1993), Matlay *et al.'s* (2007), Mitra *et al.'s* (2008) and HETAC's (2012) view that there is a lack of uniformity in the conceptual framework, curricula pedagogical design and approaches to EE, learning outcomes, and assessment at third level.

When asked if studying entrepreneurship had encouraged them to set up their own business, 29 SEEPP participants did not respond, whereas 11 said that it had and 10 said that it did not have any influence on their decision to become self-employed. Cognisant of the small response rate to this question, the findings highlight the inherent difficulties in evaluating the effectiveness of EE, this research supports Hoffmann *et al.'s* (2008) belief that there are multiple factors that influence the creation of a new venture and it cannot be directly attributed to EE.

5.2.4 Family Background in Business

When asked if their family had a background in business, 20 (43.5%) of the respondents said yes, whereas 26 (56.5%) said no (4 missing). On closer interrogation of those with a familial background in business, the respondents conceded that their background had influenced their decision to become self-employed. They suggested that it 'normalised' self-employment as a career option:

> *My Father had his own business, so it was normal to know that you did not need to be employed by someone else. I'm also fourth-generation entrepreneur, where each person has set up an unrelated business.* (Respondent 1)

> *The want to create something myself, I could see the ups and downs, what it means to buy something, lose something, make a profit, grow...* (Respondent 25)

Having a family background in business demystified entrepreneurship which gives credence to Anselm's (1993) and Wilson's (2008) belief that the earlier a student's exposure to entrepreneurship, the more likely s/he will consider entrepreneurial careers. It showed that these graduate entrepreneurs had the confidence to operate in conditions where costs may be known but rewards unknown in the Cantillon (1755) tradition.

5.2.5 Work Experience Prior to SEEPP Participation

Mitra and Manimala (2008) recommended that graduates should work for some time with other organisations which they believed would be a relatively inexpensive way of gaining on-the-job training and developing implementation skills. When participants were asked how many years were they employed before commencing SEEPP, their answers were as follows:

Table 5.6 Work Experience Prior to SEEPP Participation

Answer Options	Response Percent	Response Count
Less than 1 year	2.2%	1
1-5 years	6.5%	3
5-10 years	15.2%	7
10-15 years	23.9%	11
15-20 years	30.4%	14
More than 20 years	21.7%	10

Missing: 4

These results illustrate that graduate entrepreneurs had significant work experience in advance of starting their own business. Typically, SEEPP participants had between 10 and 20 years work experience prior to setting up their business which gives credence to Potter's (2008) observation that there is usually a lag time between graduation and self-employment. This has resonance with Taylor *et al.* (1992) who claimed that students with appropriate business experience would be better positioned to assimilate and contextualise learning outcomes from EE provision.

5.2.6 Motivation for Self-Employment

When asked to identify their motivation for starting their own business, the respondents gave the following answers as detailed in Table 5.7.

Table 5.7 Motivation for Self-Employment

Year	Percent	Number
I identified an opportunity	37%	17
I always wanted to start my own business	26.1%	12
Necessity, I needed to create a living for myself	17.4%	8
The time was right	13%	6
I became redundant	4.3%	2
Family requirement to work close to where I live	2.2%	1
Other	4.3%	2

Missing: 4

The primary motivation for self-employment was that they identified an opportunity which substantiates the extant literature which highlighted that the most distinctive trait of entrepreneurs is their ability to discover, recognise, create and/or exploit opportunities (Kirzner, 1973; Schumpeter, 1936; Greene-Beatty *et al.*, 2011). Secondly, 12 of the respondents wanted to set up their own business and be their own boss. The reality of the current economy suggests that 10 of the respondents started their own business out of necessity or because they were made redundant.

5.3 SEEPP Participants' Experience of SEEPP

This section of the data analysis examines how the respondents learned about SEEPP and their motivation for SEEPP participation. More specifically, it examines their experience of SEEPP in terms of support services and training provided, and their level of satisfaction with the programme. The respondents were asked how they heard about SEEPP and their responses are provided in Table 5.8.

Table 5.8 How SEEPP Participants Learned about SEEPP

Answer Options	Percent	Number
Advertisement	11.4%	5
Referral from Enterprise Ireland	15.9%	7
SEEPP Manager/Personnel	6.8%	3
Referral from WIT/TSSG staff member	11.4%	5
Referral from City/County Enterprise Board	9.1%	4
Recommendation from SEEPP participant	13.6%	6
Referral from friend/ family member/colleague	22.7%	10
Web search	9.1%	4
Other (Press release x 2 and referral from Enterprise Centre Manager x 1)		3

Missing: 6

The respondents learned about SEEPP from multiple sources, however, it is a cause of some concern that the number of referrals from WIT/TSSG staff was so low *i.e.,* 5 of the 44 and equally low were the number of referrals from EDA personnel. This suggests a need for either greater co-operation between WIT and the EDAs in the identification and recruitment of SEEPP participants. It highlights the need for WIT to communicate its entrepreneurial initiatives in education to a wider regional, national and international audience.

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Equally, EDA personnel need to be more proactive regionally and nationally in reaching out to a diverse range of community, work and educational contexts and champion initiatives in education aimed at increasing the number of entrepreneurial ventures.

5.3.1 Motivation for SEEPP Participation

When asked to identify the three main reasons for participating in SEEPP, the respondents gave the following answers, as detailed in Table 5.9:

Table 5.9 Motivation for SEEPP Participation

Year	Number	Percent
Business training and advisory support	31	66%
Avail of CORD funding	21	44.7%
Working with other start up entrepreneurs	21	44.7%
Structured environment to help me start my own business	17	36.2%
Access to a business mentor	15	31.9%
Space, time and support to start my own business	14	29.8%
To network with graduate entrepreneurs	9	19.1%
Access to incubation space	7	14.9%
Enhanced credibility/profile for My business	6	12.8%
Recommended by friend/family	6	12.8%
Reputation and track record of SEEPP	5	10.6%
Recommended by EDA	4	8.5%

Missing: 4

It is evident from the data that respondents' main motivation for SEEPP participation was to: (i) avail of business training and advisory support; (ii) avail of CORD funding and (iii) work with other start up entrepreneurs. They were also attracted to SEEPP because it provided them with a structured environment to help them start their business. Other attractions of the programme included the allocation of a dedicated business mentor and the space, time and support to establish their business. Again, it is interesting to see from the data that there was a low level of referrals of graduate entrepreneurs to SEEPP by EDA personnel.

5.3.2 Graduate Entrepreneurs' Perspectives of SEEPP

In order to determine if SEEPP participants' expectations of SEEPP matched the reality of their experience, the respondents were asked to rate their level of satisfaction with the programme *vis-à-vis* the following factors:

Table 5.10 SEEPP Participants' Perspectives of SEEPP

Statement	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
SEEPP lived up to my expectations as a graduate enterprise programme	14	26	4	4	0
My primary objective in participating in SEEPP was to develop a viable business	25	17	4	2	0
SEEPP helps participants to assess the viability of their business idea	21	17	5	5	0
Through SEEPP, I developed the practical management skills to develop my business	10	25	6	7	0
Through EEPP, I developed my leadership skills	3	13	17	14	1
My mentor was instrumental to the development of my business	4	12	11	20	1
The major benefit of SEEPP is that I developed contacts with WIT/TSSG staff, who could assist me in my business development	7	16	8	11	6
My confidence in my own ability increased as a result of my participation on SEEPP	18	22	4	4	0
Most of what I learned on SEEPP was from interacting with the other participants	4	14	12	17	1
SEEPP is too long in duration	2	3	12	23	8
My business would not have progressed so far without my participation on SEEPP	14	11	11	10	2

Missing: 2

In general, the level of satisfaction amongst SEEPP participations was high *i.e.,* 40 of the 48 (81%) of the respondents said that the programme lived up to their expectations. Similarly, 40 (81%) of the respondents claimed that their self-confidence increased as a result of SEEPP participation. This is a key, albeit intangible, success metric of SEEPP. As SEEPP focuses on the development of real businesses, this would give credence to Bandura's (1997) thesis that performing authentic tasks is a source of self-efficacy, particularly in the development of young, nascent entrepreneurs.

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Furthermore, 42 (87.5%) of the respondents stated that their primary objective in participating in SEEPP was to develop a viable business and 38 (79%) of them concluded that SEEPP helped them to assess the viability of their business idea. Whilst 35 (73%) of respondents claimed that through SEEPP participation, they developed the practical management skills to develop their business, they were less convinced of the development of their own leadership skills through participation in SEEPP. Likewise, only 25 of the 48 respondents believed that their business would not have progressed so far without their participation in SEEPP. Clearly, the findings support previous Matlay's (2007), Potter's (2008), Martin *et al.'s* (2011) and HETAC's (2012) work highlighting the inherent difficulties in measuring the effectiveness of EE.

In the main, the respondents' level of satisfaction with these was high with *e.g.,* the overall management of SEEPP, the experience of SEEPP management team and access to WIT library, meeting rooms. Their highest rate of satisfaction was from the support they received from their peers and this suggests a high level of interaction, moral support and referrals and networking amongst SEEPP participants. Participants were also asked to rate their level of satisfaction with SEEPP training. Of these training inputs, participants were satisfied with the following training: (i) general management development; (ii) business planning; (iii) business presentations; and (iv) making a successful business pitch. Conversely, respondents were less satisfied with SEEPP training *vis-à-vis*: (i) customer service; (ii) developing an online presence support services; and (iii) IT skills.

5.3.3 Accreditation of SEEPP

Respondents were asked if they received an accredited qualification on successful completion of SEEPP. In total, 35 of the respondents gained an accredited qualification on successful completion of SEEPP, whereas 13 received a certification of completion, as shown in Table 5.11.

Table 5.11 Number of SEEPP Participants Receiving Qualifications

Qualification	Number	Percent
Postgraduate Diploma in Enterprise Development	33	68.8%
Higher Certificate in Enterprise Development	2	2.2%
Certificate of Completion	13	27.1%

Missing: 2

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On closer examination, when asked how important was it to SEEPP participants to gain accreditation *i.e.,* Postgraduate Diploma in Enterprise Development or Higher Certificate in Enterprise Development, their responses were as follows:

Table 5.12 SEEPP Participants' Perception of Importance of SEEPP Accreditation

Qualification	Number	Percent
Very Important	16	33.3%
Important	14	29.2%
Not Important	18	37.5%

Missing: 2

It is evident from this table that 30 of the 50 respondents believed that the accreditation of SEEPP was important or very important, whereas 18 stated that it was not important. The reasons cited for the importance of accreditation were: (i) it is nice to have; (ii) it validated my learning; (iii) it is good to have in case my business does not succeed.

5.4 Profile of SEEPP Participants' Business

Respondents were asked where the current location of their business and their responses are as follows:

Table 5.13 Location of Business

County	Number
Carlow	N/A
Kilkenny	7
Tipperary	1
Waterford	21
Wexford	9
Broader South East region	2
Greater Dublin Area	3
Rest of Ireland	2
NA	2

Missing 3

Of the 47 respondents, 21 were located in Waterford, nine in Wexford, seven in Kilkenny and one in Tipperary. The remainder was located throughout Ireland, three in the GDA. On closer inspection of the data, only two respondents had an overseas office, both were located in the US (California and Idaho). When asked why they chose to locate in the South East region, 60.5% of the respondents cited personal and 57.9% stated that they were originally from the area.

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Factors that attract FDI to a region *e.g.,* proximity to the marketplace, availability of skilled labour and proximity to a regional HEI were less important to SEEPP participants. When asked why they choose to locate in the South East region, the six graduate entrepreneurs whose company was not located in the region cited personal reasons for their decision *i.e.,* I am originally from this area. International evidence on owner/managers points overwhelmingly to the location decision being decided by the need for geographical proximity of the micro-firm owner/manager close to his/her home (Healey and Ilbery, 1990; Braunerhjelm, 2011). This is a key insight into graduate entrepreneurs' decision-making *vis-à-vis* business location and suggests a need for a proactive strategy to encourage and support nascent graduate entrepreneurs to establish their business within the region. It also highlights an opportunity to redress the region's 'brain drain' by developing initiatives to attract graduates from the region to return to establish their business.

5.4.1 Sectoral Analysis of SEEPP Participants' Businesses

The respondents were asked to identify the sector in which they operate and their responses are as follows:

Table 5.14 Sectoral Analysis of SEEPP Participants' Businesses

Sector	Number	Number
Information Technology/Online	25	54.3%
Education + Training	5	10.9%
Business/Finance	3	6.5%
Green	3	6.5%
Engineering	2	4.3%
Services	2	4.3%
Food + Beverage	1	2.2%
Science	1	2.2%
Property	1	2.2%
Tourism	1	2.2%
Manufacturing	1	2.2%
Design	1	2.2%

Missing: 3

The majority of SEEPP participants *i.e.,* 25 of the 47 respondents were operating in the Information Technology/Online sector and a further nine participants were working within the Engineering, Green, Business and Finance and Science sectors. These findings show that the profile of SEEPP participants' businesses is broadly in line with

EI's strategy to recruit high tech graduates and build sustainable indigenous capacity in ICT-based sectors.

5.4.2 Number of Employees

SEEPP participants were asked how many people they currently employed, their responses were as follows:

Table 5.15 Number of Employees in SEEPP Participants' Companies

Employees	Response Percent	Response Count
0	44.7%	21
1	17.0%	8
2-4	23.4%	11
5-9	6.4%	3
10-14	8.5%	4
15-20	0%	0

Missing: 3

Bygrave and Reynolds' (2001) research highlighted that approximately 11% of HPSU entrepreneurs expected to create 20 or more jobs over the next five years which compared to only 2% of necessity entrepreneurs who expected to create a similar number of jobs. These figures show that 21 (44.7%) of the 47 respondents employ only themselves which appear to be incongruent with EI's aim of SEEPP to recruit and support HPSUs. Overall, an analysis of the profile of SEEPP participants suggests that they do not meet EI's HPSU criteria, namely: (i) they have not achieved a turnover of excess of €1m.; (ii) they have no export sales; or (iii) they do not employ ten people.

5.4.3 Turnover of SEEPP Participant Companies

Respondents were asked what the current annual turnover of their business is and the findings reveal:

Table 5.16 Turnover of SEEPP Participants' Companies

Turnover	Response Percent	Response Count
Less than €250k p.a.	80.9%	38
€250k p.a. to €500k p.a.	6.4%	3
€500k to €1m p.a.	6.4%	3
€1m to €2m p.a.	6.4%	3
€2m to €5m p.a.	0.0%	0
Over €5m p.a.	0.0%	0

Missing: 3

Interestingly, of the 47 respondents only three have achieved a turnover in excess of €1m per annum. Once again, this finding points to an inconsistency between EI's aspirations for SEEPP participants to become HPSUs and the reality of their business turnover. This raises questions about EI's criteria: Are their metrics too high or too difficult to achieve for what are essentially sole trader enterprises?

5.4.4 Export Orientation

Respondents were asked what percentage of their current business is exported and the findings reveal:

Table 5.17 Percentage of Export Sales

Answer Options	Response Percent	Response Count
None	46.8%	22
1-20%	17.0%	8
21-40%	2.1%	1
41-60%	8.5%	4
61-80%	2.1%	1
81-100%	23.4%	11

Missing: 3

The export performance of the SEEPP participants was lower than the aspirations of EI; 11 of the 47 respondents export between 81-100%. Whilst the expectation is that this figure should be higher, it is important to consider that indigenous HPSUs and SMEs predominantly target local, regional and national markets. Furthermore, these figures are largely reflective of the lower rates of exports from the indigenous sector when compared to those of FDI in Ireland.

5.4.5 Serial Entrepreneurship

In all 29 (60.4%) of the 48 respondents did not establish another business since completing SEEPP, whereas 19 (39.6%) of them had. These data suggests that the notion of serial entrepreneurship *i.e.,* entrepreneurs developing multiple businesses is very real within the context of SEEPP participants. This is a positive trend as those economies with a diverse entrepreneurial indigenous base, across a range of sectors, increases the propensity for the creation of sustainable employment growth and negates the effect of dependency on a small number of large foreign firms drawn from a small number of sectors, as is currently the case in Ireland.

5.4.6 Links with WIT

On a Likert scale, respondents were asked to rate their links with WIT at three points in time, namely: (i) pre-SEEPP; (ii) during SEEPP; and (iii) post-SEEPP. Their responses are as follows:

Table 5.18 Links with WIT

	Very Strong	Strong	Undecided	Weak	Very Weak
Pre-SEEPP	0	6	8	10	24
During SEEPP	4	22	7	7	8
Post SEEPP	7	10	6	9	16

Missing: 2

It is clear from the above data that the SEEPP participants' links with WIT/TSSG staff were very weak or at best weak prior to commencing the programme, whereas, they strengthened significantly during SEEPP. Whilst some participants said that they have very strong or strong links with WIT post SEEPP, worryingly, others' links with WIT/TSSG staff weakened sharply after completion of the programme. This highlights the guillotine effect as highlighted by Walsh (2008). In other words, former SEEPP participants can no longer rely on the network of the SEEPP manager or WIT lecturers and staff to maintain links with the Institute.

When asked about the nature of their engagement with WIT, the respondents highlighted the following links and initiatives, with which they engage with WIT:

Table 5.19 Nature of Engagement with WIT (Need to do)

Nature of Engagement	Number	%
R&D (New product development)	20	42.9
Training & education	13	28.6
Supplier	11	23.8
Consultancy	9	19
Work as guest lecturer	7	14.3
Student placements	4	9.5
Graduate placements	2	4.8
Use of WIT's facilities	2	4.8

Missing 3

The findings show that the greatest level of engagement between the SEEPP participants and WIT was for the purpose of new product development, training and education and as a supplier to the HEI. Respondents were asked to rate the strength of their links or relationship with SEEEPP team *i.e.,* the SEEPP manager and lecturers at three points in time, namely: (i) pre-SEEPP; (ii) during SEEPP; and (iii) post-SEEPP. Their responses are as follows:

Table 5.20 Links with SEEPP Manager

Answer Options	Very Strong	Strong	Undecided	Weak	Very Weak
Pre SEEPP	0	8	5	14	21
During SEEPP	17	26	4	1	0
Post SEEPP	7	19	5	15	2

Missing: 2

Similar to the question regarding SEEPP participants' links with WIT, the above data show that their links with the SEEPP team were very weak prior to their commencement in the programme. Once again, their links with the SEEPP team strengthened throughout the duration of the programme. On completion of SEEPP, whilst the relationship between SEEPP participants and the SEEPP team was stronger than it was pre-SEEPP, nonetheless it gives credence to the notion of a guillotine effect in their relationship, as highlighted by Walsh (2008).

5.5 Summary of Research Findings of E-Questionnaire

In general, the findings of the e-questionnaire highlight that the typical profile of SEEPP participants is: male; aged between 35 and 55 years and working within the IT, Engineering, Science, Business/Finance sectors. Moreover, SEEPP participants are graduates of HEIs with an Honours degree or a higher qualification and in general there is congruence between their undergraduate qualification, their work experience and the nature of their business. Generally, SEEPP participants were motivated to start their own business because they identified an opportunity or always wanted to set up a viable business. In the main, SEEPP participants were satisfied with SEEPP and they believed that they benefited both personally and professionally from SEEPP participation. They stated that their confidence in their own ability increased as a result of their participation in SEEPP. When asked if they would recommend SEEPP to other graduate entrepreneurs, 20 respondents said that they would unreservedly, whereas 20 of them said they would recommend it to some people only. Interestingly, all SEEPP participants would recommend the programme but they cautioned that SEEPP may not be suitable for all graduate entrepreneurs.

The respondents recommended initiatives to enhance SEEPP, namely: (i) the programme could be condensed into a shorter, more intense programme; (ii) not all participants are in the same sector or at the same level in terms of their educational attainment or more importantly the scope of their business. Whilst the data mined from this quantitative study provide a snapshot of graduate entrepreneurs' perspectives of SEEPP, it is a first step in understanding their perspectives of EE at third level. The following section will detail the results of the semi-structured interviews with 15 SEEPP participants (2001–2010 inclusive).

5.6 Section 3: Profile of SEEPP Participants

I conducted 15 semi-structured interviews with 15 past participants of SEEPP with the aim of examining their perspectives of EE at third level at third level. All 15 interviewees met the selection criteria for interview, namely: (i) they were all graduates of a HEI; (ii) they had established their business in South East region in the period 2001-2010 (inclusive); (iii) they had participated on SEEPP within the period 2001-2010 (inclusive); and (iv) their business was still operational. Furthermore, they all agreed to be interviewed as part of the research process. The profile of the SEEPP participants interviewed is detailed in Table 5.21.

Table 5.21 Profile of SEEPP Participants

Entrepreneur	Gender	Est.	Sector	Employees	Highest Qualification
SEEPP 1	Male	2010	Business Services	4	Masters
SEEPP 2	Male	2009	IT	1	Masters
SEEPP 3	Female	2010	Food	4	Masters
SEEPP 4	Male	2007	Food	30	Bachelors
SEEPP 5	Male	2009	R&D	2	PhD
SEEPP 6	Male	2000	R&D	1	Bachelors
SEEPP 7	Male	2006	ICT	6	Bachelors
SEEPP 8	Male	2008	Recruitment	16	Bachelors
SEEPP 9	Female	2004	Training	4	Bachelors
SEEPP 10	Male	2007	Tourism	15	Bachelors
SEEPP 11	Female	2010	Wellness	1	Masters
SEEPP 12	Male	2009	ICT	25	Masters
SEEPP 13	Male	2010	Utilities	20	PG Diploma
SEEPP 14	Male	2004	IT Services	8	Masters
SEEPP 15	Female	2000	Life Sciences	12	Masters

Source: Current Research

All of the participants were graduates with a minimum of an Honours degree and nine participants had a postgraduate qualification *i.e.,* eight had a Masters qualification and one participant had a PhD. Similar to the results of the e-questionnaire, this highlights that SEEPP has succeeded in attracting participants with a high level of educational attainment.

5.6.1 Motivation for Self-Employment

The GEM Report for Ireland 2011 (2012) concluded that the motivation for starting a business can be broadly classified as either opportunity driven or necessity driven *i.e.*, people have no other options for employment other than self-employment. The findings amongst SEEPP participants reveal that one of the primary motivations for SEEPP participants to set up their own business was that they believed that the timing was right. It would appear from the findings that SEEPP participants were pulled or drawn to self-employment rather than pushed into it because of necessity. This concurs with the GEM Report for Ireland 2011 (2012) conclusions that some 69% of entrepreneurs are driven by opportunity. The findings highlight the importance of referrals and networking in raising SEEPP participants' awareness of SEEPP:

> *"I wanted to set up my own business – I had an idea and I met with the CEO of my local County Enterprise Board who referred me to the local enterprise centre manager. He in turn recommended SEEPP."* (SEEPP 8)

> *"I was working in TSSG so I was in the same building (Arc Labs) where SEEPP was in so I had an idea of what SEEPP was about."* (SEEPP 10)

However for others, there was an element of serendipity or chance in their finding out about SEEPP for example:

> *"I found out about SEEPP online and it being within geographical reach of me, I thought I would go for it."* (SEEPP 8)

Initially, some resondents did not think that SEEPP was a suitable programme for them:

> *"When I found out about SEEPP, I thought it wasn't for me but that was the wrong impression. I met with the SEEPP manager to discuss how SEEPP could work for me and then I decided to go for it."* (SEEPP 5)

This suggests the importance of referrals between EDAs and WIT in raising graduate entrepreneurs' awareness of SEEPP, and indeed other enterprise supports. It has resonance to Etzkowitz *et al.'s* (1999) triple helix model in terms of developing links and relationships between the key enterprise stakeholders. This research highlights the importance of familial background in encouraging and discouraging SEEPP participants to or from self-employment:

"My Father was self-employed so we often spoke about business and he ingrained in me the belief that business is all about sales." (SEEPP 15)

"I was actively discouraged from setting up my own business. My Father said to me "quit messing and get a real job." (SEEPP 12)

These comments are insightful because they highlight the importance and influence of familial background in 'normalising' or indeed discouraging self-employment as a career choice for the graduate entrepreneurs.

5.6.2 Motivation for SEEPP Participation

According to Gunnigle *et al.* (2002), Sadler-Smith *et al.* (2000) and Reinl (2011) the motivation for learning is dependent on perceptions of benefit (Sadler-Smith *et al.*, 2000). Micro-firm owner/managers will often seek new information when a problem arises that requires immediate resolution, demonstrating a preference for learning that is immediately applicable. Patton *et al.* (2000) suggested that where learning/training is undertaken for more strategic motivations, it may be more likely that it will result in deeper levels of learning. The findings revealed a plurality of motivations for SEEPP participation, including:

"My motivation for joining SEEPP was to learn and grow my business. Reducing the risk along the way was a big issue for me and doing it in a low risk environment to get to market … I needed SEEPP as I was pitching and presenting my idea and getting up in front of people and convincing them. I was determined to create an excellent business plan and I wanted to learn about how to access funding." (SEEPP 8)

"I was attracted to SEEPP as much for personal development reasons. I did not get CORD funding so that wasn't my motivation for participating on the programme." (SEEPP 12).

The respondents recognised that SEEPP could provide them with the necessary structure and framework for developing their business for example:

"I was attracted to SEEPP as I believed it would provide a structured environment to help me start my own business. It would allow me to network with other start up entrepreneurs and the SEEPP manager and of course CORD funding was an added bonus." (SEEPP 9)

Some participants for example SEEPP 5 had significant experience of setting up a business:

"My motivation for participating on SEEPP was three-fold: (i) I wanted to develop an investor-ready business plan; (ii) I wanted to get CORD funding; and (iii) I wanted to win the SEEPP competition and develop a profile in order to gain access to venture capitalists. In fairness, I succeeded in achieving these ambitions so SEEPP lived up to my expectations." (SEEPP 13)

"My motivation for participating in SEEPP was that I wanted to have my own business and create employment. To put SEEPP into context, when we started, there was money available from EI and that was beneficial to the business for cashflow purposes and also from a learning perspective with a focus on market research, marketing and sales." (SEEPP 14)

"SEEPP offered me some breathing space to develop a business idea and retain an income while doing so." (SEEPP 15)

SEEPP participants were attracted to SEEPP because it offered them a structured environment, in which to start and develop their business but more specifically, it also offered them access to CORD funding and the opportunity to link with like-minded graduate entrepreneurs. Whilst there is a plurality in SEEPP participants' motivation to participate in the programme, the main reasons can be summarised as follows: (i) structured environment; (ii) access to CORD funding; and (iii) links with other SEEPP participants. Each of these benefits will now be considered in greater detail.

5.6.2.1 CORD Funding

This research highlights the importance of CORD funding in influencing graduate entrepreneurs' decision to participate in SEEPP. It provided SEEPP participants with a financial safety net, or a bridge to help them make the transition from employment to self-employment. CORD funding allowed SEEPP participants to focus on developing their business, thus, the importance of securing CORD funding cannot be overstated in terms of providing SEEPP participants with a financial safety net *i.e.,* meeting basic needs *e.g.,* mortgage repayments and household bills, for example:

"Getting CORD funding was hugely important to me because starting my own business was a big leap for me after 19 years in employment. I had a young family, a good salary but I made the decision to leave at the end of the month. SEEPP helped to minimise the risk. I got CORD funing and essentially that looked after my basic needs." (SEEPP 6)

"My primary motivation for participating on SEEPP was the CORD funding. I invested it all in the business and it provided the necessary working capital for the business and gave me enough money so that I was not destitute in my first year of business." (SEEPP 15)

"It was clear from the beginning that I wouldn't get CORD funding but I really wanted to learn. I wanted to create a business plan and get something going within the year. I persisited in developing my business plan and finally secured CORD funding later in the programme." (SEEPP 8)

Clearly, CORD funding has succeeded in bringing graduate entrepreneur's business from concept to market and is a crucial part in the government's strategy to assist graduate entrepreneurship. Conversely, SEEPP participants who were unsuccessful in securing CORD funding could see other benefits of SEEPP participation, namely:

"As I did not get CORD funding (as I had received some in the past), I could not have done SEEPP without the support of my partner." (SEEPP 5)

"I was attracted to SEEPP as much for personal development. I did not get CORD funding so that wasn't my motivation for participating on SEEPP." (SEEPP 10)

These comments highlight the need for greater transparency regarding the eligibility criteria for CORD funding. Setting up a business is a risky endeavour, however, the CORD funding provided a "safety net" (SEEPP 6) in terms of meeting their basic needs for participants who were fortunate to receive CORD funding.

5.6.2.2 Links with SEEPP Participants

One of the key motivations for participating on SEEPP was networking. This was particularly true of people locating in the region to establish their business. They believed that SEEPP opened many doors for them *i.e.,* to WIT, its research centres, EDAs, potential clients and/or investors. Some of this networking was formal through structured SEEPP events but the majority of this networking was done informally amongst peers or facilitated by the SEEPP management team.

Interestingly, the more canny entrepreneurs thought that networking was the means to oil the wheels of their business and enjoyed forging alliances through SEEPP.

5.6.2.3 The Role of the SEEPP Manager

The respondents believed that the SEEPP manager plays a central role in giving direction to the programme and the participants. He is a touchstone, with whom participants can "bounce ideas" (SEEPP 1) and act as a "sounding board" (SEEPP 12). Crucially, SEEPP participants believed that they could gain access to the manager's "rolodex" (SEEPP 1) *i.e.*, his network of contacts of academic staff, EDA personnel, venture capitalists etc. This was a key benefit of SEEPP participation. They benefitted from the one-to-one meetings with him to assess the direction of their business. A key conclusion of this research is that the success of SEEPP is contingent on the energy and enthusiasm of the SEEPP manager who gives direction to participants. Given some of the SEEPP training was provided by WIT staff, there was an ongoing relationship between participants and School of Business lecturers. Participants sought other WIT academic staff who could help them with their business and their route to such people was through the SEEPP manager. It is encouraging that the participants believed that their links and relationships with WIT personnel is stronger as a result of participating on SEEPP and whilst they may not be in regular contact, they believed that there is potential for collaborating with staff in the future. Interestingly, SEEPP participants believed that their relationship with EDAs has been enhanced as a result of SEEPP. In some cases, SEEEPP helped participants to navigate the funding and to give them the self-confidence to meet EDA personnel and seek funding for their business.

> *"SEEPP certainly helped us to shape our business. The business plan was a key part of what I learned."* (SEEPP 15)

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5.7 Section 3: Profile of Non-SEEPP Graduate Entrepreneurs

This section presents an overview of the 15 graduate entrepreneurs who did not participate in SEEPP. Again, the interviewees met the selection criteria and they agreed to be interviewed as part of the research process, namely: (i) they must be a graduate of a HEI; (ii) they must have established their business in South East region in the period 2001-2010 (inclusive); and (iii) their business must still be operational. The following table provides some background information on each of the graduate entrepreneurs interviewed:

Table 5.22 Profile of Non-SEEPP Participants

Entrepreneur	Gender	Est.	Sector	Employees	Highest Level of Educational Attainment
Entrepreneur 1	Female	2009	Food & Drink	2	Hons Degree
Entrepreneur 2	Male	2005	Education & Training	15	MBA
Entrepreneur 3	Female	2008	Publications	4	MA
Entrepreneur 4	Male	2010	Telemetrics	2	Degree
Entrepreneur 5	Male	2009	Manufacturing Consultancy	6	Hons Degree
Entrepreneur 6	Female	2009	Jewelry	2	Higher Cert.
Entrepreneur 7	Male	2009	Consultancy	2 + Associates	Hons Degree
Entrepreneur 8	Male	2009	Food & Drink	6	Hons Degree
Entrepreneur 9	Male	2009	Training	2 + Associates	MBA
Entrepreneur 10	Male	2009	Giftware Manufacturing	12	Hons Degree
Entrepreneur 11	Male	2005	Financial Services	9	MBA
Entrepreneur 12	Female	2001	Food & Drink	4	BA
Entrepreneur 13	Female	2007	Hygiene	3	PhD
Entrepreneur 14	Male	2010	Call Centre	370	MBA
Entrepreneur 15	Male	2004	Pharma/Health Care	6	MBA

Source: Current Research

The graduate entrepreneurs interviewed had a high level of educational attainment and were working across a diverse range of sectors. Similar to the research conducted amongst the SEEPP participants in both the e-questionnaire and the semi-structured interviews, the gender profile reflects the findings of the GEM report for Ireland (2012) which concluded that the entrepreneurial gender divide continued, compounded by the relative lack of ambition among women entrepreneurs.

5.7.1 Motivation for Self-employment

The findings reveal that 11 of the 15 respondents made a conscious decision to set up their own business.

> "I always wanted to set up my own business. I wanted to be in control of my own destiny, to be my own boss and grow my own business." (Entrepreneur 11)

> "I never dreamed that I would start my own business but it seemed like the right thing to do. I met a business partner who was willing to work with me and I said why not give it a go? What have I to lose?" (Entrepreneur 1)

The GEM Report for Ireland 2011 (2012) highlighted a growth in the rate of necessity entrepreneurship in Ireland 31% in 2011 and relative to other OECD countries, the rate of necessity entrepreneurship is higher than the OECD (23%), the EU (25%) and the Eurozone (18%) averages. Of the 15 respondents, five (33%) were 'pushed into' self-employment because they were made redundant:

> "I fell into self-employment by necessity really. The organisation I was working with closed and I had always wanted to manage my own time, have flexibility and take control of my life. Essentially, it was a lifestyle choice. I never saw myself as a high-flyer or ambitious but I had a portfolio of skills." (Entrepreneur 7)

> "Waterford Crystal closed in January 2009. I was the main breadwinner, I couldn't find a job ... I couldn't hang around so I had to create my own employment. I always wanted to work for myself, it wasn't a fanciful idea but the reality is it is difficult to give up secure employment. Given I was unemployed, I said I may as well chance it." (Entrepreneur 9)

> "I was made redundant. Lots of my friends were in the same boat and chose to emigrate. I was married and we were expecting our first baby so we didn't want to emigrate. I looked at redundancy as an opportunity and I thought, I will regret it in ten years time if I don't do it now." (Entrepreneur 8)

> "Self-employment was a challenge. I had spent 44 years working in Waterford Crystal and I could not sit around and do nothing. It was a good opportunity." (Entrepreneur 10)

> "I was working for a bank and it was becoming very bureaucratic, a lot of internal reporting. The MBA was a catalyst for self-employment – as part of the programme, we were asked to compare our current employment with where we wanted to be. That got me thinking that I did not want to spend my career working within the bank." (Entrepreneur 11)

It is interesting that all of the five necessity entrepreneurs regarded redundancy as an opportunity to pursue their latent ambitions to become self-employed.

This is an important insight because it highlights the potential for EDAs and HEIs to explore the potential for entrepreneurship amongst recently unemployed graduates. In summary, whilst some of the graduate entrepreneurs were pushed into self-employment through redundancy, many of these 'necessity entrepreneurs' regarded this as an opportunity.   This confirms Schumpeter's (1936) contention that entrepreneurs 'create opportunities' rather than are just alert to them (Kirzner, 1973). This has significant implications for HEIs and policy makers in the provision of EE courses to necessity or nascent entrepreneurs.

5.7.2 Reasons for Not Participating in SEEPP

Some respondents were not aware of SEEPP, whereas, others did consider participating in the programme but chose not to because of what they perceived as an opportunity cost involved in participating in SEEPP and/or they did not meet the criteria for SEEPP participation:

> *"We looked at sending one of us on SEEPP but we considered the opportunity cost. Effectively we saw it as a day away from selling and we decided our business couldn't afford that luxury."* (Entrepreneur 5)

> *"Yes, I did consider SEEPP but one look at the entry criteria and I knew that we were not eligible. We were in no way near becoming a HPSU."* (Entrepreneur 9)

It may be the case that the criteria specified by EI may be too difficult to achieve, thus potentially excluding a large population of HPSUs. Whilst this may be a perceptual lack of confidence and self-efficacy amongst non-participating HPSUs, is it the case that those who participate in programmes such as SEEPP are an elite cohort with high expectations of success?   Answering such a question would be difficult without conducting research on all HPSUs nationally. Entrepreneur 10 ruled out SEEPP participation for the following reason:

> *"No, I never considered it. I was anxious to get going – I knew I had a lot of experience so I didn't want to be tied down to or by any programme."* (Entrepreneur 10)

Reinl (2011) concluded that motivation is an essential pre-condition for effective learning and is dependent on perceptions of benefit (Sadler-Smith *et al.*, 2000).

Micro-firm owner/managers will often seek new information when a problem arises that requires immediate resolution, demonstrating a preference for learning that is immediately applicable (Reinl, 2011). Thus, the strategic way in which graduate entrepreneurs approach EE raises a fundamental question, namely: what is the value added of SEEPP participation?

5.8 Synthesis of Research Findings

This section synthesises the previous three sections of the data analysis to provide a composite overview of the profile of graduate entrepreneurs in the South East region. This research shows that graduate entrepreneurs in the region are highly educated, typically male and established their business after acquiring considerable work experience. Some of the graduates had a family background in business which helped to normalise self-employment as a plausible option for graduates. However, in the absence of a positive 'norming' influence such as family, could the education sector seek to normalise entrepreneurship for students? However, this research shows that EE is still a relatively new phenomenon in Irish higher education and the majority of the respondents had not studied entrepreneurship as part of their undergraduate studies. Therefore, this research cannot provide any conclusive or hard evidence to suggest that EE had a significant influence on graduates' decision to become self-employed.

There is a plurality of motivations for graduates to become entrepreneurs, however, they were focused upon developing a sustainable business and made a conscious decision to locate in the region. The data from the e-questionnaire reveal that the majority (63%) of graduates made a conscious decision to become self-employed, whereas, 17.4% were 'pushed' into self-employment by necessity *i.e.*, they had lost their job and were made redundant. This is reflective of the adverse economic conditions within the region. Interestingly, the growth in necessity entrepreneurs is higher (33%) amongst graduate entrepreneurs who did not participate in SEEPP.

The importance of CORD funding cannot be overstated as it provides a 'financial cushion' to graduates who were leaving secure employment to pursue their entrepreneurial ambitions.

An interesting finding of this research is that all of the graduate entrepreneurs had prior work experience before starting their own business. Their route to self-employment was circuitous and this mirrors Robinson's (2010) assertion that education is not linear and Potter's (2008) observation that EE does not lead to immediate graduate entrepreneurship. The key benefits and limitations of SEEPP participation are summarised in Table 5.27.

Table 5.23 Perceived Benefits and Limitations of SEEPP Participation

Benefits of EE	Limitations of EE
• Training & advice • Access to CORD funding • Networking • Access to SEEPP Manager's network • Links with EDAs • Links with WIT staff • Greater self-confidence • Practitioner-based training • Dedicated business mentor • Networking with like-minded peers • Greater focus on self-directed learning • Postgraduate Diploma in Enterprise Development • Campus incubator space • Case histories of successful entrepreneurs • Working with like-minded peers	• Timescale/Duration of SEEPP • Timing and scheduling of training inputs • Some inputs theoretical & didactic • Limited engagement with academic community • Over-emphasis on business plan as teaching tool • Limited exposure to entrepreneurs or SEEPP alumni • Incubation space was not always available

Source: Current Research

SEEPP Participants appear to have better working relationships with WIT, whereas, non-SEEPP graduate entrepreneurs had more tenuous links with WIT and could be considered to be an unseen and neglected constituency. In short, their relationships with HEIs were best regarded as 'ad hoc' in nature, and this highlights a need for an enterprise champion within HEIs, essentially a 'go-to person' to bridge the gap between students, graduate entrepreneurs and the institution itself.

5.9 Conclusion

This chapter examined the prevailing economic conditions and graduate entrepreneurship within the South East region. It detailed their motivation for starting their own business and their reasons for participating, or not, in SEEPP. The data provided insights into graduate entrepreneurs' needs at the start-up phase of their business. In general, the findings reveal that SEEPP participants were satisfied with the programme mainly because they were able to hone their entrepreneurial skills whilst developing a real business. Essentially, their learning was live, the stakes were higher and they regarded themselves as highly motivated learners. Notwithstanding the key benefits accrued from SEEPP participation, namely: availability of training, access to CORD funding, supportive network of like-minded entrepreneurs, the respondents highlighted some limitations of the programme, including the pace, sequencing and relevance of some of the SEEPP training. Specifically, the SEEPP participants emphasised that the programme may not be suitable for all graduate entrepreneurs given the diversity of experience, ambition and growth aspirations of participants. Whilst some respondents did not meet the SEEPP eligibility criteria, others chose not to pursue SEEPP because they questioned its value to their business. This provides an important insight into how graduate entrepreneurs, as adult learners, evaluate learning opportunities. This resonates with Goethe's (1749 -1832) thesis that knowing is not enough we must apply, willing is not enough, we must do. This chapter has provided an insight into their perspectives of EE at third level to reveal their prior experience of EE at undergraduate level, their engagement with WIT, and their needs at the crucial start-up stage of their business. Chapter 6 will examine in greater detail graduate entrepreneurs' perspectives of the role of HEIs and EE in graduate enterprise development.

Chapter 6 Graduate Entrepreneurs' Perspectives of EE

Non scholae, sed vitae dicimus.
                                          Seneca (1 BCE – CE 65)

6.0 Introduction

EE is frequently cited as a means of increasing the supply and quality of entrepreneurs entering the economy, however, there is a lacuna of empirical research to substantiate HEIs' claims that students benefit significantly from EE and go on to set up profitable new businesses (Matlay, 2000). Even though the voice of graduate entrepreneurs does not feature strongly in the literature, I believe that it is important to place graduate entrepreneurs at the heart of this research because they had experience of higher education and were in a unique position to discuss and evaluate current EE provision at third level. This chapter analyses graduate entrepreneurs' perspectives of EE at third level by addressing the five themes of the conceptual framework and the seven research questions. This research represents a synchronic view of graduate entrepreneurs' perspectives of EE at third level. It is important to highlight that this research is not intended to be either an evaluation of SEEPP or a comparative study between graduate entrepreneurs who participated in SEEPP and those who did not. Rather, it aims to examine graduate entrepreneurs' perspectives of EE at third level in their formation as entrepreneurs. In other words, this research aims to provide an understanding of whether or not HEIs are meeting the real needs of graduate entrepreneurs through EE. This chapter is organised into three sections, namely: (i) section 1 analyses the data and discusses the salient findings from the qualitative research amongst the following 15 SEEPP participants; (ii) section 2 analyses the perspectives of the 15 graduate entrepreneurs who did not participate in SEEPP; and (iii) section 3 synthesises both cohorts' perspectives of EE at third level in order to provide a composite overview of their perspectives of EE at third level. The following section will consider the research data generated from semi-structured interviews with 15 graduate entrepreneurs who participated on SEEPP during the period 2001 to 2010 (inclusive).

6.1 Section 1: SEEPP Participants' Perspectives of EE at Third Level

This section considers the research data generated from semi-structured interviews with 15 graduate entrepreneurs who participated on SEEPP during the period 2001 and 2010 (inclusive). As a distinct research cohort, they can offer valuable insights into the benefits and limitations of EE at third level in Ireland. The criteria used for selection for the 15 graduate entrepreneurs who participated in SEEPP from 2001 to 2010 (inclusive) were that they: (i) were all graduates of an HEI; (ii) had established their business in South East region in the period 2001-2010 (inclusive); and (iii) had an operational business at the time of the research. The semi-structured interviews explored the five key themes of the conceptual framework for EE at third level (see Appendix H) and sought to answer the research questions and to provide a framework for the data analysis. The findings reveal that given EE is a relatively recent phenomenon in Irish higher education, all bar one of the SEEPP participants did not study entrepreneurship at undergraduate level. Thus, their perspectives of EE at third level are framed by their experience as adult learners participating in SEEPP. This is an important consideration because as Hannon (2006) maintained in the rush to introduce and embed entrepreneurship programmes at third level, educators have sometimes forgotten to examine what pedagogical approaches best support burgeoning or aspiring entrepreneurs.

It is evident from the findings, and congruent with the socio-cultural and constructivist theories of teaching and learning that graduate entrepreneurs are adult learners who bring a rich body of knowledge and experience with them to the classroom. The SEEPP participants had high expectations of both SEEPP and themselves: the stakes were high because they all had given up permanent employment to pursue their entrepreneurial dreams. They regarded themselves as focused and highly motivated learners who were determined to develop a viable business. This resonates with Morrison's (1996) belief that the aspirations of owner/managers have obvious consequences for learning and management development.

6.1.1 Entrepreneurial HEI and Leadership

This section analyses SEEPP participants' perspectives of what HEIs are doing to promote entrepreneurship amongst students. SEEPP 15 maintained that even though entrepreneurship is *"in the ether"* and there is greater recognition for it now within higher education, she believed that HEIs are more concerned with promoting graduate employment, rather than graduate entrepreneurship. She concluded:

> *"I don't think College inhibits anybody from starting their own business nor do I think it prepares students to set up their own business. HEIs have a role to play in pointing the way to people how to get there faster."* (SEEPP 15)

> *"Undergraduate education prepares students for employment i.e., to get a job, whereas, postgraduate education prepares people for business. Personally, I don't see this as a weakness as Colleges are preparing students for where the majority of graduates will get work."* (SEEPP 14)

The general consensus amongst SEEPP participants was that HEIs could have a strategic role in promoting entrepreneurship as an alternative and attractive career path, especially given the limited employment opportunities for graduates at present, for example:

> *"HEIs provide a rich learning experience for students. I think they can help students to (i) develop networks (I always have people who I can pick up the phone to call); (ii) develop problem-solving skills; and (iii) provide formal education about running a business." (SEEPP 10)*

However, there is a need for HEIs to demystify entrepreneurship as an esoteric activity for a talented minority (Cooney, 2002; Green, 2012):

> *"HEIs should be getting students to think why not? There is a need to demystify entrepreneurship – I think it has become an academic term and most entrepreneurs I know would cringe at being called entrepreneurs. Essentially, they are ordinary people who have developed a business and I think it is important to get that message across."* (SEEPP 15)

Whilst Jones (2010) argued that entrepreneurship as a subject has arrived, this research suggested otherwise:

"I hadn't even heard the word entrepreneurship in college. There were lots of business subjects but they were not necessarily relevant to setting up a small business." (SEEPP 12)

The research concludes that entrepreneurship was not an integral part of higher education curriculum during the 1980s or 1990s which gives credence to Wilson's (2008) research that entrepreneurship has only recently began to filter higher education since the mid-1990s. The age profile of participants suggests that most SEEPP participants completed their undergraduate study in the 1980s and 1990s before entrepreneurship became a legitimate module at third level:

"I did not study entrepreneurship at undergraduate level. To be honest I don't think the subject was even invented then as marketing was the buzzword at the time." (SEEPP 15)

Of the 15 respondents, only one had studied entrepreneurship as part of his undergraduate degree:

"I studied Agricultural Science and Agri-Business and Rural Development. It wasn't enterprise per se but we did look at alternative farm enterprises. Effectively, the course was effectively a B.Comm. but I think it needs to be modernised." (SEEPP 8)

Even in this instance, entrepreneurship was offered as an elective module and effectively it was a bolt-on module *i.e.*, not core to the curriculum. Interestingly, the findings showed that non-Business graduates *e.g.*, Humanities or Engineering did not have the opportunity to study business subjects, not to mind entrepreneurship at undergraduate level.

"Back then, there was a zero focus on entrepreneurship, or business in general. Engineering students were being prepared for work not for self-employment." (SEEPP 14)

"I hadn't studied entrepreneurship in my undergraduate or either of my postgraduate courses." (SEEPP 11)

Given entrepreneurship is a relatively recent addition to Irish higher education, this finding substantiates Hindle's (2007) contention that EE as a field of study lacks basic legitimacy as a source of value within the broader education community in HEIs.

This research concludes that Irish HEIs have been reactive rather than proactive in promoting EE, given the delayed time frame of its implementation. From the perspective of national policy formation, this time lag also reflects the slow pace of the implementation of government and education policy in the area of innovation and policy. Since the 1950s, the attitude of successive governments has been to 'make hay while the sun shone' in relation to FDI without any real reflection on the potential role of innovation and entrepreneurship in developing an indigenous enterprise sector. Cumulatively, this had a knock on effect in terms of EE being taken seriously within HEIs as both a policy and strategy aimed at forming HPSUs, creating jobs and promoting regional development.

6.1.1.1 Initiatives to Promote Student Enterprise

The SEEPP participants highlighted the importance of visibility for entrepreneurship within both the curriculum and on campus and concluded that WIT has invested significantly in the development of a campus incubator. Whilst commending initiatives for promoting entrepreneurship in HEIs (*e.g.,* campus incubators, EPPs and EE), they maintained that it would be an exaggeration to say that HEIs have developed a fully integrated entrepreneurial ecosystem. This gives credence to Brennan *et al.'s* (2007) belief that the presence of entrepreneurial activity within a HEI does not necessarily make it entrepreneurial. Gibson (2011) highlighted the importance of visibility of entrepreneurship within HEIs, however, the respondents believed that the lack of EE, particularly within the undergraduate curriculum, and the off-campus location of the campus incubator relegated entrepreneurship a fringe as opposed to a core activity. In reality, undergraduate students had little or no awareness of the campus incubator and were largely ignorant of the entrepreneurial activity within the whole HEI. According to SEEPP 12, this was a *"wasted opportunity"* and highlighted a lack of coherence between undergraduate EE and broader entrepreneurial initiatives within the HEI. This finding concurred with Crehan *et al.'s* (2011) belief that opportunities for interaction between the undergraduate student population and the enterprise community are being squandered in part because of geography.

6.1.1.2 Entrepreneurial HEI Leadership

The Literature Review highlighted the need for a more nuanced debate on the leadership and values required for entrepreneurship to flourish within HEIs. Some respondents were skeptical of HEIs' commitment to enterprise, for example:

> "In Ireland, in general, entrepreneurship is still regarded as a bolt-on activity, whereas in UK HEIs entrepreneurship is regarded as an integrated activity. There is a lot more to be done by Irish HEIs. Firstly, they need to decide if entrepreneurship is to be part of their agenda and to be honest, a lot of HEIs pay lip service to it which is obvious for political reasons, however, there is a need for HEIs to put action where their mouth is." (SEEPP 4)

> "I don't think entrepreneurship has been taken seriously ... HEIs could do more to help students with ideas, faciliate them to talk to the right people." (SEEPP 12)

According to the SEEPP participants, HEIs are very good at 'talking the talk', but not 'walking the walk' with regards to their commitment to entrepreneurship. Essentially, they regarded the importance associated with entrepreneurship as mere rhetoric, rather than a genuine commitment by HEI management to promote and normalise entrepreneurship as a choice of self-employment for graduates rather than the select few 'who decide to jump the bar'. They identified the need for HEIs to develop and implement a coherent entrepreneurship strategy to create a sense of continuity over time or a timeline of entrepreneurial initiatives. Secondly, they identified a need for HEIs to promote the value of entrepreneurship amongst their staff so as to normalise it as a career option for graduates from all disciplines. In effect, this requires:

> "...a systematic approach and allocation of resources to implement enterprise policy as much as about values as skills. HEIs should place a value on enterprise and innovation." (SEEPP 5)

This recommendation had resonance with Potter's (2008) call upon higher education management to show leadership in the promotion of entrepreneurship and he maintained that this could be achieved through courses; knowledge exchanges with enterprise; instilling an enterprise culture; and promoting a greater awareness of the forms and value of entrepreneurship accrued by staff and students.

6.1.1.3 Lack of Visibility of Entrepreneurship in Curriculum

A consistent theme of the findings was a lack of focus on SMEs or start-ups within the higher education curriculum, for example:

> "The reality is no one really cares about start ups, they never feature in courses as case studies." (SEEPP 8)

The SEEPP participants called for lecturers to provide case studies of small businesses and not to focus on large corporations:

> "Lecturers need to focus on start up companies and not cite examples of MNCs and expect that the same business model can be diluted and applied to a start up company. Using Apple as an example to me is not a real example, lecturers need to cite examples of local businesses. Instead, lecturers need to focus on start up companies and local businesses. I can read about case studies at home, I am coming here to learn."
> (SEEPP 1)

A key criticism of undergraduate education and indeed SEEPP is that it did not focus on real case studies of startup or micro enterprises. In many instances, academics used case studies of MNCs with a flawed belief that these could be scaled down or diluted so they could be applied within a micro or start-up enterprise. The respondents were emphatic in stating there was little point in studying larger companies like Google, Apple or Ryanair because as start-up entrepreneurs, they wanted to learn about more small businesses to which they could relate. This insight had resonance to McGrath's (2008) research, wherein she argued that small companies cannot be considered miniature versions of larger corporations. This approach was particularly frustrating for SEEPP participants who wanted to learn about real role models, rooted within the context of local and national enterprise.   Furthermore, the globalisation and localisation strategies of MNCs are very different to those of new start-ups. EE should, therefore, focus on micro enterprises and SMEs to reflect the real world, where graduate entrepreneurs will operate as owner/managers of start-ups and SMEs. It is evident that there is a dis-connect between the theory communicated in EE and the ability of EE modules to recognise the profile and career aspirations of those taking graduate EE modules. The respondents posited that if EE were to focus on micro-enterprises and SMEs, students would gain a greater insight into the realities, challenges and benefits of setting up a business.

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With such knowledge, students would be in a greater position to make an informed decision if self-employment was an attractive option for them. This is particularly important if Irish HEIs and EE are to meet the ambitions of the Innovation Task Force (2010) and the Hunt Report (2011) regarding the creation of job shapers or job creators. In WIT, the School of Business has appointed *'an entrepreneur in residence'* to act as a role model to the student body and as an ambassador for the Institute at public enterprise fora. Whilst the SEEPP participants conceded that this appointment raised the profile of entrepreneurship within and outwith the HEI, they believed the value of such an appointment was difficult to measure. SEEPP 11 cautioned that *"it is utterly useless to have a low profile entrepreneur in residence - it negates the whole initiative."* This highlights two important questions, namely: (i) what is the value and effectiveness of such an initiative to promote entrepreneurship? and (ii) is such an initiative merely tokenism?

6.1.2 Entrepreneurial Staff

When asked about what factors can affect the efficacy of academics teaching entrepreneurship, the respondents identified that the effectiveness of EE is contingent upon lecturers having prior experience in enterprise development. The SEEPP participants believed that they gained most from the training provided by practitioners with experience of setting up a small business and not from presenters with just a *'chalk and talk'* approach to EE. The SEEPP participants had greater respect for lecturers who had 'walked the talk' in terms of setting up their own business or had, at a minimum, worked in a start-up business. Without such experience, the respondents perceived lecturers as mere transmitters of theoretical knowledge:

> *"In my opinion, academics do not give a lot of value to the programme. If they just impart theoretical knowledge, what is the point of me being there? I could just as easily read about it at home, in my own time."* (SEEPP 4)

> *"It is essential that the lecturers have started a business themselves. Without having done it themselves, you can't teach entrepreneurship from text books."* (SEEPP 5)

This is an important insight into what graduate entrepreneurs value with regards to EE. As adult learners, they are discerning and strategic learners, they question the benefit accruing from what they learn and how it can be applied to their business. If such benefit is not obvious, they will not willingly participate in EE. All the respondents were skeptical of the value academics could bring to EE without having experienced entrepreneurship first-hand.

> *"The knowledge of the academics was very good but the application of their knowledge to an entrepreneurial setting was very poor. I was more impressed with practitioners, who had already set up a business, who could cut to the chase and explain this is what you need to know and do."* (SEEPP 1)

> *"One academic stood out as being exceptional but in fairness, he had set up his own business so he understood what I was going through. Otherwise, academics teaching entrepreneurship did not have a high impact for me."* (SEEPP 10)

According to SEEPP 6, the most impact was from people with authentic experience and with a track record in enterprise development. It is a completely different ball game to know something in theory and in practice.

> *"I would not have any faith in pure academics lecturing in that environment. It is important that lecturers are an inspiration to entrepreneurs."* (SEEPP 12)

Hederman (2011) suggested that the task of educators is to harness students' natural flair and the role of the educator is to establish with the student that specific contact which will unlock the armour and allow the person to expand. However, within the context of EE, particularly at graduate level, it is more important to graduate entrepreneurs that lecturers can straddle both the practical and academic domains. This gives greater credence to Penaluna *et al.'s* (2008) recommendation for HEIs to recruit 'pracademics' to teach entrepreneurship and to enrich and punctuate students' learning with personal, practical experience (Martin *et al.*, 2011).

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6.1.3 Entrepreneurial Students and Graduates

Matlay (2007) argued that EE is regarded by many as the most effective way to increase both the quality and the quantity of entrepreneurs entering an economy. On the other hand, Johannison (1991) argued that to teach individuals to become not only more enterprising but businessmen (*sic*) is beyond the capabilities of a HEI. Within this debate, SEEPP 10 raised concern about the effectiveness of EE at third level. Whilst employability is one of the most pertinent issues facing graduates, their career choice is more complex than a dichotomous choice of employment or self-employment. Employment was their preferred choice and they believed that the global economic downturn has had an adverse impact on graduate employment and this is forcing graduates to consider self-employment. However, without exception all respondents recommended that graduates gain experience prior to setting up their own business, for example:

> *"Graduates need to gain real world experience working in industry, and when they are longer in the tooth, they could start their own business."* (SEEPP 15)

> *"I had worked for years within a multi-national company so I learned a lot about business in my work."* (SEEPP 5)

Researchers such as Karr (1985), Brockhaus *et al.* (1986), Scott *et al.* (1988) and McCarthy *et al.* (1997) argued that students who lack relevant experience in which to place knowledge and the context of immediacy surrounding the issue, are likely to dismiss dealing with such problems as common sense or irrelevant. The findings substantiate these claims given all respondents associated success in business with prior work experience. The perception is that the older and more experienced one is when starting a business, the greater credibility and *"cop on"* (SEEPP 4) one has. There was general consensus amongst the respondents that the notion of 'raw graduates' starting business straight out of college was a misnomer. Without exception, the graduate entrepreneurs said they would advise young graduates to gain experience in the workplace:

> *"It is essential for graduates to have work experience before setting up their own business. Such a background gives them a great grounding for business and it develops their self-confidence."* (SEEPP 7)

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> *"Success has a lot to do with time and experience. Everyone I know became good at one element of a business within employment before starting their own business."* (SEEPP 10)

This insight concurs with Robinson's (2010) argument that education is not a linear activity and Potter's (2008) conclusion that there is a lag time between the time students graduate and when they start their business. Moreover, it substantiates Westhead *et al.'s* (2005) view that entrepreneurial experience gained prior to undergoing EE tends to improve the overall performance of entrepreneurs. This is particularly relevant given the current difficulties in start-up entrepreneurs securing credit/finance from banks and/or venture capitalists, for example:

> *"Raw graduates wouldn't have a chance of gaining funding because they haven't got a track record in business."* (SEEPP 14)

Brown (1990), Vesper *et al.* (1996) and Leonhardy (1996) argued that graduates who benefit from entrepreneurship courses have a higher propensity to become entrepreneurs and will emerge well prepared to start their own venture or to become enterprising employees in small businesses.

> *"Fundamentally, I believe that EE cannot make entrepreneurs. I don't really believe that raw graduates starting their own business is a good approach. It has a lot to do with time and experience. Everyone I know became good at one element of a business within employment before starting their own business."* (SEEPP 10)

> *"People come through the college system but they are not prepared to set up their own business. Perhaps MBA graduates are better prepared to start their own business because they have significant work experience."* (SEEPP 7)

This insight concurs with Westhead *et al.'s* (2005) belief that entrepreneurial experience gained prior to undergoing EE tends to improve the overall performance of entrepreneurs. Moreover, it substantiates Callan *et al.'s* (1995) belief that there is a greater likelihood for such graduates to engage in successful business creation.
However, there is no conclusive evidence from this research to suggest that this is the case for all graduate entrepreneurs.

SEEPP 14 was particularly doubtful of what HEIs could do to prepare students for self-employment. Given that only a minority of graduates will become entrepreneurs, he questioned the logic of changing the curriculum *i.e.,* making entrepreneurship mandatory to suit a minority of the student population. This pithy observation highlighted an inherent paradox in EE provision *i.e.,* focusing EE upon equipping a limited number of students for self-employment (Green *et al.,* 2008) or developing entrepreneurial skills for all students (Jack *et al.,* 1999; Rae *et al.,* 2000; Blenker *et al.,* 2006). The notion of developing entrepreneurial skills for all was not fully appreciated by the SEEPP participants. Given their background, they all conceived EE as educating students and graduates to set up their own businesses, rather than for social entrepreneurship or indeed for life. In summary, the research was in accord with the work of Adcroft *et al.* (2004) because it showed that the SEEPP participants believed that whilst EE can open students' minds to entrepreneurial careers and develop students' technical skills, there is little empirical evidence that more EE provision will result in more numbers of graduate entrepreneurs. Interestingly, the SEEPP participants maintained that the elusive element of serendipity or chance emerged from their work.

6.1.4 Dynamic Learning Environment

Solomon (2008) maintained that if EE is to produce graduates capable of generating businesses, employment and wealth, lecturers must develop modules/programmes with the requisite academic rigour whilst maintaining a practical and real-world focus on the entrepreneurial climate. Many of the respondents believed that the approach to EE was largely theoretical and lecturers used business plans as the primary teaching tool. Whilst this approach was useful in providing students with a framework for developing a business plan, they regarded it as too didactic for students with no business idea or prior exposure to enterprise.

> *"Undergraduate education doesn't really prepare graduates to set up their own business. My understanding of EE at undergraduate level suggests that is a one-way thing with the lecturer pretty much doing all the talking. There is not a lot of interaction and it is more about giving information to the students."* (SEEPP 11)

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Conversely, EE at graduate level was more participative and experiential, for example:

> "there *was a correlation between the effectiveness of the training and the degree to which the workshops were interactive."* (SEEPP 13)

This finding concurs with Ryan's (2008) conclusion that early undergraduate EE is teacher or teaching-centred *i.e.,* didactic and it is not until an advanced level of understanding that programmes become more learner-centred. SEEPP 8, who studied entrepreneurship at undergraduate level, praised lecturers who provided students with opportunities to engage with successful entrepreneurs and this early exposure to business success was inspiring and crucial to them in considering self-employment as a possible career choice. Some lecturers brought in an external *'Dragons' Den'* panel to review their business proposals which provided them with a fresh and real-world perspective. This would suggest that EE does need entrepreneurial learning *i.e.,* learning: (i) by doing; (ii) through experience; (iii) by experiment; (iv) by risk taking and making mistakes; (v) through creative problem solving; (vi) by feedback through social interaction; and (vii) by role playing, as advocated by Gibb *et al.* (1998). He recognised the challenge provided by the tight deadlines implicit within a semesterised timetable which could limit students' appreciation of the subject because *"there was too little time to cut your teeth with the subject."* This reflects Carlile *et al.'s* (2012) view that within HEIs, the management policies with rigid structures, modular systems, strict timetables, assessment and scripted curricula inhibit creative approaches to teaching. SEEPP 8 highlighted the differences in approaches to graduate EE *i.e.,* the approach to EE at graduate level was less didactic in nature and he no longer felt that he was a "passive recipient" of knowledge, rather he was regarded as a peer by the SEEPP lecturers. This insight suggests that EE at graduate level is more dynamic and focused given that the stakes are higher.

Situated in a real world context of the HEI's campus incubator, the students are embedded in an enterprise environment with links to both the academic and commercial worlds. This finding mirrored Ryan's (2008) conclusion that the achievement of learning-centred EE can be only achieved where there is a real-world or live learning context for students.

The respondents believed that there is a need for movement away from a theoretical approach to EE *i.e.,* from learning about or for entrepreneurship to learning *in* EE. The Literature Review highlighted that the weakness in EE provision is where the business plan becomes the main pedagogical focus (Mullins, 2006; Honig, 2004; Potter, 2008). Some of the respondents concurred and believed that there was:

> *"There was too much focus on the business plan. I mean does it take 12 months to develop a business plan? Things change so much within that time and the focus should be on developing a viable business model."* (SEEPP 1)

SEEPP 2 saw the benefits of the focus on business plan because it forced him to move from fiction to reality. In other words, it provided him with a certain discipline and framework for planning the development of his business in addition to being a metric, against which to measures his business' success. However, SEEPP 10 recommended that instead of the *"slavish adherence to the business plan"*, EE at graduate level should focus on key business issues such as (i) value proposition; (ii) marketing; (iii) sales and sales strategy; (iv) finance; (v) growth; and (vi) team building. This is in accord with Potter's (2008) recommendation that HEIs should focus on increasing the supply of entrepreneurial talent to develop HPSUs or *gazelles,* capable of moving seamlessly between employment and self-employment and *vice versa.*

> *"My business was a real life project and I had quit my job to start it and had invested everything into it. Anything I learned in SEEPP, I really looked at it and tried to apply it into my business and where it was going. The biggest thing I got from SEEPP – the advice and the actual implementing the advice into my business and into the strategy."* (SEEPP 8)

Reinl (2011) concluded that motivation is an essential pre-condition for effective learning and is dependent on perceptions of benefit (Sadler-Smith *et al.,* 2000). This research concurs with Reinl's (2011) conclusion that owner/managers will often seek new information when a problem arises that requires immediate resolution, demonstrating a preference for learning that is immediately applicable. It demonstrates how graduate entrepreneurs approach their learning *i.e.,* with strategic intent.

Mullins (2006) recommended a six-step plan for teaching aspiring entrepreneurs, namely to: (i) discover opportunities; (ii) assess opportunities; (iii) develop a business plan; (iv) gather resources; (v) manage growth; and (vi) harvest value. It would appear from the findings that current EE provision at undergraduate level does not deal with all of these elements:

Table 6.1 SEEPP Participants' Perspectives of Focus of EE at Third Level

Focus	Undergraduate EE	Graduate EE
Discover opportunities	✓	✓
Assess opportunities	✓	✓
Develop a business plan	✓	✓
Gather resources		✓
Manage growth		✓
Harvest value		✓

Adapted from Mullins (2006)

The SEEPP participants recognised the shortcomings in current EE provision, particularly at undergraduate level and this finding concurs with the conclusion of the EU Survey of Entrepreneurship in Higher Education (2008) *i.e.,* that most EE at third level is still theory-based and lacks personal and practical experiences of entrepreneurs. The respondents recommended a movement away from the business plan as the dominant teaching methodology as it was often *"abstract"* and caused problems for students without a business idea. Instead, they suggested using case studies, shadowing and profiling local entrepreneurs, 'Questions and Answers' sessions with graduate entrepreneurs and networking with EDAs. Moreover, they stated that lecturers should focus on key business growth strategies such as raising finance, opportunity identification, risk-taking, strategy making, leadership, negotiation building strategic alliances and IP protection. Within this debate, the respondents believed that it would be more useful for lecturers to maintain strong links with graduate entrepreneurs *i.e.,* alumni so that they could contribute to EE through telling their 'war stories' and highlighting the tribulations of self-employment. They suggested means of enhancing future EE provision at third level so as to enhance the student learning experience, including:

> *"A more project-oriented approach to teaching and learning that is a lot more interactive and relevant to small business."* (SEEPP 11)

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The SEEPP participants identified that the key benefits of SEEPP participation are: (i) access to CORD funding; (ii) the structured environment of SEEPP; and (iii) being part of a community of learners. The main benefits derived from SEEPP participation are summarised in the words of the SEEPP participants:

> "I don't think I would hove launched so quickly or at all if I hadn't gone to my local enterprise centre and participated on SEEPP." (SEEPP 8)

> "I thought SEEPP was brilliant. The material was really relevant. Within six months, it had knocked the techie out of me and it forced me to talk in lay man's terms."
> (SEEPP 5)

Conversely, two SEEPP participants were critical of the academic nature of SEEPP:

> "There was some academic stuff creeping in and it had not really a commercial focus."
> (SEEPP 8)

> "The format of SEEPP was a bit academic. I believe it needs to be more project-orientated. When you think about it SEEPP was developed by a third level college and colleges are by their very nature academic and conservative in nature. The academic focus is different to the entrepreneur's risk-taking nature/mentality." (SEEPP 11)

They identified the training they really wanted and needed from SEEPP, for example:

> "I cannot overstate the importance of sales and selling." (SEEPP 4)

In effect, the participants recognised that they did not have a viable business if they could not secure sales and customers. SEEPP 4 was highly critical of SEEPP training in that it failed to prepare the graduate entrepreneurs to "clinch that sale" and he recommended a drills and skills approach to selling. This sentiment was echoed by SEEPP 1 who maintained:

> "There needs to be greater use of experiential learning - set exercises each week — do — and report on them." (SEEPP 1)

The findings concur with Cotton et al. (1998), O'Brien (2007), and Ryan (2008) who concluded that entrepreneurial learning requires experiential learning i.e., where knowledge is created through the transformation of experience (Kolb, 1984).

The SEEPP participants welcomed the introduction of subject experts in the field of sales, corporate taxation, company law, IP and raising finance was regarded as extremely worthwhile and useful in the development of their business. SEEPP 14 highlighted the difficulties in doing business in the current economic climate and identified the need to provide more sophisticated training in areas such as "boot-strapping" *i.e.*, starting or developing a business without external help from *e.g.*, venture capitalists. The term 'boot-strapping' comes from the German legend of Baron von Münchhausen pulling himself out of a swamp by his own boot-straps. It means that start-up entrepreneurs or developing companies fund their growth through internal cash reserves or own resources, rather than through external investment.

SEEPP 13 highlighted the lack of on-line learning resources as a weakness SEEPP. He argued that whilst attendance at SEEPP workshops was not always feasible for participants, they needed to avail of lecture materials. Whilst he acknowledged that there is no substitute for attending class and 'pressing the flesh' with other participants and the SEEPP lecturer, he recommended that a virtual learning environment be created for SEEPP participants. Ironically, for a programme that purports to be technology-oriented, the absence of online learning resources was disappointing for SEEPP participants. The availability of online learning would also attract a more diverse body of potential learners and perhaps cater for the different learning needs of a diverse participant profile.

On successful completion of SEEPP, graduates received a Postgraduate Diploma in Enterprise Development or a Higher Certificate in Business in Enterprise Development. The respondents were almost unanimous in saying that the accreditation of the programme was *"a nice to have"* or *"an added bonus"*. It is clear from this research that accreditation was not their primary motivation for participating in SEEPP nor was it crucial to the development of their business, for example:

> "Although *the Postgraduate Diploma was not my motivation for participating on SEEPP, however, I did get a great sense of achievement when I was conferred. Would it attract other people? Yes and no but it could also attract the wrong people i.e., people who are chasing qualifications."* (SEEPP 7)

"As I had already got a postgraduate qualification, the Postgraduate Diploma in Enterprise Development was less relevant to me but I could see how it would be important for younger people without such a qualification." (SEEPP 13)

The respondents believed that accreditation was more important for participants who did not succeed in establishing their business and for those with lower levels of educational attainment. The higher the level of educational attainment amongst SEEPP participants, the less importance they placed on attaining the postgraduate qualification.

"The qualification was an added bonus but given I already had a PhD, it did not really matter as much to me as to others without a postgraduate qualification. There, I could see its value for others." (SEEPP 5)

"The qualification turned out to be very important to me and my business. It lent credibility to the team - banks and investors do take the qualifications and track record of the team on board." (SEEPP 8)

This led me to conclude that participants were more interested in developing a viable business than attaining accreditation for successfully completing SEEPP. All respondents had a definite business idea and wanted to apply the knowledge gained in class directly to their business. This has resonance with Reinl's (2011) contention that micro-firm owner/managers demonstrate a preference for learning that is immediately applicable to their business. Whilst the graduate entrepreneurs welcomed some theoretical approaches to EE, they were more strategic in their approach to learning to use what knowledge was relevant to their business. The respondents believed that they required greater training in sales, the sales process and focus on developing a route to the market. Moreover, instead of focusing on perfecting the business plan, they believed that the focus should be on developing the business process. Whilst it would be easy to negate the value of the Postgraduate Diploma as a *'nice to have'*, attaining the qualification gave all SEEPP participants a sense of achievement and recognition for their work in developing their business. This was particularly applicable to SEEPP participants who on completion of the programme, did not succeed in creating a viable business. SEEPP offered them an exit qualification and according to SEEPP 1, it meant that it was not a waste of a year for people whose businesses failed.

SEEPP 6 who participated in SEEPP prior to the introduction of the Postgraduate Diploma in Enterprise Development voiced his disappointment at not receiving the qualification:

> *"I did not get the Postgraduate Diploma in Enterprise Development as I participated in SEEPP before it was offered. I believe that there should be retrospective accreditation for my work. In saying that, I would not lose sleep over it but nonetheless, I think there should be a mechanism in place."* (SEEPP 6)

Given that policies are in place within HEIs to recognise students' prior learning, I recommend that SEEPP management could put in place a mechanism to retrospectively award the Postgraduate Diploma in Enterprise Development provided they could demonstrate that they met the learning outcomes. Walsh (2008) highlighted an absence of supports to SEEPP participants after the completion of the programme which she regarded as a weakness of SEEPP. However, the respondents maintained that they were under no illusion that supports would continue once they completed SEEPP, for example:

> *"I didn't have any expectations that there would be any follow on. Yes, it ended abruptly but you don't want to drag things out."* (SEEPP 7)

> *"I knew well in advance what SEEPP could offer me so I had no problem with the programme finishing."* (SEEPP 13)

SEEPP participants who wish to remain in contact with the SEEPP Manager do so, largely on an informal basis. However, the findings highlight a need for continued supports for graduate entrepreneurs after the official programme is over. Whilst it is not the remit of WIT or a HEI to provide such supports, there is a gap in service provision and, as Walsh (2008) maintained, some former SEEPP participants fall through the cracks. Interestingly, after a year of a comprehensive package of supports, many graduate entrepreneurs return to the loneliness and isolation of being self-employed, for example:

> *"being an entrepreneur is a very lonely place ... I missed the support of my peers. I went to work from home and kept asking myself can I sustain this, can I keep going? I do keep occasional contact with SEEPP and I often meet the SEEPP manager"* (SEEPP 6)

One of the most attractive aspects of SEEPP was that it offered participants a structured environment in which to develop their business. Moreover, it provided participants with a space 'to think' which was critical to fostering a culture of creativity and innovation in enterprise.

> *"I was attracted to SEEPP because it had a structured approach."* (SEEPP 7)

> *"It meant that you came to class one day a week, Mondays which left you with four days to do business."* (SEEPP 4)

> *"SEEPP offered a semi-structured environment within a dedicated space. In my time, before the campus incubator was built, nonetheless, it was a space, where entrepreneurs could meet and attend lectures."* (SEEPP 6)

SEEPP required that participants attend mandatory training workshops each Monday and the rest of the week, they could spend on developing their businesses. SEEPP 13 believed:

> *"I thought it would drive me to a timeline of a business plan and force me and others along and to achieve deliverables."* (SEEPP 13)

This introduced a structure to the lives of the graduate entrepreneurs which could have been characterised by loneliness and isolation. Another key attraction to participation in SEEPP was being and working with like-minded entrepreneurs. The findings highlighted the importance of the community of learning aspect of SEEPP because some respondents spoke of the inherent loneliness and seclusion of self-employment. They welcomed the opportunity to work, study and network with like-minded peers who *"were in the same boat"* (SEEPP 8) as themselves. This is important because it highlights the value of SEEPP in bringing together like-minded entrepreneurs, for example:

> *"It is a lonely place starting out on your own and it is very difficult to get anything started."* (SEEPP 8)

> *"It was great that I was in a group of people who were in the same place, trying to do something fairly innovative and new and just give it a go. We were all helping each other and working with each other. There was real benefit in peer learning."* (SEEPP 4)

The research highlighted that the SEEPP participants benefitted from the group sessions because they learned from the shared experiences of other group members in addition to learning from the formal training input.

"There was a very tight group. The brilliant thing is that everyone is coming from different angles. People are at different stages of development". (SEEPP 8)

"There was a real sense of community amongst the participants, we all learned from each other." (SEEPP 11)

Whilst most respondents regarded the diversity of the SEEPP participants as a positive feature, others were more critical of it and believed it to be a key weakness of the programme. SEEPP 13 maintained that there was a lack of cohesiveness within the group by that I mean, there is diversity in participants' abilities, ideas and expectations. Initially, there was some anxiety about the confidentiality within the group, SEEPP 8 maintained that these were quickly allayed.

"Initially, I was nervous about sharing my idea and then I realised it was safe to open up ... It was great that it is very confidential and you can talk to people in this confidential environment about your project and move it forward." (SEEPP 8)

"The group dynamic was very important. We met as a group once per week and trust was built up over time. We were able to relay our experiences and difficulties..." (SEEPP 7)

Some respondents questioned if the participants actually *"did business"* with one another. This research concludes that the notion of a community of learning supersedes the notion of networking *i.e.,* close co-operation leading to the creation of relationships between similar or complementary businesses in terms of sharing resources, business referrals and experiences. Some respondents were skeptical of the networking value of SEEPP participation and offered a more nuanced view of interactions between SEEPP participants:

"I saw the participants on SEEPP as a community but not a network. By that I mean, I developed personal relationships with them but none that not resulted in real business development." (SEEPP 12)

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"As I had an established business, I was keen to be in and out quickly so I did not engage with other participants as much as others. I was more concerned with running my business." (SEEPP 14)

In a small cohort of entrepreneurs from diverse sectoral backgrounds, it might be difficult to expect business linkages. However, in the longterm it would be reasonable to expect that the SEEPP connections could garner access to wider business networks for the participants. The key benefits accruing from SEEPP participation are depicted in Table 6.2.

Table 6.2 Benefits of SEEPP Participation

Benefits
Structured environment
Links with wider enterprise community (including WIT, TSSG and EDAs)
Success is contagious, equally, so is failure
Test market - Feasibility of business idea
Links with other participants
Community of learning
CORD funding
One-to-one business development meetings with SEEPP manager
Links with Arc Labs tenants
Mentor
Access to WIT & TSSG staff
Serendipity: Being open to new ideas and opportunities
Breathing space
Structure of programme
Links with WIT students
SEEPP awards
Innovation vouchers
Greater credibility amongst EDAs and banks
Profile of SEEPP is very strong on technical businesses
Greater access to EDAs
Support of SEEPP manager
Opportunity to pitch to potential investors during the annual SEEPP enterprise awards
Hot-desk facility
Access to WIT's library & facilities
Getting people into a self-help environment

Source: Current Research

The research showed that, on balance, there were a lot more benefits than limitations to their participation in SEEPP. SEEPP provided them with a structured environment, in which to grow their business. Essentially, EE at graduate level (SEEPP) was more relevant, engaging and applied and they, themselves, were more proactive learners.

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They had the confidence to avail of the supports of the SEEPP Manager, network with EDA personnel, WIT staff and the other SEEPP participants. In general, the findings show that graduate entrepreneurs benefited from participation in SEEPP as they were able to hone their entrepreneurial skills whilst creating a real business. Essentially, their learning was live, the stakes were higher and they were more committed and self-directed learners. This reflects the ideals and values of adult and graduate education.

6.1.5 Part of Broader Entrepreneurial Ecosystem

When asked how HEIs, SMEs and EDAs work together to promote student and graduate entrepreneurship, the SEEPP participants acknowledged the importance of their relationship with the SEEPP Manager. Essentially, he was instrumental in forging links between SEEPP participants and WIT staff members, TSSG and EDA personnel. They believed that the SEEPP manager played a central role in giving direction to the programme and their business. They regarded the SEEPP Manager as a *"touchstone"* (SEEPP 1), from whom participants could *"bounce ideas"* (SEEPP 5) and as an objective sounding board. Crucially, SEEPP participants believed that they could leverage the manager's contacts for referrals to WIT academic staff, EDA personnel, venture capitalists etc.

> *"Once you are in, you get to know the right people. The SEEPP Manager opened a lot of doors for me - to TSSG, EI, SEBIC. He gave me access to his rolodex and that was really invaluable."* (SEEPP 1)

> *"One of the great supports was being able to connect with WIT and capitalise on the Innovation Vouchers from Enterprise Ireland for TSSG. TSSG were very important in the development of my company as they worked on key software at a critical time."*
> (SEEPP 8)

The respondents said that they also benefitted from the one-to-one meetings with the manager in order to assess the direction of their business. A key finding of this research is that the success of SEEPP was contingent on the energy and enthusiasm of the SEEPP manager who gave direction to the programme and to participants. His role was essentially as a sounding board, a networker and a sign-poster of opportunities and potential.

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Figure 6.1 Networking Role of SEEPP Manager

6.1.5.1 Role Models

Erikson (2003) suggested that entrepreneurship learning is dependent on an individual's exposure to experience, including observation of an entrepreneurial role model. Such role models could participate in EE courses and demystify entrepreneurship as the pursuit of a talented minority (Cooney, 2002; Green, 2012). Their narrative could frame entrepreneurs as ordinary people or graduates who have developed a belief in themselves and their ability. Equally important is celebrating the success of past participants *i.e.,* the *"local heroes"* who had achieved business success. It is clearly evident that there is a lack of communication from the management of HEIs on the importance of entrepreneurship. According to SEEPP 8, an inherent weakness of SEEPP is that:

> *"It doesn't promote its successes. I think there is a need to track the success of SEEPP businesses and showcase their successes."* (SEEPP 8)

This observation is important in that it highlights the importance of recognising success stories of former SEEPP participants and local entrepreneurs to act as positive role models for current and indeed future SEEPP participants.

The respondents believed that guest speakers could add considerable value to current EE provision and enhance students' overall learning experience.

"It is crucial for start up entrepreneurs to be exposed to entrepreneurs who have achieved big success. These people can shape you. No matter how good you think you are, it is important to move beyond the box and stretch yourself." (SEEPP 10)

One of the key motivations for participating on SEEPP was networking. Whilst some of the respondents were highly experienced in business in MNCs or indigenous companies, SEEPP offered them access to a local and regional business network. This was particularly pertinent to participants who were relocating to the South East region and establishing their business and lacked knowledge of local and regional networks. The respondents believed that SEEPP opened many doors for them *e.g.,* to WIT's research centres such as TSSG, EDAs, potential clients and/or investors. The value of developing links with EDAs and WIT was highlighted:

"I got to make great links with TSSG. I got EI Innovation Vouchers. Also I got access to EI, the local CEB. Participating on SEEPP gave me the confidence to approach these people, it gave me a certain cachet." (SEEPP 2)

The respondents were adept at using the network of contacts gained through SEEPP participation. Whilst some of this networking was formal through structured SEEPP events, the majority of this networking was done informally amongst peers or through the SEEPP manager. It is interesting to note that the more canny entrepreneurs thought that networking was the means to "oil the wheels of their business" and enjoyed forging alliances through SEEPP.

6.1.5.2 Greater Engagement with Campus Incubator

Arc Labs, WIT's campus incubator, the location for SEEPP, provided a focal point for SEEPP participants. Prior to participation on SEEPP, respondents said they had little, if any, awareness of Arc Labs because it is located off-campus and away from WIT's main campus. Many of the SEEPP participants were given a hot-desk facility as part of SEEPP participation, whereas others opted to work from home or their own business premises.

For Arc Labs tenants, they believed the campus incubator provided a stimulating and supportive environment for developing their business. As well as increasing awareness of the facility, students could network informally and formally with real and graduate entrepreneurs and become aware of opportunities through such networking. Given some of the SEEPP training was provided by WIT staff, there was an ongoing relationship between participants and School of Business lecturers. Participants sought other WIT academic staff to help them with their business and their route to such people was through the SEEPP manager. It is encouraging that the participants believed that their links and relationships with WIT personnel is stronger as a result of participating on SEEPP and whilst they may not be in regular contact, they believed that there is potential for collaborating with staff in the future.

> *"There is a need to manage expectations. Small business works to a different timeframe to HEIs. For us it is about survival at the end of the month so there is a need for colleges to be more aware of our needs."* (SEEPP 12)

> *"We did link with TSSG on a couple of Innovation Vouchers but the administration was painful. I thought TSSG were very research focused and there were mismatched expectations."* (SEEPP 8)

There would have merit developing relationships with SEEPP alumni, other graduate entrepreneurs and current students. However, SEEPP 1 argued that the viability of such relationships relies on the development of organic links between both parties. There is a need for the SEEPP Manager and/or WIT lecturers to maintain strong links with SEEPP alumni and other graduate entrepreneurs to develop opportunities for symbiotic relationships with existing undergraduate and postgraduate students. Initially, the onus should be on the lecturer to facilitate such links through networks with students, campus incubator clients, EDAs and the wider enterprise community. Once established, there is more value and sustainability to be gained from the development of organic, informal networks amongst students, initiated by them where they support each other, particularly interdisciplinary networks. Some respondents suggested creating an Enterprise Society, led by students, would allow students to take control of the enterprise agenda *e.g.,* they could influence the focus and identify role models of relevance and of interest to them.

What was encouraging from this research is that many of the respondents expressed a desire to "give back" (SEEPP 12) to the programme.

> *"I would be happy to do some pro bono work with SEEPP participants. I have done so in the past but on an informal basis. I could be a help to SEEPP participants by bouncing ideas off one another."* (SEEPP 6)

Their willingness to engage with nascent and emerging entrepreneurs needs to be harnessed by the SEEPP Manager and lecturers. However, it does not need to be confined to SEEPP as SEEPP alumni can support EE initiatives by becoming guest speakers, mentors and/or positive role models to undergraduate, postgraduate students and SEEPP participants.

6.1.6 Emerging Themes of Research

There are a number of consistent themes emerging from this research, namely: (i) SEEPP provided a breathing space for them in the development of their business; (ii) failure needs to be embraced as an important learning strategy; (iii) a homogeneous approach to EE does not work; and (iv) graduate entrepreneurs as adult learners. Each of these emergent themes will now be considered individually.

6.1.6.1 Breathing Space

The research shows that an important benefit of SEEPP participation was that it gave graduate entrepreneurs "breathing space" to assess the feasibility of their business idea and to develop a strategy for their business.

> *"SEEPP gave me space to work on my business i.e., a place and environment where I could think and research."* (SEEPP 8)

> *"the opportunity to properly research the product was vital for me, we went through four stages of concept. We did that very quickly and cost effectively by doing it all through paper research. We didn't spend a massive amount of money building something, failing with it and then changing it. We did it all on paper and that was purely through research and working with the people on the course and the advisors we met through SEEPP."* (SEEPP 11)

> *"SEEPP certainly helped me to shape my business. It reaffirmed what I was doing right."* (SEEPP 9)

Solomon (2007) concluded that project-based experiential learning is widespread in EE and takes many forms, however, the findings show that this was only really applicable at graduate level. The reality of EE at graduate level is that *"everyone there was working on a real, live project"* (SEEPP 11).

6.1.6.2 Failure: An Important Learning Strategy

The SEEPP participants recognised the potential of HEIs to promote entrepreneurship and within a safe space where students can develop and hone their entrepreneurial competence. However, they identified risk aversion as a key barrier to developing an entrepreneurial culture amongst staff and students:

> *"There is a real need to tell people (students) that failure is no big deal, what matters is you learn from it."* (SEEPP 8)

This mirrors Robinson's (2012) belief that failure is a necessary and important factor in a student's learning, therefore, lecturers need to encourage their students to take risks and to embrace failure as an important learning strategy. The concept of 'fail often, fail fast' was a recurring theme of the semi-structured interviews. This suggests that amongst the SEEPP participants, a perception exists that HEIs are risk averse and more needs to be done by HEIs themselves to prepare their students for business *i.e.,* both success and failure. The evidence would suggest that HEIs are risk averse, with messages of a high propensity for failure in business start-ups communicated in EE modules and programmes. Whilst I argued that learning within a HEI takes place within a safe and essentially risk free environment, SEEPP 4 maintained that higher education is predicated on risk aversion. He argued that HEIs, particularly IoTs, need to be more applied and get their hands dirty by engaging more with small business and industry.

6.1.6.3 Heterogeneity of Learner Cohort

Potter (2008) recommended that HEIs should focus on increasing the supply of entrepreneurial talent to develop high growth companies or 'gazelles' and/or be capable of moving seamlessly between employment and self-employment and *vice versa*. He also recommended that EE at third level should include knowledge about building an entrepreneurial team, patents, internationalisation and accessing venture capital. However, what is notable from the findings is that even at graduate level and on a bespoke graduate enterprise programme (SEEPP), entrepreneurs cannot be assumed to be a homogenous group. In other words, the diversity of the graduate entrepreneurs participating on SEEPP necessitates a bespoke or tailored approach to EE.

> "At the end of the programme, not all businesses are up and running or do not have a commercially focused business plan. This tells me that SEEPP is not really working" (SEEPP 3)

It is evident that a 'one size fits all' approach is unsuitable for EE, particularly at graduate level which concurs with Nabi *et al.'s* (2008) conclusion that there is no universal approach to graduate entrepreneurship that works for all contexts and graduates and different contexts require tailored approaches that best suit their individual needs. This would suggest that SEEPP has been naïve in placing what appears (on paper) to be a homogeneous group of graduates in a generic EE programme. The reality was there were differences between SEEPP participants in terms of their background in business: some lacked commercial knowledge and experience, whereas, others were highly experienced and had a sophisticated knowledge of international markets. SEEPP 13 believed that the programme needed to be restructured in order to cater for the needs of: (i) an accelerated group; and (ii) lifestyle entrepreneurs. He maintained that:

> "There is a need for a graduated approach to dealing with SEEPP participants. There is a need to screen the participants on SEEPP. Some participants are very needy and work at a different pace to others." (SEEPP 13)

Some SEEPP participants were critical of the pace of the programme, for example:

> "*SEEPP is too long. Ideally, it should be a three-month intensive programme i.e., 5 days per week or intensive weekend sessions. I think if you condense it, you may get better results. Perhaps the personal development may not happen in a shorter period.*" (SEEPP 5)

> "*SEEPP should be about acceleration rather than incubation. It should be shortened to say six to eight months and embrace a 'fail fast' mentality. After an intensive programme, then participants should undergo a milestone review in order to assess their business model and progress to the next stage of development and supports... Some people were at a faster rate than others.*" (SEEPP 1)

Some respondents believed that SEEPP needed to be restructured:

> "There is a need to *separate out the basic educational elements and make them optional (electives).*" (SEEPP 10)

> "*You could probably have an accelerated group.*" (SEEPP 13)

Whilst all SEEPP participants shared a common goal of setting up a viable business, it is evident from the research that not all SEEPP participants were HPSUs.   There were clear differences in their ambitions for their business in terms of business growth, export sales, employment creation *etc.*   Theoretically, SEEPP aims to develop the entrepreneurial skills of graduate entrepreneurs in the region, however, the reality is that SEEPP is trying to cater for a multiplicity of learner needs.

> "*Some SEEPP participants had advanced business ideas and they were less open to listening to others. There were two types of people on SEEPP (i) there were guys there with just an idea and using SEEPP as a space for developing their idea; and (ii) there was a smaller number of participants with real businesses who wanted to develop and grow their business. SEEPP is almost a two-speed programme and in my opinion, by having two types of participants on SEEPP, it devalues the programme.*" (SEEPP 12)

This led to frustration amongst some participants who believed: (i) the pace of SEEPP training was too slow (typically HPSU entrepreneurs); or (ii) SEEPP training was too advanced. It also provides a critical insight of graduate entrepreneurs' perspectives of SEEPP and suggests that as it is currently configured, it has not met the needs of all graduate entrepreneurs.

To counter this limitation of the programme, one of the respondents recommended a differentiated approach to EE, particularly at graduate level:

> *"As it is currently structured, SEEPP is for people at the early stage of business development. I think there is a need for a two-pronged approach ... Graduate EE needs to be a lot more sophisticated, particularly, with respect to finance. Currently, banks are not lending money - so people need to be clever...".* (SEEPP 10)

The SEEPP participants would have preferred customised, timely (just-in-time) learning supports over the formal group training. They suggested that future training should focus on the needs of the individual entrepreneur rather than *"a one size fits all"* (SEEPP 14) group training. Whilst providing a tailored programme to cater for the various learning and development needs of all graduate entrepreneurs would be operationally challenging, there are significant opportunities for SEEPP to develop an online repository of learning materials. The findings supported the view that there is ambiguity and a lack of uniformity in the conceptual framework, curricula pedagogical design approaches to EE, learning outcomes and assessment (Hills, 1998; Gibb, 1993; Matlay *et al.*, 2007; Mitra *et al.*, 2008; HETAC, 2012). This may be because of the diversity of SEEPP participants which some participants concluded made SEEPP appear unfocused *i.e.*, trying to cater for the needs of a disparate group of graduate entrepreneurs:

> *"SEEPP was not focused enough"* (SEEPP 3)

> *"it tended to be very technology focused and my company did not fit that mould. As a result, I struggled a bit."* (SEEPP 9).

> *"I think SEEPP is better than an MBA which tries to change techies (sic) into managers. SEEPP is more practical.* Given SEEPP participants, as adult learners, had significant work experience believed that. In a sense, it catered for the *"lowest common denominator"* (SEEPP 10).

> *"As I had set up a business previously, at times I suffered through some of the training, some of which was irrelevant to me – a lot I had known from experience."* (SEEPP 10)

> *"Some people found some of the modules irrelevant beacuse they had previous knowledge. There was some repetition of materials covered. ."* (SEEPP 2)

Despite the limitations of SEEPP, the participants believed that the positive features outweighed the negative features of the programme.

6.1.6.4 Graduate Entrepreneurs as Adult Learners

A key theme of the research with SEEPP participants is that they all approached their learning as adult learners. In other words, they had significant work and authentic experience prior to setting up their own business and they believed that they could influence the focus of the curriculum. This seems to go against the notion of EE being analogous to adult education, where both lecturers and students play an active role in the co-creation of knowledge and lecturers assume the role of facilitators of learning (Carey *et al.*, 2011). Unfortunately, there was limited opportunity for them to do so because of the prescribed nature of SEEPP training given its need for adherence to academic conventions. As adult learners, they highlighted the need for lecturers, the SEEPP manager and EDA personnel to provide honest feedback to SEEPP participants and did not need the lecturers or SEEPP manager to "sugarcoat the truth" (SEEPP 12).

> *"There is a need for brutal and honest feedback on ideas and for people to be honest and identify at an early stage if a business is viable."* (SEEPP 7)

> *"My money, my time, my future and my career were at stake. I was there to learn – it was as simple as that and if I wasn't learning I'd be very quick about telling the lecturer- but in fairness that didn't happen. The lecturers were very good. It is your project – you don't go home and go back to a job. You are going back and you are implementing it into your strategy or your business so it is very important and you must be taken very seriously."* (SEEPP 8)

At graduate level, the stakes are higher and graduate entrepreneurs require honesty regarding the feasibility and growth prospects of their business. As stated previously, adult learners are strategic learners and this was evidenced in the responses of SEEPP participants:

> *"I was coming in and out of the training; I cherry picked what I wanted to learn."* (SEEPP 14)

> *"I cannot blame SEEPP if there were weaknesses in my business plan. Ultimately, I am responsible."* (SEEPP 6)

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These insights are insightful because they show graduate entrepreneurs as adult learners *"grasping and comprehending* what they need and what they want to know' (Rogers, 1983).

6.1.7 Summary of Research with SEEPP Participants

In summary, of the 15 SEEPP entrepreneurs, only one had studied entrepreneurship at undergraduate level and he believed that it did not equip him with the skills or knowledge to establish his own business. Essentially, he believed that the approach to EE at undergraduate level was *"too dry and theoretical"* and did not instill him with the self-confidence to become an entrepreneur. Whilst current EE provision, particularly at undergraduate level, has a role to play in sign-posting self-employment as an option for students, it fails to adequately prepare them for the harsh realities of the marketplace. One of the key findings is that all SEEPP participants believed that no amount of EE could adequately prepare them for the realities of developing their own business. Without exception, they maintained that such knowledge could only be gained through authentic work experience. In short, the case evidence suggested that participation in SEEPP had a positive bearing on participants and in some cases, it even exceeded their expectations. Through participation in SEEPP, graduate entrepreneurs were able to hone their entrepreneurial skills whilst simultaneously creating a real business. In essence, their learning was experiential and real. Given the stakes were higher; they were more committed and self-directed learners than they would have been at undergraduate level. This finding gives credence to Cope *et al.'s* (2000) argument that learning by doing is the best means for students to learn about enterprise. It supported Gunnigle *et al.'s* (2002), Sadler-Smith *et al.'s (2000)* and Reinl's (2011) contention that motivation is an essential pre-condition for effective learning and is dependent on perceptions of benefit. The key benefits and limitations of EE at third level are summarised in Table 6.3.

Table 6.3 Perceived Benefits and Limitations of EE

Benefits of Undergraduate EE	Limitations of Undergraduate EE
• Exposure to alternative career path • Opportunity to participate in Institute and national enterprise awards • Continuous assessment • Value of group work • Links with real & graduate entrepreneurs • Passionate lecturers • Links with EDAs • Entrepreneur in residence: positive role model(s)	• Theoretical, didactic approach • Over-reliance on business plan as teaching tool • Lack of concrete business idea • Going through the motions • Title of entrepreneurship can be off putting • Semesterisation
Benefits of Graduate EE	**Limitations of Graduate EE**
• Networking with like-minded peers • Definite business opportunity in place • More practical • The stakes are higher • Greater focus on self-directed learning • Graduate learning embedded in campus incubator	• Greater risk involved as the stakes are higher • Limited engagement with academic staff of HEI • Lack of engagement with undergraduate students • Campus incubator located off campus

Source: Current Research

The following section will consider the research data generated from semi-structured interviews with the other 15 graduate entrepreneurs who did not participate in SEEPP.

6.2 Section 2: Graduate Entrepreneurs' Perspectives of EE

I chose to interview 15 non-SEEPP graduate entrepreneurs as I believed that it was essential to gain their perspectives on EE at third level. Similar to SEEPP participants, they could offer valuable insights into the benefits and limitations of current EE provision at third level and why they chose not engage in formal EE at graduate level. The criteria used for selection of these graduate entrepreneurs were that they: (i) were all graduates of a HEI; (ii) had established their business in South East region in the period from 2001 to 2010 (inclusive); and (iii) had an operational business at the time of the research.

6.2.1 Entrepreneurial HEI and Leadership

This section analyses the non-SEEPP graduate entrepreneurs' perspectives of what HEIs are promoting entrepreneurship amongst students. They were asked if current EE provision is creating an awareness of entrepreneurship as a career choice or developing entrepreneurial skills.

"There was an expresssed aim that 50% of our class would start their own business. The college was really proud of their graduates and believed it reflected well on them. They organised for successful graduate entrepreneurs e.g., Cully and Scully (food entrepreneurs) to talk to and motivate us about starting our business." (Entrepreneur 1)

Entrepreneur 5 believed that:

"Colleges are focusing too much on high level business management i.e., managing and running large companies. There is little if anything in the curriculum looking at small companies, regardless that some 50% of graduates will end up working the SME sector – it's madness. There is a need to change the mindset or perhaps split the focus of business education perhaps 50% SMEs and 50% large corporations." (Entrepreneur 5)

Of the 15 graduate entrepreneurs interviewed, two had studied entrepreneurship as part of their undergraduate studies, whereas 13 had not. According to SEEPP 7:

"No, I never studied entrepreneurship at college. In fact, there was no mention of it at that time (mid-1980s). I don't think I knew what the word meant. My understanding was that guys did a B.Comm. i.e., a Business degree and went on to become entrepreneurs."

Similar to the research with SEEPP participants, as undergraduate students, there was little, if any, emphasis on entrepreneurship in the curriculum. Indeed, the graduate entrepreneurs were more likely to study general business modules as opposed to entrepreneurship. According to three graduate entrepreneurs:

"No, I only studied standard business managment modules which had nothing to do with entrepreneurship; its focus was on manufacturing business." (Entrepreneur 5).

The majority of respondents had not studied entrepreneurship at third level which is at odds with Vesper *et al.'s* (1997) and Leonhardt's (1996) belief that graduates who benefit from EE have a higher propensity to become entrepreneurs.

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"No, I only studied a standard business managment modules which had nothing to do with entrepreneurship, its focus was on manufacturing businesses." (Entrepreneur 10)

"No, I didn't. My course was very firmly set to prepare you to become a Quantity Surveyor. When, I look back at it, I can understand that they thought we would all get employment in the construction industry and become employees."
(Entrepreneur 8)

The general consensus amongst the graduate entrepreneurs was that HEIs have a strategic role in promoting entrepreneurship as a viable career option but they have largely failed to do so because, heretofore, their focus has been on graduate employment, for example:

"My degree course focused on preparing us for work." (Entrepreneur 7)

These findings are contrary to Jones' (2006) conclusion that entrepreneurship has arrived as an essential subject area. In one instance, a graduate entrepreneur maintained that she was actively dissuaded from setting up her own business and instead her lecturers encouraged her to become a Master craftsperson:

"The course leaders actively discouraged us from focusing on setting up a small business. Instead they wanted us to concentrate on becoming Master craftspeople but I thought this was crazy". (Entrepreneur 6)

This would suggest that lecturers have a key role in both conveying not just knowledge about enterprise but also instilling a passion for the subject amongst their students in the de Saint-Exupery (1943) tradition. Equally, lecturers have a role in quelling such enthusiasm. Entrepreneur 8 highlighted the challenges inherent in EE provision at third level:

"To be fair, it is hard for HEIs to impart information that you learn through experience. I don't know if you can do that through college. People need to work just to develop a work ethic and professionalism." (Entrepreneur 8)

He maintained that the value of a third level qualification cannot be understated in providing graduates with transferrable skills that could be applied within a business:

"As a graduate, I was more confident approaching banks. I was more articulate and I knew how to convey a point. Having undertaken a dissertation as part of my degree, helped me to research and write a business plan." (Entrepreneur 8)

Whilst these skills may not be categorised as entrepreneurship studies, this insight does highlight the need for a holistic education, where knowledge, skills and competencies learned at third level can be applied within the work context. This research concludes that entrepreneurship was not an integral part of higher education curriculum when the respondents were at third level *i.e.*, the 1980s or 1990s. This gives credence to Wilson's (2008) belief that entrepreneurship has only recently began to filter higher education in the past fifteen years. The respondents were critical of HEIs not committing to the enterprise agenda and were skeptical of the effectiveness of EE in preparing graduates to start their own business:

> *"I struggle with the notion of EE and I would be very sceptical about it. This is reaffirmed by my experience of working with a real entrepreneur. He is a special guy to be around. He has the gumption to try stuff i.e., to see opportunities and to respond to them."* (Entrepreneur 7)

Entrepreneur 9 believed that HEIs are very risk averse. His experience of EE at graduate level was that it was more about opening his eyes to the potential pitfalls of self-employment as opposed to identifying or highlighting the opportunities. This seems to contravene accepted thinking that entrepreneurship is concerned with identifying and exploiting opportunities (Schumpeter, 1934; Kirzner, 1973; Gartner, 1989; Drucker, 1995; Caligo & Katz, 2001; Kirzner, Deakins & Freel, 2003; Frith & Atherton, 2007; Henry & McGowan, 2007; Taatila, 2010). In effect, students could be bombarded with too much information about the challenges of self-employment:

> *"A limiting factor would be so much exposure to information that it could be offputting to some people."* (Entrepreneur 9)

The findings were congruent with SEEPP participants and Cooper and Lucas' (2007) research which claimed that when graduates leave formal education only a very small minority will start their own ventures immediately. The respondents highlighted the value of developing and honing commercial and people management skills in advance of setting up their own business. This would concur with Mitra *et al.'s* (2008) belief that graduates should work for some time with other organisations because they believed would be a relatively inexpensive way of gaining on-the-job training. This resonates with Westhead *et al.'s* (2005) belief that experience gained prior to undergoing EE tends to improve the overall performance of entrepreneurs.

6.2.2 Entrepreneurial Staff

When asked about what factors can affect the efficacy of academics teaching entrepreneurship at undergraduate level, the respondents identified that lecturers' background and experience in business was essential to the effectiveness of EE:

> *"Some academics are too far removed from the reality of starting and growing a business and making money. They need to have real experience in running a business in the real world, not just in academia i.e., spin-offs. I think the stakes are way higher in the real world."* (Entrepreneur 4)

> *"One lecturer took a particular interest in me. He saw that I had a passion for food and he took me under his wing, helped me to get work experience (he even drove me to my interview) and he kept pushing me ... Such lecturers can help to sculpt and mould students and I was very fortunate to have met someone like that."* (Entrepreneur 1)

This has resonance to Hederman's (2011) views that the job of lecturers is to harness students' natural flair and to establish with the student that specific contact which will unlock the armour and allow the person to expand.

> *"Having a pure academic can have advantages in that they have studied entrepreneurs and know what works in theory. However, the real value comes from people who have lived and breathed enterprise."* (Entrepreneur 9)

Again, Penaluna *et al.'s* (2008) notion of a 'pracademic' straddling both the academic and entrepreneurship domains is best suited for EE.

6.2.3 Entrepreneurial Students and Graduates

Each of the non-SEEPP graduate entrepreneurs interviewed was asked (i) what factors may affect the efficacy of graduate entrepreneurs to be entrepreneurial and (ii) if they believed that education central to this self-efficacy?

> *"when I started my business, I knew nothing about business planning, sales and marketing, how to read and analyse accounts. Sure, I was exposed to it during my career but I didn't have the proper training ... doing is learning."* (Entrepreneur 5)

> *"I gained a lot of skills when I was working in Waterford Crystal and these helped me when I started my own business. I can't see the point in young graduates setting up a business straight after college. They would lack street smarts and experience. The reason I got backing from the CEB and EGF was that I had a track record within employment, I had risen through the ranks to become Health & Safety Manager. They could see that I could deliver because I had credibility. Young graduates just don't have that."* (Entrepreneur 10)

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This view may reflect the significant capital investment he required to develop his business. Gibb *et al.* (2009) called for a differentiation between EE at undergraduate and postgraduate level with the objectives, indicative content and teaching methods of teaching differing according to the level of education. The findings show that from the perspective of graduate entrepreneurs, the most important thing is to work generally on students' mindsets and to stimulate interest in self-employment and business creation *i.e.,* awareness and motivation. Undergraduate EE is essentially about teaching people about enterprise, whereas, graduates need practical tools and concrete support in order to develop their business ideas. Entrepreneur 9 said:

> *"I studied enterprise as part of my MBA studies. It was an elective module so I made a conscious decision to study it. I thought it was really good. The best part was that we had to develop a case study of a small business and we chose to undertake a case study of a family business. We got terrific insights from talking to them and learning about their experiences."* (Entrepreneur 9)

Few of the respondents had studied entrepreneurship at undergraduate level, thus, Brady *et al.'s* (2010) call for Irish HEIs to embed entrepreneurship across the spectrum of the curricula is timely.

6.2.4 Part of a Broader Entrepreneurial Ecosystem

When asked how HEIs, SMEs and EDAs work together to promote student and graduate entrepreneurship, the non-SEEPP graduate entrepreneurs examined their relationships with both WIT and the EDAs separately.

> *"We work well with WIT in terms of graduate recruitment and we have recruited students as part of their third year placement. Essentially, we are looking for graduates who can hit the ground running so it is important to choose them correctly. Some graduates have not a clue that we are a small business, they seem to be have a multi-national mentality and they cannot fathom that if a machine is broken that we have to fix it instead of replacing it. Quickly, reality bites..."* (Entrepreneur 5)

> *"The local CEB only opens during office hours and does not have a postbox. What does this say to entrepreneurs? We don't really want to help you."* (Entrepreneur 9)

> *"I think it is crazy but there is very little interaction between the CEB and EI, CEBs are not preparing people to progress to EI. There appears to be no co-ordination or interaction between the agencies. Each has its own corner of the field and appear to be guarding it fiercely ...EI is a brilliant organisation - if you can meet their criteria, sadly, we didn't."* (Entrepreneur 5)

In summary, this section has provided the findings of this research and interesting insights into graduate entrepreneurs' perspectives on EE provision at third level. The salient themes emerging from this section of the research will be considered in light of the findings in the following section.

6.2.5 Emerging Themes of Research

The graduate entrepreneurs highlighted the sense of loneliness and isolation inherent in self-employment. Given they were not part of a formal graduate enterprise programme, they had greater difficulty gaining access to EDAs and to WIT. Unlike SEEPP participants, they were unable to work with the SEEPP Manager to develop links with WIT staff and EDA personnel. Significantly, they believed that they were poorly equipped to navigate the EDA landscape and were effectively on their own in terms of developing their business. Some of the graduate entrepreneurs maintained that they just had to 'get on with it' but they were at a disadvantage *vis-à-vis* supports and training compared with the SEEPP participants. Similar to the SEEPP participants, the graduate entrepreneurs who completed postgraduate study were very discerning, demanding and strategic learners:

> *"as a postgraduate student, I was aware that being in college was costing me time and money. I was looking for a return on my investment and when I didn't think I was getting that, I walked away from it."* (Entrepreneur 4)

> *"I wasn't there to meet people or to network. I was there to learn how to develop my own business."* (Entrepreneur 10)

> *"I didn't study entrepreneurship at undergraduate level as it wasn't an option during my primary degree. When I studied for my MBA, I was more discerning in my choice of electives (Enterprise & Innovation was an elective module). I examined the module syllabus/content and I thought that I wouldn't learn a lot from it so I chose another module."* (Entrepreneur 2)

The non-SEEPP graduate entrepreneurs believed that if the learning gained in entrepreneurship modules did not result in a benefit to their business or themselves, they opted not to study it. In effect, they critiqued the learning outcomes and indicative content of modules before deciding whether to study it or not. This provides a key insight into the strategic approach to learning by graduate entrepreneurs and concurs with the findings of the research with SEEPP participants.

6.2.6 Summary of Research with Non-SEEPP Graduate Entrepreneurs

Of the 15 non-SEEPP graduate entrepreneurs interviewed, only two had studied entrepreneurship at undergraduate level and they believed that HE did adequately prepare them to set up their own business. They conceded that HEIs have a role to play in sign-posting and highlighting self-employment as a viable career option for students but HEIs' focus remains on preparing graduates for employment. A key research findings is that the respondents believed that graduates need work experience to develop the hard and soft skills required to successfully develop and grow a business. Thus, the notion of graduates starting business without significant experience was incomprehensible to them. What is significant about the research with the graduate entrepreneurs is that they are less likely to engage with HEIs and regarded themselves as quite isolated in the development of their business. Unlike the SEEPP participants, they had to fend for themselves and navigate the EDA landscape: sometimes, they 'fell through the cracks' in terms of their eligibility for supports from EDAs. Given the stakes were higher, they were more committed and self-directed learners than they would have been at undergraduate level. This finding gave credence to Cope *et al.'s* (2000) argument that learning by doing is the best means for students to learn about enterprise. Moreover, it supported Gunnigle *et al.'s* (2002), Sadler-Smith *et al.'s (2000) and* Reinl's (2011) contention that motivation is an essential pre-condition for effective learning and is dependent on perceptions of benefit.

6.3 Section 3: Synthesis of Overall Research Findings

Sections 1 and 2 summarised the SEEPP participants and non-SEEPP graduate entrepreneurs' perspectives of EE at third level in their formation as entrepreneurs. A cross case comparison of the key themes of the research between both cohorts highlights the similarities and disparities in their perspectives of EE at third level in their formation as entrepreneurs. Key research themes emerging from the Literature Review have been augmented by additional themes emerging from the findings which will be further considered to see how they influence EE at third level.

In general, all graduate entrepreneurs regarded HEIs as risk averse and were skeptical about their commitment to the enterprise agenda. This would support Taatila's (2010) belief that academic education teaches people more about risk aversion instead of helping them look at future potential. It is evident from the findings that EE is still a relatively new phenomenon in Irish higher education and many of the respondents did not study entrepreneurship as part of their undergraduate or postgraduate studies and suggests that there is still a long way to go in terms of EE provision at third level. More worryingly, is that current EE provision at undergraduate level does not adequately prepare students to set up their own business, rather it teaches them *about* or *for* entrepreneurship rather than how to grow and develop a real business. Few of the 30 graduate entrepreneurs had studied entrepreneurship at undergraduate level which would reiterate Wilson's (2008) conclusion that entrepreneurship only substantially began to enter higher education curriculum since the mid-1990s. Moreover, it would seem to contradict Matlay *et al.'s* (2007); Carey *et al.'s* (2011) and Matlay's (2012) contention that there has been considerable growth in EE at third level.

Both cohorts agreed that successful EE requires a combination of buy-in from staff, students and the HEI, as well as the resources to fully equip and create better enterprise lecturers which concurs with Carey *et al.'s* (2007) and Hannon's (2006) vision for an entrepreneurial HEI. However, all graduate entrepreneurs were unconvinced that HEIs are entrepreneurial. This gives credence to Brennan *et al.'s* (2007) conclusion that entrepreneurial activity within a HEI does not necessarily make it entrepreneurial.

Both cohorts agreed that a key component of effective EE requires a focus on micro-enterprises or SMEs *i.e.,* entrepreneurship cannot be taught through the lens of big business. The absence of micro-enterprises and SMEs as case studies in the Business curriculum led me to believe that HEIs are still focused on preparing students for employment in MNCs, rather than for them to become job creators or work within SMEs. Some commonalities and disparities existed between the SEEPP participants and graduate entrepreneurs in relation to their approach to EE.

Cotton *et al.* (1998) recommended an emphasis on pedagogies that encourage experiential learning. However, there is little evidence from the findings to prove that this was the case. On the other hand, the general consensus amongst the respondents was that graduate EE was focused, effective and practical. Primarily, this is because all respondents had a definite business idea and could apply the knowledge gained in class directly to their business. This has resonance with Reinl's (2011) contention that micro-firm owner/managers demonstrate a preference for learning that is immediately applicable to their business. Whilst the graduate entrepreneurs welcomed some theoretical approaches to EE, they were more strategic in their approach to learning to use what knowledge was relevant to their business.

Notwithstanding the inherent challenges of teaching EE at third level *e.g.,* semesterised timetables, the paucity of academics with real enterprise experience and the risk-averse nature of HEIs, the graduate entrepreneurs that HEIs and EE can open people's minds to self-employment as a real career choice. A key point of agreement amongst both cohorts was that crucial to the success of EE at third level are enthusiastic lecturers with both credibility and prior experience in enterprise development to instill a passion for entrepreneurship amongst students. Graduate entrepreneurs' perspectives of good practice in EE in requires buy in from the students, lecturers, the HEI itself and liaison with external partners *i.e.,* entrepreneurs and EDAs. It is notable that there was general consensus amongst both cohorts that it was not ideal for *"raw graduates"* to set up their business immediately after finishing college. Both research cohorts highlighted the importance of graduates gaining work experience prior to setting up their business.

This is important for multiple reasons, namely graduates: (i) can hone their business and commercial skills; (ii) can develop their 'softer skills' *i.e.,* managing and motivating staff, customers, and working with others to drive a project. This has implications for government, policy makers and indeed HEIs *vis-à-vis* their expectations of EE. It would be both naïve and erroneous to assume that more EE can create greater numbers of entrepreneurial graduates who will immediately set up their business.

The respondents recommended that graduates should gain work experience before setting up their business which affirms Potter's (2008) contention that there is a significant lag time between when graduates finish college and establish their business. However, there is greater credence to the argument that EE at graduate level can produce greater entrepreneurial new ventures.

A key finding of this research is that each graduate entrepreneur is on his/her own journey to self-employment and s/he defines her/his success differently. Essentially, there is no place for a 'one size fits all' approach to EE nor should there be a homogeneous success metric for graduate entrepreneurs. This corroborates Nabi *et al.'s* (2008) conclusion that there is no universal approach to graduate entrepreneurship that works for all contexts and graduates and different contexts require tailored approaches that best suit their individual needs. This highlights a need for the development of more sophisticated success metrics for graduate entrepreneurs. Such metrics should include entrepreneurs' business performance, turnover, sales, as well their quality of life, work/life balance, their attitude towards their business and the long-term sustainability of their business and would provide a more holistic approach to measuring the success of graduate entrepreneurs. Some disparities existed between the SEEPP participants and graduate entrepreneurs in relation to their links with EDAs. Through SEEPP, participants had access to a formal network of contacts *i.e.,* EDAs, whereas, non-participants had less formalised access to both HEIs and EDAs. I conclude, therefore, that SEEPP participants were better equipped to navigate the EDA landscape and a key benefit of SEEPP participation is ease of access to a formal network of enterprise enablers. More specifically, SEEPP gave some credibility to graduate entrepreneurs, essentially, it meant that the participants were serious about their business and were endorsed by EI and WIT. It made access to EDAs easier for SEEPP participants and in a sense demystified the EDAs.

SEEPP participants concluded that graduate EE was more focused, effective and practical. Primarily, this is because all graduate entrepreneurs had a definite business idea and could apply the knowledge, gained in class, directly to their business.

Whilst they welcomed some theoretical approaches to EE at this level, they were more strategic in their approach to their learning. Essentially, they *"cherry picked"* what knowledge was relevant to their business which highlights the strategic nature of learning of graduate entrepreneurs as adult learners. Graduate EE takes place within WIT's campus incubator and the students are embedded in an enterprise environment with links to the academic and commercial worlds. On the other hand, the non-SEEPP graduate entrepreneurs recognised the shortcomings in EE at third level, particularly at undergraduate level. They recommended a change from the focus on the business plan as the dominant teaching methodology as it was regarded as *"abstract"* and caused problems for students without a definite business idea. Instead, they suggested using case studies of SMEs, shadowing and profiling local, national and international entrepreneurs, meeting graduate entrepreneurs and networking with EDAs. With a more real world focus of EE, the graduate entrepreneurs believed that students would gain a greater insight into the realities, challenges and benefits of setting up a business. Only then, could they make an informed decision if self-employment was a viable option for them.

There is a need for HEIs and SMEs to articulate, recognise and promote the type of skills and competencies necessary to drive HPSU development and this aspect of EE has been ignored by Irish HEIs at undergraduate level.

All respondents offered to *"give back"* and contribute to EE at third level by becoming guest lecturers, mentors and/or role models for undergraduate students and future SEEPP participants. Heretofore, graduate entrepreneurs have been regarded an untapped resource by HEIs but it is evident from the findings that they represent a valuable resource for HEIs in the provision of meaningful and relevant EE. Contributions from people who have essentially 'walked the talk' would only enhance and enrich students' learning. Moreover, they could become positive role models to students and by telling their story, they could demystify entrepreneurship for students. Whilst the respondents believed that there would be merit in developing symbiotic relationships between graduate entrepreneurs and current students, they argued that the viability of such relationships relies on sustainable synergies between both parties.

Networking with real-world entrepreneurs is regarded as a vital component of successful EE and the lecturer is instrumental in facilitating and developing both formal and informal networks between students and SMEs. The lecturer's role is to initiate links between students, local and national entrepreneurs and EDA personnel who could assist students in developing their business. There is also great value in the organic, informal networks amongst students, initiated by them rather than contrived or 'imposed' by academics or the SEEPP manager. To this end, some respondents suggested the creation of an Enterprise Club/Society, led by students and affiliated to the Students Union, it would allow students to be in control, identify role models of relevance and of interest to them. This would also help them to develop their self-efficacy, identity and development as entrepreneurs. Table 6.4 provides a summary of all graduate entrepreneurs' recommendations for enhancing EE at third level.

Table 6.4 Graduate Entrepreneurs' Suggestions for Enhancing EE at Third Level

	Undergraduate	Graduate
Entrepreneurship modules	✓	
Positive role models	✓	✓
Celebration of entrepreneurial success	✓	✓
Greater use of online materials	✓	✓
Provision of customised & sophisticated training		✓
Lecturers with enterprise experience	✓	✓
Flexible pace of delivery		✓
Negotiated learning	**Higher Level**	✓
Focus on general concepts	✓	
Focus on specific concepts	**Higher Level**	✓
Feasibility studies	✓	✓
Case studies of micro-enterprises	✓	✓
Guest lecturers	✓	✓
Avatars – simulated enterprises	✓	
Access to hatcheries	✓	
Access to campus incubators	✓	✓
Enterprise Bootcamps	✓	✓
Placements in SMEs	✓	
Networking with graduate entrepreneurs		✓
Consulting with SMEs	✓	
Links with EDAs – EI, SEBIC & EDAs	✓	**Regular**
Blended/E-learning modules	✓	✓
Links with Industrial Liaison office	✓	✓
Business plan competitions	✓	**Optional**
Links with business angels/venture capitalists		**Optional**

Source: Current Research

These recommendations will be used to develop a revised conceptual framework for EE at third level which will be discussed in detail in Chapter 8.

6.4 Conclusion

The research data provided a nuanced view of SEEPP and non-SEEPP graduate entrepreneurs' insights, experiences and perspectives of EE at third level. Whilst this research was conducted using SEEPP as a case study, it attempts to reflect their perspectives of EE *vis-à-vis* their experience at third level, their engagement with HEIs, and their needs at the crucial start up stage of their business. These insights provide new knowledge of the needs of graduate entrepreneurs and what WIT and other HEIs can do to effectively meet such requirements at the crucial phase of start-up phase of their business. A key lesson that can be learned from this research is that EE is still a relatively new phenomenon in Irish higher education and EE has a long way to go in order to gain legitimacy within Irish higher education curricula. Whilst the majority of the respondents did not study entrepreneurship as part of their undergraduate studies, their belief is that current EE provision does not adequately prepare students to develop and grow their own businesses, rather it teaches them *about* or *for* entrepreneurship. Given the largely abstract nature of teaching entrepreneurship through business plans, EE does not develop students' entrepreneurial skills for the harsh realities of setting up their own business. All graduate entrepreneurs believed that the success of EE is contingent upon enthusiastic lecturers with prior experience in enterprise development. Lecturers, who had set up their own business had greater credibility amongst graduate entrepreneurs. However, the respondents conceded that such a combination of teaching skills and experience is rare amongst academics and recommended involving graduate entrepreneurs, alumni and EDA personnel in the delivery of EE programmes. Notwithstanding the inherent challenges of teaching entrepreneurship in HE *e.g.,* semesterised timetables, the lack of academics with real enterprise experience and the risk averse nature of HEIs, graduate entrepreneurs believed that EE can open students' minds to self-employment as a viable career path.

None of the graduate entrepreneurs had set up their business upon graduation and they expressed concern about the business-readiness or preparedness of 'raw graduates' because they lack vital commercial experience or market exposure in which to hone their business and people management skills.

This raises a fundamental question about government and policy makers' expectations of the higher education sector as a seedbed for entrepreneurial talent. It highlights the paradox of how can undergraduate students gain such experience whilst in full-time study. It identifies a need for (i) incorporating authentic experience in EE programmes at undergraduate level and (ii) tempering government and policy makers' ambitions for greater graduate entrepreneurship. Given the majority of the respondents did not study entrepreneurship at undergraduate level, these findings have greater relevance within the context of EE at graduate level.

Graduate entrepreneurs are highly motivated and discerning learners and they demand inputs that will have a direct impact or significance to their business. An example of this was in their critique of SEEPP in terms of the pace, sequencing and relevance of some of SEEPP and concluded that a one size fits all approach to EE at graduate level did not cater for the diversity of experience, ambition and growth aspirations of participants. They called for the development of bespoke EE programmes, tailored to meet the individual needs of graduate entrepreneurs with a focus on: (i) value proposition; (ii) marketing; (iii) sales and sales strategy; (iv) finance; (v) growth; and (vi) team building. Whilst developing bespoke programmes to meet the needs of disparate learners may be difficult to manage at an operational level, they recommended the use of a virtual learning environment *e.g.*, Moodle to provide just-in-time training materials which entrepreneurs could access at their own discretion and in their own time.

This research provides an insight into how graduate entrepreneurs learn and what they value in EE; they are strategic, vociferous, discerning and self-motivated students. This calls for a more sophisticated approach to EE at third level, particularly at graduate level to reflect the complexities of doing business in the current economy. Graduate entrepreneurs who did not participate in SEEPP had tenuous links with their regional HEI and could be considered to be an unseen and neglected constituency. Sometimes, they can fall between the stools of EDAs in terms of their eligibility. The findings reveal that SEEPP graduate entrepreneurs have better working relationships with HEIs.

All respondents expressed a genuine willingness to engage with HEIs to promote student and graduate entrepreneurship. Heretofore, graduate entrepreneurs' relationships with HEIs were best regarded as *ad hoc* in nature, therefore, steps must be taken to harness their goodwill and enthusiasm to engage with HEIs and students. There is a need for an enterprise champion within HEIs, essentially a 'go-to person' for students and graduate entrepreneurs. To conclude, this chapter has provided a deeper understanding of graduate entrepreneurs' perspectives of EE at third level in their formation as entrepreneurs. Their recommendations for enhancing EE at third level will be reflected upon further in Chapter 8, where they will be discussed along with the recommendations of the enterprise enablers *vis-à-vis* the extant literature, policies and conceptual framework. Chapter 7 examines enterprise enablers' perspectives of the role of EE in graduate enterprise development.

Chapter 7 Enterprise Enablers' Perspectives of EE at Third Level

Come to the edge, He said. They said, we are afraid. Come to the edge, He said.
They came. He pushed them. They flew.

Guillaume Appollinaire (1880-1918)

7.0 Introduction

Mellalieu (2006) posited that enterprise enablers are key agents in the identification and development of entrepreneurial talent and they can be found amongst the professions of teachers, advisors, informal investors and EDA personnel. Enterprise enablers can assist entrepreneurs to overcome obstacles, and build their confidence in developing their business (*ibid*). They are a critical component in developing appropriate learning environments and the processes for educating, training, coaching and mentoring the innovators and entrepreneurs that a region needs if it wishes to produce an abundance of successful, world-class, new ventures (Thompson, 2006). Central to this research are the perspectives of 15 enterprise enablers comprising eight SEEPP lecturers *i.e.,* six WIT lecturers and two self-employed management consultants who work as associate lecturers on SEEPP and six EDA personnel and one enterprise centre manager, as detailed on Table 7.1. I believed that it was important to gain their perspectives on EE at third level because they are representative of a cohort who has unfettered access to the lived experiences of graduate entrepreneurs. As such, they understand the needs of start-up entrepreneurs and have unique insights into the process which shapes the formation of an entrepreneur, starting with the seed of a business concept to seeing it through to its eventual development as a real business. Even though they are unique purveyors of this process, in the international literature on EE, their voices are rarely heard despite the fact that they play a critical role in supporting graduate entrepreneurs on their journey to create and grow a business. The guiding criterion used to select the 15 enterprise enablers was that they must have engaged with graduate entrepreneurs in the South East region during the period 2001 to 2010 (inclusive). Table 7.1 provides an overview of the enterprise enablers who participated in the semi-structured interviews.

Table 7.1 Profile of Enterprise Enabler Respondents

Enabler	Role/ Remit	Organisation
1	SEEPP Lecturer	School of Business, WIT
2	SEEPP Lecturer	School of Business, WIT
3	SEEPP Lecturer	School of Business, WIT
4	SEEPP Lecturer	School of Business, WIT
5	SEEPP Lecturer	School of Business, WIT
6	SEEPP Lecturer	School of Business, WIT
7	SEEPP Lecturer	Self-employed Consultant BB
8	SEEPP Lecturer	Self-employed Consultant TH
9	Enterprise Ireland	National
10	Enterprise Ireland (SE Region)	Regional
11	Enterprise Ireland (SE Region)	Regional
12	City/County Enterprise Board	Acting CEO
13	City/County Enterprise Board	Acting CEO
14	South East Business Innovation Centre	Manager
15	Enterprise and Technology Centre	Manager

Source: Current Research

Similar to the research with the graduate entrepreneurs, the semi-structured interviews explored the five key themes of the conceptual framework for EE at third level (see Appendix I for format of the semi-structured interviews). These themes sought to answer the research questions and to provide a framework for the data analysis. They will be refined as case insights emerge from each section of the data analysis. In order to facilitate coherent data analysis, this chapter is divided into three distinct sections, namely:

- Section 1 analyses the data and discusses the salient research findings from the qualitative research amongst the eight SEEPP lecturers/mentors;
- Section 2 presents the perspectives of the seven EDA personnel;
- Section 3 synthesises both sets of data in order to provide a composite overview of their perspectives of EE at third level.

7.1 Section 1: Perspectives of SEEPP Lecturers

There is a need to bridge the credibility gap between government expectations and harsh entrepreneurial realities to determine if EE is having a positive impact upon graduate enterprise development. In order to determine if EE at third level has led to more graduate entrepreneurial activity, I conducted semi-structured interviews with SEEPP lecturers to examine their perspectives on what HEIs are doing to promote entrepreneurship amongst students, particularly with respect to EE. In all, eight SEEPP lecturers participated in the research comprising six School of Business lecturers and two self-employed business consultants who were contracted by SEEPP to provide specific training, namely strategy and sales. Given their significant experience of working closely with SEEPP entrepreneurs and their understanding of the regional and national enterprise landscape, they were considered to be reliable informants for the purpose of this research. In order to contextualise the research, I asked each SEEPP lecturer whether they believed there had been a growth in graduate entrepreneurship in the South East region over the past decade. Enabler 2 recommended decoupling this timeframe as follows: (i) pre-recession and (ii) post-recession. In other words, there is a need to examine graduate entrepreneurship through the lens of the Celtic Tiger when the country appeared to be awash with money, thereby, opportunity. In pre-recession times *i.e.,* from 2000 to 2008, there was a steady flow of graduate entrepreneurs wanting to set up their own businesses as they identified business opportunities linked to Celtic Tiger confidence. Conversely, in post-recession times *i.e.,* from 2008 to 2010, many graduates are being pushed into entrepreneurship by redundancy and/or a lack of employment opportunities.

> *"In the earlier years of SEEPP, there was a definite increase in graduate enterprise development which was consistent with other EPPs. Currently, I believe the quality of the ideas are not as strong, they are more lifestyle businesses rather than HPSUs. This is because we live in a different economic climate ... there is difficulty in accessing credit, higher interest rates and higher costs of doing business."* (Enabler 1)

> *"Given the economic cycle when a company fails, it spawns entrepreneurship. I think that many people are becoming entrepreneurs by default."* (Enabler 7)

Enabler 1 maintained that during the Celtic Tiger years, there was an element of complacency which meant that graduates regardless of the level of their qualification could literally walk straight into employment.

> *"The higher education system in Ireland is about educating and training people for work and not about creating their own business." (Enabler 1)*

> *"HEIs prepare students for the professions or to work in MNCs or larger industry. The focus is not on preparing students to work in SMEs." (Enabler 5)*

Within the context of entrepreneurs, it is clear from the research that despite Gibb *et al.*'s (2006) and Bewick's (2011) calls for HEIs to encourage young people with the idea that they can make it happen for themselves, the reality is that the primary focus of Irish HEIs is to prepare students for employment mainly in large companies. This finding reinforces Florida's (1999) belief that HEIs' primary role as a nation's 'primary knowledge source' is to produce graduates or 'knowledge workers' and not entrepreneurs. Barry (2009) maintained that during the economic downturn of the 1980s, HEIs were seen as nothing more than suppliers of graduates. However, twenty years hence, this focus persists in Irish higher education. It may be a reflection of the current recessionary times of 2012 when employability is of increased concern to graduates and to their parents, and one of the unique selling propositions of HEIs is graduate employability. Indeed, Waterford Institute of Technology has prided itself on its consistent high performance *vis-à-vis* graduate employment in the annual Sunday Times Higher Education Guide. Enabler 3 maintained that HEIs' incessant focus on graduate employment has distracted students' focus from self-employment as an alternative career option:

> *"There is pressure on them to attain high grades and a quality degree in order to get a job. Consequently, many of them are not focused on entrepreneurship or self-employment." (Enabler 3)*

The SEEPP lecturers were in accord with Gibb *et al.'s* (2006) contention that a university degree is no longer a voucher for lifelong employability. They acknowledged that:

"What we need to be saying to students is: we can no longer guarantee a job for life but what we can do is give you the skills to set up your own business." (Enabler 1)

"The day of a job for life or a pensionable job is gone forever... People are hopping from job every two to three years. I think this is healthy, we need to prepare people for such mobility." (Enabler 7)

This research suggests a certain dissonance between what HEIs and SEEPP lecturers regard as the mission of HEIs, namely: (i) preparing students and graduates for employment; versus (ii) preparing students and graduates for self-employment. If Handy's (2001) prediction that graduates will have a portfolio of careers throughout their lives, one of which may include self-employment, there is a need to legitimise self-employment as a viable career option for graduates. This would concur with recommendations by the EC (2006) and Moreland (2007). However, the reality is that this approach is largely aspirational given that entrepreneurship is not central to the academy in the way in which Green (2012) recommended it should be. Notwithstanding the adverse economic conditions, there has been an increase in graduate entrepreneurship since 2002 which Enabler 6 concluded may be due in part to the recession and in part to the increase in EE provision at third level.

"Up until five years ago, there was no EE in undergraduate programmes. Even though entrepreneurship is now being taught, I don't believe that graduates are being prepared to set up their own business." (Enabler 8)

However, there is little empirical evidence to support the latter is true given there are very few new or 'raw graduates' participating in SEEPP. Furthermore, there has been no research to date completed in Irish HEIs which assesses the degree to which EE is provided across all disciplines in general. According to Enabler 2, few, if any, graduates progress immediately to self-employment or to SEEPP. Whilst she maintained that as an educator, she would hope that more EE leads to greater graduate enterprise development, there appears to be no obvious correlation betweenthe two. This would suggest that Matlay (2006) was correct in querying if HEIs can really make a significant contribution to the quality and quantity of entrepreneurial stock that operate within an economy.

With respect to SEEPP, the typical profile of participants is male, between the ages of late 20s to early 40s. Interestingly, there is a low level of female entrepreneurship which Enabler 2 attributed to SEEPP's entry criteria *i.e.,* it has a bias towards technology-oriented businesses, an area dominated by males.

> *"Most of SEEPP participants come from technical rather than business backgrounds."* (Enabler 5)

> *"I don't think there is a typical profile of graduate entrepreneurs. The common denominator is their attitudes, behaviour and traits. Essentially, they see a gap in the market or a market in the gap and they are opportunity-focused so they try to turn that into a business."* (Enabler 8)

Given the age profile of SEEPP participants, it appears that many graduates often wait until they have gained a number of years of work experience before embarking upon entrepreneurial ventures. This would substantiate the findings of Chapter 6, where graduate entrepreneurs espoused the virtues of work experience to hone their self-confidence and self-efficacy.

7.1.1 What are HEIs doing to promote entrepreneurship amongst students?

Brady *et al.* (2010) called for Irish HEIs to be brave and ambitious for their graduates and create the right conditions for entrepreneurship to flourish and embed entrepreneurship across the spectrum of the curricula. However, the findings reveal that SEEPP lecturers believed there is no specific, articulated enterprise policy in HEIs, for example:

> *"Sometimes, I think that promoting entrepreneurship is like pushing a rock up a hill. It is more than the work of an individual lecturer or indeed the School of Business. Sure, individuals can do a lot if what they're doing is valued. My belief is that entrepreneurship is not valued by the Executive and a lot of what they are doing and saying is just paying lip service."* (Enabler 3)

The SEEPP lecturers acknowledged that whilst there are commendable initiatives in place to promote and develop entrepreneurship at third level, many of these initiatives were focused at the graduate end of the EE spectrum.

The respondents believed that HEIs' focus must switch from preparing undergraduate students for employment to preparing them for self-employment and this reinforces Green's (2012) call for legitimising self-employment as a viable career choice for graduates:

> *"Colleges need to paint the big picture of entrepreneurship, tell the positive success stories so that students could believe that they too could set up a business."*
> (Enabler 6)

> *"There is a lot more to be done by Irish HEIs. Firstly, they need to decide if entrepreneurship is to be part of their agenda and to be honest, a lot of HEIs pay lip service to it which is obvious for political reasons, however, there is a need for HEIs to put action where their mouth is."* (Enabler 3)

Essentially, a key weakness in EE provision at third level persists, namely: entrepreneurship is not integrated into an undergraduate's overall studies (Leskinen, 1999). This has serious implications for non-Business students who appear to have a lesser chance of studying entrepreneurship than their Business School colleagues:

> *"There is no joined up thinking   What we are offering are independent, stand-alone modules, mostly within the School of Business, these are essentially bolt-on electives."*
> (Enabler 4)

Whilst Hoffmann *et al.* (2008) claimed that there has been a strong trend towards HEI-wide EE, the findings revealed that the reality is that the approach to EE is a focused approach, where lecturers and students are situated almost exclusively in the Business School (Streeter *et al.*, 2002). Pittaway *et al.'s* (2007) vision of a campus-wide and discipline-based approach to EE targeting students within and outwith the Business School is not evident in Irish HEIs.

> *"Successful HEIs are generating entrepreneurial outputs i.e., graduate entrepreneurs. In Ireland, entrepreneurship is still regarded as a bolt-on activity, whereas in UK HEIs, it is regarded as an integrated activity."* (Enabler 3)

Given entrepreneurship is not embedded across the HE curriculum, the notion of a multi-disciplinary approach to EE has yet to happen in Irish higher education.

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This is a squandered opportunity and reinforces the outdated and obsolete structuring of HEIs into functional silos which Robinson (2010) and Hederman (2011) criticised. The findings revealed that HEIs are structured rigid Departments/Schools with very little interaction between Departments and the level of diffusion of entrepreneurship is poor. This finding refutes Jones' (2006) claims that entrepreneurship has arrived as an essential subject area at third level. This finding has significant implications for HEIs because it highlights a weakness in current EE provision. More significantly, it suggests there is an unrealistic and unreasonable expectation of HEIs as seedbeds for entrepreneurial talent given non-Business students have had heretofore limited opportunities to study entrepreneurship in their undergraduate study.

The concept of the entrepreneurial HEI, as espoused by Etzkowitz *et al.* (2000) and Gibb *et al.* (2009), has yet to take root in Irish higher education. Whilst Green (2012) recommended HEI leaders take responsibility for developing sustainable entrepreneurial ecosystems and championing the enterprise agenda, the reality is different in higher education. Some SEEPP lecturers were cynical stating that HEI management is largely paying lip service to the enterprise agenda, for example:

> *"I believe that government and HEIs are really only paying lip service to entrepreneurship and not taking it seriously. If you compare what is happening in Irish HEIs with for example Stanford, they have a $20 billion endowment for entrepreneurship and the hinterland (Silicon Valley) is one of the key entrepreneurial regions in the world."* (Enabler 1)

The SEEPP lecturers recognised that in order to facilitate entrepreneurship at third level, there needs to be management committment and changes in structures, priorities and policies. This reflects Potter's (2008) call for each HEI to define, articulate and increase awareness of an explicit third mission to promote entrepreneurship and provide corresponding public funding to support this endeavour. Furthermore, there is a need for:

> *"... both rewards and incentives for academic staff involved in EE. Parity of esteem with publications, links with industry."* (Enabler 7)

This perspective would accord with Van der Sijde *et al.'s* (1999) and Brennan *et al.'s* (2007) belief that there is a need to regard entrepreneurship as a corporate rather than an individual phenomenon because the best guarantee for the sustainability of entrepreneurship within a HEI is to change it into an entrepreneurial organisation. However, this is not a 'quick fix' project because it requires a systematic approach and allocation of resources to implement enterprise policy. Moreover, there is a need for an integrated approach to EE and to inculcate an entrepreneurial mindset within the HEI and the SEEPP lecturers acknowledged that reform of the higher education would not be achieved quickly:

> *"It is a slow burn to be honest. There is a need for an element of cultural affirmation for entrepreneurship within a HEI. The leaders of HEIs have no, or at best a limited, idea about enterprise development."* (Enabler 5)

This again points to the lack of vision accorded to entrepreneurship by HEI management because "what gets measured gets done" (Enabler 6).

In summary, whilst there have been initiatives to promote entrepreneurship at third level in Ireland, the SEEPP lecturers believed that a lot more needs to be done for entrepreneurship to gain legitimacy within the academy. It is evident from the research that Jones' (2006) contention that entrepreneurship's arrival as an essential subject area is not the case in Irish higher education. This research, thus, concurs with Hindle's (2007) and Jones' (2010) contention that EE as a field of study lacks basic legitimacy as a source of value within the broader education community in HEIs. Unless HEI leaders commit unequivocally to the enterprise agenda and enshrine entrepreneurship within their mission and ethos, the development of entrepreneurial graduates will become a byproduct of EE as opposed to an explicit objective of the HEI. Moreover, if entrepreneurship remains the function of the Business School and the responsibility of a few lecturers, it will remain a fringe activity and not reach the wider student cohort. This will have significant implications for HEIs who aspire to be regarded as truely entrepreneurial. This research would concur with Carey *et al.'s* (2007) conclusion that successful EE at third level requires a combination of 'buy-in' from staff, students and the HEI, as well as the resources to fully equip and create better entrepreneurship lecturers.

7.1.2 What is the focus of EE at Third Level?

Each of the SEEPP lecturers interviewed was asked what they believed was the focus of EE at third level. The findings revealed that the traditional definition of entrepreneurship as new business creation persists in Irish higher education.

> *"EE in Business Schools is purely focused on entrepreneurial new venturing."*
> (Enabler 6)

This would suggest that given the dominance of EE for New Venture Creation, Blenker *et al.*'s other three approaches to EE have yet to gain acceptance within WIT.

Table 7.2 Approaches to Entrepreneurship Education at WIT

Approach to EE	Undergraduate Level	Graduate Level
Educating students to create new ventures	✓	✓
Educating students to transform ideas/ knowledge into initiatives that will create economic growth.	✓	✓
Facilitating entrepreneurial energy for social change	✓	✓
Facilitating an entrepreneurial mindset in everyday practice	✓	✓

Adapted from: Blenker *et al.* (2011)

Entrepreneurship is conceived narrowly and there is limited evidence to suggest that the broader paradigms of EE *i.e.,* entrepreneurial activities within self-employment, employment, social enterprise and life have gained momentum at third level in Ireland. According to the SEEPP lecturers, the word entrepreneurship may be off-putting to non-Business students and there may be a need to change the nomenclature in order to encourage them to participate in EE.

> *"Not a lot of undergraduate students can identify with entrepreneurship and some regard entrepreneurs as wealthy businessmen (sic). There is a need to democratise entrepreneurship."* (Enabler 6)

This would refute Blenker *et al.'s* (2011) assumption that students are already to some extent willing or motivated to engage in entrepreneurial activity. Surely, if the nomenclature of entrepreneurship is a deterrent to some students, entrepreneurship must be framed within its broader definition, as espoused by Blenker *et al.* (2011).

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The notion of EE for: (i) facilitating entrepreneurial energy for social change; and (ii) facilitating an entrepreneurial mindset in everyday practice could do a lot for demystifying and democratising entrepreneurship amongst non-Business students. The SEEPP lecturers maintained that there needs to be space within the curriculum for entrepreneurship in all its guises.

> *"Semesterisation and modularisation have reduced the flexibility in EE. There is a rigidity within the timetable."* (Enabler 1)

This finding concurs with Carlile *et al.'s* (2012) summation that management policies with rigid structures, modular systems, strict timetables, assessment and scripted curricula inhibit creative approaches to teaching, including student placements.

When asked is there a difference in the approach to EE at undergraduate and at graduate level, Enabler 2 responded:

> *"Undergraduate education is very focused on exams. Given the semesterised system, there is little time or space for students to explore their creativity or to set up their own business. Undergraduate students are used to rote learning so they want to be given a set of notes for the module. Entrepreneurship is less focused on theories and more on creativity and originality – this can pose problems for some students used to rote learning."* (Enabler 2)

There is a need to shoehorn entrepreneurship into existing programmes but the difficulty is that some academics do not want to "sacrafice their modules" (Enabler 1) for the inclusion of entrepreneurship within the curriculum. Enabler 2 called for EE to be mandatory for all undergraduate students:

> *"I think there is a need to make entrepreneurship mandatory in all higher education programmes. I have worked in the School of Science and it makes sense that Science, Agricultural Science and Horticultural Science students are exposed to entrepreneurship."* (Enabler 2)

According to the findings, there appears to be a tenuous link between undergraduate EE and graduate entrepreneurial activity. To be fair, it is only in the past decade that there has been a growth in EE provision at third level.

These increases have been largely incremental and the impact *i.e.*, rate of graduate entrepreneurship has been low. This raises important questions about the effectiveness of EE at third level and highlights the need for some metrics to assess graduate entrepreneurs' progress or performance.

> *"More EE allows students to anticipate and understand processes involved in setting up their own business but more needs to be done on entrepreneurial skills and competence development."* (Enabler 5)

> *"There is a need for some sort of metrics e.g., how far has someone progressed with their business proposition?"* (Enabler 6)

Each of the SEEPP lecturers interviewed was asked if they believed there was an overemphasis on the development of HPSUs in Ireland. Whilst they all conceded that there is an emphasis on HPSUs, particularly by Enterprise Ireland, they were pragmatic in relation to current policy in that they understood EI's focus on HPSUs:

> *"I think there is an overemphasis on HPSUs. It is all that EI can talk about, I believe that they are blinded by people meeting HPSU criteria … Are HPSUs all they are cracked up to be?"* (Enabler 2)

> *"Even though very few companies achieve HPSU status, the writing is on the wall – there is going to be a greater focus on the development of HPSUs given Government policy and EI priorities."* (Enabler 5)

> *"As educators, our job is not to pick winners but to help people get to a stage where they can approach EDAs."* (Enabler 3)

What is concerning about this is that EE at undergraduate level does not appear to adequately prepare graduates for self-employment not to mind becoming HPSUs. The SEEPP lecturers conceded that EE does little to hone students' entrepreneurial skills:

> *"More needs to be done on developing students' entrepreneurial skills and competence.* (Enabler 6)

There is an argument to be made that EI are too rigid in their conceptualisation of entrepreneurship focused on the formation of HPSUs based on defined metrics. Equally, there is an argument that EE in HEIs is too focused on the business plan.

This reinforces the view of Enabler 6 earlier (Section 7.1.2.), in pointing to the lack of vision accorded to entrepreneurship by HEI management, based on the practice of *"what gets measured gets done"*. It appears from the findings that the focus of EE at third level is predominantly upon developing a business plan:

> *"EE at third level allows students to anticipate and understand the processes involved in setting up a business. By this I mean, they need to learn how to become creative problem solvers. They need to learn about risk-taking. They need to learn from failure and not to be afraid. I think there is a danger in teaching students about compling a business plan that it looks as though we are providing the right answer or the right formula. What and how we teach needs to be challenged."* (Enabler 6)

Yet, the SEEPP lecturers conceded that such an approach stymied creativity and a passion for entrepreneurship amongst students:

> *"Business plans are the wrong form of assessment..."* (Enabler 1)

Moreover, Enabler 4 identified the main limitation of EE was its academic focus:

> *"Perhaps it is too theoretical. We are not dealing with a homogenous group, therefore, the pace may be too slow or too fast depending on the progress of individual entrepeneurs."* (Enabler 4)

Enabler 7 acknowledged that students were being taught about entrepreneurship through the lens of big business:

> *"Most EE and business education focuses on big business or large corporations, therefore, EE really does not prepare students to set up their own business. Technical excellence is prioritised over commercial application."* (Enabler 7)

There is an absence of case studies of micro or small businesses within the EE curriculum which confirms the belief that HEIs are more concerned about big, international businesses to teach students about business. This is a fundamental flaw in current undergraduate EE because it does not focus on the challenges facing owner managers of micro-enterprises or SMEs. it also highlights a need for the development of case studies of such companies to give legitimacy of entrepreneurship within the academy (publications) and visibility to the attractiveness of entrepreneurship as a career choice.

"Entrepreneurship is unlike other disciplines. It is much easier to train students to become engineers or accountants, but it is more difficult to train them to become entrepreneurs ... there needs to be practice in business enterprise development." (Enabler 3)

Specifically with regard to graduate EE, the SEEPP lecturers acknowledged the importance of experiential learning, namely:

"There is a danger with SEEPP that participants become isolated and comfortable. The year goes by very quickly (structured to reflect the academic as opposed to the calendar or accounting year). There is an overemphasis on honing and recrafting the business plan which I believe is only a document to crystallise ideas." (Enabler 7)

"I think SEEPP provides a cossetted environment and some participants get the feeling they are still at college." (Enabler 8)

"Too few participants are willing to talk to potential customers. Enterprise is all about sales. If you have no sales, essentially you have no business." (Enabler 1)

Specifically, regarding SEEPP, the respondents concluded that participation in the programme facilitated excellent networking opportunities and access to WIT as a resource.

"It offers participants great networking opportunities, specific skills development e.g., sales and presentation skills, it raises their strategic intent. It also provides opportunities for entrepreneurs to access HEIs as a knowledge base." (Enabler 2)

"One of the major benefits is the social aspect of the programme. Being an entrepreneur is like having no one to dance with – it is lonely so participants get to meet with others in the same boat as themselves." (Enabler 14)

"A lot of talent within the group that can be tapped into as a sounding board and for the crossfertilisation of ideas." (Enabler 8)

Interestingly, it appears from the findings amongst SEEPP lecturers that the accreditation of SEEPP had greater benefit to the School of Business rather than to the SEEPP participants. Similar to the SEEPP participants, they agreed that the qualification was a 'nice to have' but it could have had an adverse impact on the programme.

"It is my experience that the more academic the domain, the less commercial focus there will be." (Enabler 3)

There was too much focus on the business plan which "muddied the waters" (Enabler 1) in terms of distracting graduate entrepreneurs from what should be their primary focus *i.e.*, developing a viable business:

> *"I don't think the accreditation of SEEPP is an important factor for participants. The Postgraduate Diploma in Enterprise Development is a nice to have. It is almost counter-intuitive, it is imposing academic rigour on a programme that should be focused on business development."* (Enabler 4)

> *"I do not think that the accreditation of SEEPP is a significant factor particularly if the business is successful. However, it is a windfall gain if the business doesn't take off. It limits the downside for participants if their business isn't successful and they have to return to employment."* (Enabler 6)

The SEEPP lecturers conceded that accreditation was not the graduate entrepreneurs' primary motivation for participating in the programme, therefore, Enabler 1 questioned what is the added value to their business:

> *"I would have to ask how better off are the participants after SEEPP?"* (Enabler 1)

Interestingly, this view is in accord with the SEEPP participants' conclusion that accreditation was more important for participants who did not succeed in establishing their business and for those with lower levels of educational attainment. Graduate entrepreneurs are more interested in creating a viable and vibrant business, rather than pursuing qualifications.

7.1.3 What factors can affect the efficacy of academics teaching entrepreneurship?

When asked what factors can affect the efficacy of academics teaching entrepreneurship, some of the SEEPP lecturers cautioned of the danger of SEEPP becoming too academic, formulaic and rigid.

> *" ... Lecturers are not involved in the application process. There is an issue with the lack of enterprise experience of lecturers. EE seems to be driven more by research rather than a practical, applied knowledge. Everything seems to be informed by research – I ask where is the passion? Is there any passion?"* (Enabler 1)

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"SEEPP is too closely linked with the acadmic rather than the industrial world. There is a definite link between credibility and application i.e., show me what you have done. If a lecturer has not started or even worked in a SME, they run the risk of losing face with the participants." (Enabler 8)

That did not stop lecturers from asking graduate entrepreneurs hard and probing questions regarding the viability and direction of their business proposition and model. To this end, one respondent queried HEIs' approach to graduate entrepreneurs:

"I wonder are we (lecturers) being too nice are we offering participants a false sense of security. We need to be tougher at an earlier stage ask the question "would I invest in your business?" (Enabler 1)

This has resonance with the research findings, stated in Chapter 6, that graduate entrepreneurs highlighted the need for lecturers who were experienced entrepreneurs, the SEEPP manager and EDA personnel to provide honest feedback to them regarding the viablity of their business.

7.1.4 What factors may affect the efficacy of graduate entrepreneurs to be entrepreneurial? Is education central to this self-efficacy?

Each of the SEEPP lecturers interviewed was asked: (i) what factors may affect the efficacy of graduate entrepreneurs to be entrepreneurial; and (ii) if they believed is education central to this self-efficacy?

"The more mature participants, the stronger the candidates. They have good business experience." (Enabler 1)

"I believe that if they get CORD funding, they have a better chance of succeeding. If they don't, there should be an alternative programme." (Enabler 1)

These comments provide interesting perspectives into some factors that contribute to graduate entrepreneurs' success in SEEPP and business. In essence, the maturity and experience of graduate entrepreneurs has a bearing their business success. By securing CORD funding, the graduate entrepreneurs' business met EI criteria as a potential HPSU and as such is a positive endorsement of their business.

7.1.5 How are HEIs, SMEs and EDAs working together to promote student and graduate entrepreneurship?

When asked how are HEIs, SMEs and EDAs working together to promote student and graduate entrepreneurship, the respondents were somewhat ambivalent in their responses.

> *"More could be done to strengthen links with enterprise support agencies. I believe that it is down to the individual CEO of the County Enterprise Board. There doesn't seem to be a uniform approach to engaging with colleges in the region."* (Enabler 8)

> *"The real issue is that EDAs won't talk to people without experience. This begs the question will they talk to students or recent graduates? Entrepreneurship educators need to broker links with EDAs for their students."* (Enabler 3)

Some enablers believed that some EDAs, particularly EI, are not very responsive to graduate entrepreneurs for example:

> *"EDAs are becoming more risk averse with respect to funding entrepreneurs so there is a greater emphasis on education and experience. EDAs have more confidence and security – show and tell..."* (Enabler 6)

> *"there is no specific policy to deal with graduate entrepreneurs. Ideally, there should be an information centre or portal, where alumni i.e., potential graduate entrepreneurs can learn about SEEPP or who can they contact if they have a business idea."*
> (Enabler 6)

The SEEPP lecturers suggested that more could be done to maintain contact with alumni, inform them of the enterprise development supports available to them through the college or through the EDAs.

> *"Although we are working well together, there could be greater links with EDAs to develop closely aligned initiatives. EDAs need to be proactive, at the moment, they are slow to engage."* (Enabler 5)

When asked for suggestions as to how could HEIs, SMEs and EDAs work better to promote student and graduate entrepreneurship, the SEEPP lecturers had a number of practical suggestions which included:

"There needs to be a specific and articulated policy to promote entrepreneurship which must be communicated to all staff, academics and students ... Firstly, educators need to talk to would-be entrepreneurs about what they need. HEIs need to keep in touch with graduates and inform them of the supports that they can offer them or their links with EDAs. Perhaps this should not be limited to alumni but perhaps there is scope to widen the remit to a wider enterprise cohort." (Enabler 2)

"HEIs need a figurehead for entrepreneurship ... an entrepreneur in residence. Her/his role is to increase the profile of entrepreneurship both within and outside the HEI. The symbolism is important it makes a strong statement." (Enabler 7)

The findings point to a need for more than a figurehead or symbol for entrepreneurship, rather there is a need for HEIs to appoint a dedicated enterprise champion to broker links with students, alumni, lecturers, entrepreneurs and EDA personnel to develop a co-ordinated and integrated approach to EE at third level.

7.2 Section 2: Perspectives of EDA Personnel

I conducted semi-structured interviews with seven EDA personnel. Six were regarded as key stakeholders in enterprise development within the South East region, namely: CEBs, Enterprise Ireland (EI), South East Business Innovation Centre (SEBIC) and a regional enterprise centre. Whilst Enabler 1 was not based in the South East region, he worked for Enterprise Ireland and had a national brief for the development of HPSUs. All respondents work as senior executives within their respective organisations and given their experience of working with start-up entrepreneurs, they were considered as reliable informants for the purpose of this research. Their perspectives are central to understanding the effectiveness of HEIs in the provision of EE because as professional enterprise enablers, they were cognisant of: (i) their own organisation's policies and priorities *vis-à-vis* supporting graduate entrepreneurs; (ii) the regional and national landscape for enterprise development; (iii) the profile of entrepreneurs (including SEEPP participants) in the region who have sought EDA assistance; and (v) the circumstances under which entrepreneurs started and developed their businesses. In order to contextualise the research, I asked each of the EDA personnel what proportion of their clients were graduates. Their responses provided a really interesting insight into how EDA personnel regard entrepreneurs and indeed graduate entrepreneurs.

In short, all EDA personnel explained they do not necessarily categorise entrepreneurs as graduates or non-graduates. Without exception, each respondent said that they are more concerned with (i) the strength of the business proposition and (ii) the promoter *i.e., "the jockey"* (SEEPP 14) rather than her/his educational background. It is evident that all seven EDA personnel are focused on the development of viable, sustainable businesses. However, EI has a particular focus on HPSUs and their focus is on the market viability of the business proposition, access to market, sales proposition and this would suggest that most of their clients are graduates.

> *"EI does not have a specific approach to graduates - we are more concerned with the business proposition i.e., the ability to develop technology. In such a case, there is a greater probability that those promoters would be graduates but we would do due diligence on the person and her/his capabilities. The key issue for EI is route to market i.e., market access and the ability to sell and generate sales. There needs to be a sales pipeline."* (Enabler 11)

> *"We do not have any explicit policy to support graduate entrepreneurs. Our focus is to support any entrepreneur. I believe enterprise is more about the person than the idea. Of course, we are looking for viable business ideas but it is all about the person and who will drive the idea forward."* (Enabler 13)

Enabler 13 admitted that there is no management information system in place to track the educational background of clients and conceded that this was a weakness of the system. However, this does reinforce the point that CEBs' focus is on the business proposition rather than the educational background of client(s). She concluded:

> *"We have very few, if any, graduates applying directly out of college. However, we have no way of capturing that data and, as such, there is no need to capture that data."* (Enabler 13)

The EDA personnel concluded that the typical profile of graduate entrepreneurs in the region is male, between the ages of 30 and 40 years old and comes from a technical background *i.e.,* ICT, Engineering or Science. However, there has been a growth in older entrepreneurs, typically, men in their 50s which Enabler 11 referred to as "reluctant entrepreneurs". These entrepreneurs have been pushed into self-employment by unemployment and/or the adverse economic conditions.

Enabler 11 maintained that some of these people could be classed as "unemployable" given their age, however, they have significant market experience which they wish to build upon in the development of their own business. Enabler 9 who had been working in this sector since the 1980s offered an interesting insight:

> "There is a higher level of male entrepreneurship. I put this down to that female entrepreneurs are typically clients of the County Enterprise Boards because their business is in the services sector or that they are micro-enterprises. All of our clients have significant experience. We never see raw graduates approaching us. I'm not sure if this is a reflection of the two colleges in the region." (Enabler 9)

There is a need to differentiate between graduate entrepreneurial activity pre-recession and post-recession.

> "What is different now is that there appears to be greater level of sophistication amongst entrepreneurs - more qualified people are coming to the table from a greater diversity of sectors and this is invariably a sign of their higher level of education or qualifications." (Enabler 9)

> "There has been an increase in graduate entrepreneurs over the past two years in particular but I would classify a lot of them as reluctant or necessity entrepreneurs." (Enabler 11)

> "Post-2008, there has been an increase in the number of entrepreneurs. However, the majority of them would never have seen themselves as self-employed. There are more necessity entrepreneurs in the mix." (Enabler 15)

> "Yes, we are seeing more graduate entrepreneurs. However, I believe we are seeing a lot of necessity entrepreneurs because self-employment is becoming an option in itself as opposed to emigration." (Enabler 14)

> "The number of young people applying is relatively small and typically, they want to set up activity/holiday enterprises – these people are passionate about something. Occasionally, a person in their late 20s may come forward with a business idea. My thinking is that young people are emigrating – that is a possible or plausible reason for them not applying to us." (Enabler 13)

What is striking is the respondents' belief that there were very few 'raw graduates' presenting themselves to EDAs for assistance or funding. All seven EDA personnel concluded that most graduate entrepreneurs have significant work experience prior to setting up their own business. Whilst emigration was cited as a possible factor affecting the low number of raw graduates seeking their support, there was no empirical evidence to substantiate this claim.

7.2.1 What are HEIs Doing to Promote Entrepreneurship amongst Students?

In 2008, the Organisation for Economic Co-operation and Development (OECD) (2008) called upon on higher education management to show leadership in the promotion of entrepreneurship. This could be done through: courses; knowledge exchanges with enterprise; by instilling an enterprise culture; and promoting a greater awareness of the forms and value of entrepreneurship accrued by staff and students. Whilst the EDA personnel interviewed recognised the importance of EE in developing students' entrepreneurial mindsets through EE, Enabler 9 believed that:

> *"Students coming out are trained to work in MNCs. The headspace and focus is in MNCs/FDI. HEIs needs to lead the way in making entrepreneurship cross curricular where it touches every course, where relevant."* (Enabler 12)

This gives credence to Florida's (1999) belief that HEIs' primary role as a nation's 'primary knowledge source' is to produce graduates or 'knowledge workers'.

> *"IoTs are promoting entrepreneurship through campus incubators, Enterprise Platform Programmes, EE in undergraduate programme."* (Enabler 15)

> *"EE is in its infancy in Ireland so difficult to see a correlation between EE and graduate enterprise development."* (Enabler 12)

Whilst it could be argued that EE is still at an embryonic stage in Irish higher education. Significantly, the findings show that there is little evidence to show that HEIs have evolved into entrepreneurial institutions and this gives credence to Brennan *et al.'s* (2007) claim that the presence of entrepreneurial activity within a HEI does not necessarily make it entrepreneurial. Concern was raised about where the responsibility lay for championing entrepreneurship within HEIs.

> *"It appears to be no one's job to promote entrepreneurship ... Whose job is it anyway? In the absence of a champion, it can fall through the cracks. There is a need for someone to champion and promote entrepreneurship – it needs to be written into every curriculum and focus initially on courses that matter i.e., where there is a strong probability that the graduates will be self-employed. Then, it can filter into the rest of the curricula."* (Enabler 13)

This implies a need for a dedicated person to broker links with students, entrepreneurship lecturers and EDAs in the triple helix tradition, as espoused by Etzkowitz *et al.* (1999).

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When asked if they were aware of best practice in EE, interestingly, all enablers cited international HEIs, mainly in the US e.g., Babson College, University of Michigan, the Kauffman Institute and Stanford University. Only one enterprise enabler cited IT Tralee as an example of good practice in EE in Ireland. A reasonable explanation for that is that the US has a fifty-year head start on European and Irish HEIs in the provision of EE (Katz, 2003; Blenker *et al.*, 2006).

7.2.2 What is the Focus of EE at Third Level?

When asked if current EE provision adequately prepares graduates to set up their own business, all respondents said no.

> *"EE appears to be a bolt-on activity. I do not see a huge amount of undergraduate entrepreneurship and there is definite room for improvement. Students need to get entrepreneurial experience. The reality is that we are preparing people for a tough market place. Based on my experience, you need to be cruel to be kind and 'kill the puppy'. By that I mean it is better to have a robust, encouraging system rather than to give people false hope."* (Enabler 9)

The EDA personnel concluded that EE does not adequately prepare graduates for the harsh realities of setting up their own business. They expressed concern about the business-readiness or preparedness of raw graduates, many of whom lack a commercial experience or market exposure. Essentially, the EDA personnel maintained that more needs to be done with respect to developing practical skills such as sales, market research and marketing. What EDAs are looking to support are commercially focused entrepreneurs with a clear business model. Whilst they are not necessarily looking for perfection, they have a preference for investing in or supporting businesses where the entrepreneurs have a proven track record in business. Blenker *et al.* (2011) claimed that EE for ENV is influenced by the integration of marketing, strategy, budgeting and analysis of a potential business using a SWOT analysis. However, some of the EDA personnel concluded that the big issues are not being addressed by EE, namely route to market or contacts and networking.

> *"Whilst conceding this may be difficult for HEIs to do this, there is greater need for market research in third level ... Market research is drudgery so perhaps students could undertake real-world research on behalf of indigenous companies which could link to market research courses/modules."* (Enabler 11)

"I think EE can be prescriptive and using a business plan to teach entrepreneurship is dry. There appears to be no joined up thinking. There are great kids (sic) at third level, who have been exposed to entrepreneurship at second level and they may not have the opportunity to engage with or study entrepreneurship at third level." (Enabler 13)
"It is disappointing that there are few, if any, case studies of small businesses." (Enabler 15)

"We see some raw graduates coming in but I would say that there is a naivety about them, a lack of realism ... I notice that many come in with spreadsheet forecasts and a sort of slavish adherence to business planning tools, but generally they lack an understanding of the business process." (Enabler 14)

This suggests that teaching entrepreneurship through a business plan is not enough to prepare students for the vagaries of the marketplace. It has resonance with the literature, wherein researchers argued the educational programmes are largely abstract, theoretical and formulaic (Honig, 2004; Gibb, 2005; Mullins, 2006; Jones, 2010; O'Gorman, 2010). Whilst the use of the business plan has its place in effective pedagogic practice of EE, emphasis must also be placed on 'real world' practice. When asked if they believed there was an overemphasis on the development of HPSUs, there was a difference of opinion amongst the EDA personnel, namely between EI and CEB personnel. In essence, their responses were informed by their role and the remit of their employer. For example, all EI staff defended this focus:

"EI's focus on HPSU is the correct one as the Irish market is so small and limited. There is a need to build significant markets and to look at generating exports. I believe the best prospects are overseas". (Enabler 9)

"The focus on HPSUs is the only game in town. Without sounding pejorative, it works." (Enabler 11)

"Whilst it may appear that there is a blind focus on HPSUs, we do need companies that can scale quickly. There is a need for an outward, export-oriented focus from the outset. I believe that the Irish market is a test market – it is too small and not commercialy viable." (Enabler 14)

Enabler 13 disagreed with EI's 'blind focus' on HPSUs and argued that in reality she comes across very few HPSUs within the South East region. It is clear that EI and the CEBs, whilst under the auspices of the Department of Jobs, Enterprise and Innovation and receive policy direction from Forfás, have very different approaches to supporting entrepreneurs.

The findings suggest considerable variations in their approach to supporting entrepreneurs: the CEBs appear to be more grounded in the reality and understand that entrepreneurs take time to develop their business. Conversely, EI personnel argued that there is a need to differentiate between lifestyle entrepreneurs and HPSUs and treat them as two different constituencies. Similar to the findings of Hills (1998), Gibb (1993), Matlay *et al.* (2007) and HETAC (2012), there is an ambiguity in EE at third level and this has led to a 'one size fits all' approach to EE. The research with the SEEPP participants reveals that such an approach does not meet the diverse needs and growth aspirations of students.

When asked what are HEIs doing to underpin the growth and rejuvenation of the Irish economy through the EE, Enabler 12 identified the challenges inherent in EE at third level:

> *"Semesterisation is a huge issue with regard to level or momentum. Primarily at undergraduate level. The system needs to change."* (Enabler 12)

The literature relating to EE highlights that experiential learning is most effective within the context of EE (Kolb, 1984; Cotton & Gibb, 1998; O'Brien, 2007; Ryan, 2008), however given the constraints of the academia *i.e.,* semesterisation and modularisation, there is little space for students to embrace fully entrepreneurship at undergraduate level. A notable exception is the flexible semester, a novel initiative within WIT's School of Business which allows third year Business students to spend a semester developing a business. Unfortunately, the uptake of this by students has been disappointingly low. Whilst the reasons are unclear, it may be because entrepreneurship has not gained parity of esteem to work placement. Even within the context of a Business School, entrepreneurship is regarded as an esoteric activity for a talented minority of Business students. The metaphor of bringing a horse to the water comes to mind and this insight substantiates Engel *et al.'s* (2006) belief that HEIs cannot plan entrepreneurship even though they support it through pedagogy, skills development and networking opportunities. Enabler 15 was critical of the primacy of the business plan within SEEPP:

"At graduate level, lecturers really need to perform. By that I mean, they must learn how to help students to move their business from a concept to commercialisation. A business plan is just a plan — it does not make things happen. The hardest part is how to move a business forward, how to commercialise it." (Enabler 15)

Whilst the notion of entrepreneurship for life has been gaining momentum internationally (Blenker *et al.*, 2011; Bridge *et al.*, 2011), the findings reveal that the EDA personnel were more concerned with supporting an individual or a team of graduates who wish to establish a traditional *i.e.*, commercial business. Consequently, the broader definition of entrepreneurship and approaches to EE, as espoused by Blenker *et al.* (2011), are of little consequence to EDA personnel. When asked if the accreditation of SEEPP was a significant factor for entrepreneurs, all seven EDA personnel believed that it was a 'nice to have' but they did not regard it as an essential part of the programme:

"It is an attractive add-on but in the main, I believe that entrepreneurs or potential participants are not excited by it." (Enabler 10)

"I would say the accreditation is a nice to have but I would have to ask so what? My belief is that the real proof of the pudding is developing an investment-ready business plan." (Enabler 14)

Enabler 11 raised concern about SEEPP participants gaining a Postgraduate Diploma in Enterprise Development on successful completion of the programme:

"I didn't really think much of it as I believed it diverted people's attention away from their primary focus of business development. Some people stayed on SEEPP to get the qualification. I believe that, in some ways, it devalued the Institution. By that I mean, that someone could achieve a postgraduate qualification without attending classes full-time." (Enabler 11)

It is curious that in a changing landscape of higher education that features experiential learning *i.e.*, working on real-life business, may not be perceived to be higher order learning. Furthermore, approaches such as 'blended learning' may be perceived by adult learners who were schooled through more traditional didactic approaches, to be 'soft' approaches to education with little evidence of real learning taking place.

The EDA personnel were questioned on their perspectives of the benefits and limitations of EE and the role of HEIs, particularly IoTs, in graduate enterprise development. All seven of the EDA personnel recognised the importance of EE in raising the profile of entrepreneurship as a viable career option yet they were skeptical about its effectiveness. When asked if the increase in EE at undergraduate level had led to greater graduate enterprise development, without exception, all EDA personnel maintained that it was difficult to conclude if there was a correlation between increased EE provision at third level and graduate entrepreneurship:

> "I have not yet seen an increase in graduate entrepreneurs as a result of EE. If I look at the profile of the guys (sic) approved as HPSUs, they have been in the system for a while... There is a definite lag time between graduation and enterprise start up." (Enabler 11)

> "As such, I cannot see any immediate results from EE ... In fact, I work with a particular cohort of graduates and there is no doubt that they are highly skilled. However, they know nothing about business. It is crazy and impractical that these students are going to set up their own business and know nothing about starting or running a business." (Enabler 13)

This supports the findings of Gibb *et al.* (2006), McKeown *et al.* (2006), Matlay (2006), Potter (2008) and Jones (2010) that very little is known about the effectiveness of EE in generating sustainable entrepreneurial endeavours.

The EDA personnel highlighted some limitations in the programme, namely:

> "We see people who have very good technical skills but are very poor at commercialisation. I often urge them to "let the baby go". They spend too much time perfecting the product but fail to work on the commercialisation of their business ... The weakness of many SEEPP participants is that they are not commercially ready at the end of the 12-month programme. Perhaps the programme is too academically focused?" (Enabler 10)

Significantly, the EDA personnel believed that SEEPP participants were engaged in too many iterations of the business plan and this distracted them from what should be their primary focus *i.e.*, to generate a viable business through sales.

> "SEEPP provides an umbrella or protection for participants against the harsh realities of the commercial world. My instinct is that the majority are not real entrepreneurs. They are not good sales people." (Enabler 12)

"The biggest problem with SEEPP is that there is too much variety in the programme. By that I mean there is too much diversity amongst the participants which results in an unfocused programme." (Enabler 14)

Table 7.3 summarises EDA personnel's perspectives of the benefits and limitations of EE at third level.

Table 7.3 Perceived Benefits and Limitations of EE at Third Level

Benefits of Undergraduate EE	Limitations of Undergraduate EE
- Exposure to alternative career path - Opportunity to participate in Institute and national enterprise awards - Continuous assessment - Value of group work/peer learning - Links with real and graduate entrepreneurs - Passionate lecturers - Links with EDAs - Entrepreneur in residence: positive role model	- Little evidence of entrepreneurship within the curriculum - Theoretical approach to EE - Over-reliance on business plan as teaching tool - Low conversion rate of graduates to entrepreneurs - Raw graduates are ill prepared for self-employment - Title of entrepreneurship can be off putting to students - Semesterisation & modularisation - Credibility of academics teaching entrepreneurship
Benefits of Graduate EE (SEEPP)	**Limitations of Graduate EE (SEEPP)**
- Focused, motivated learners - Networking with like-minded peers - Learning is live and real-world - Greater focus on self-directed learning - Community of Learning - Graduate learning embedded in campus incubator - Space for graduates to assess the feasibility of their business & test the market - Access to campus incubator & facilities - Links with HEI staff and research Centres - Innovation vouchers - Success culture	- Over-reliance on business plan as teaching tool - Too many iterations of business plan to the detriment - Not enough focus on sales - Limited engagement with HEI Staff - Limited engagement with EDAs of non SEEPP participants - Campus incubator located off campus

Source: Current Research

7.2.3 What Factors Affect the Efficacy of Academics Teaching Entrepreneurship?

The consensus view is that EE can play a key role in developing graduate entrepreneurship but it needs to be less theoretical and more practical. This was expressed in a number of ways:

"I believe that we need to approach EE from a very practical point of view by starting with the basic principles i.e., you need to sit students down, identify their product or business, identify an expert mentor, set goals/targets e.g., to earn €50k per annum. There is a real need to break it down, take it back to the basics and make it more practical and when you think about it almost everything you do in life is a business (paying bills, meeting deadlines etc). This thinking needs to be encouraged amongst students." (Enabler 13)

"I don't believe that business plans are the way to teach entrepreneurship as they are pieces of fiction and are not based in reality ... EE does not give students an insight into running a business. How students can really learn to set up a business is through experience..." (Enabler 15)

Some of the respondents said they were not convinced that academics are "the right fit" for teaching entrepreneurship. They believed there is a need for specialists delivering specific training to the participants.

"There is a problem with an academic approach to EE. This can lead to an unrealistic view of the modern business world." (Enabler 9)

This is consistent with Martin *et al.'s* (2011) belief that a good lecturer is not only a pedagogical expert but also someone possessing a deep knowledge and understanding of entrepreneurship. It also has resonance with the EU Survey of Entrepreneurship in Higher Education (2008) which concluded that the quality of EE is dependent on whether lecturers have real-world experience in order to fully appreciate and fully communicate the benefits and obstacles of entrepreneurial activities.

7.2.4 What Factors may affect the Efficacy of Graduate Entrepreneurs to be Entrepreneurial? Is Education Central to this Self-efficacy?

The EDA personnel concluded that before graduates start their own business, they need authentic experience and market exposure in order to hone their business skills. Enabler 11 maintained that EI meets very few 'raw graduates' with business ideas, nor has EI invested in such businesses. If EI were to invest in such businesses or graduate entrepreneurs, they would need to have developed distruptive technology *i.e.,* developed an innovation that would have a definite market application. Essentially, he believed that new graduates lack essential market exposure.

Similarly, Enabler 15 maintained:

> *"The reality is that raw graduates won't get past the first three months of business. They just don't have the wherewithall from college. They have not been trained in how to set up a business. EE does not give students an insight into running a business. How students can really learn to set up a business is through experience..."* (Enabler 15)

This highlights the limitations of EE in preparing new graduates to set up a business and it concurs with Martin *et al.* (2011) and HETAC (2012) who concluded that critical questions have not been raised or answered regarding the effectiveness of EE in producing sustainable graduate enterprises. According to Enabler 13:

> *"Some EDAs have a very rebarbative approach to entrepreneurs because it is incredibly difficult for entrepreneurs to get in the door to meet them. They need a cast iron business plan i.e., commercially ready and they require a trinity of things, namely: (i) industry experience; (ii) finance; and (iii) market(s) in place."* (Enabler 13)

This comment is especially worrying given students have limited exposure to authentic experience within their undergraduate study. Whilst the EDAs may rationalise their decision not to support 'raw graduates' without the requisite trinity of factors, namely: (i) experience; (ii) finance; and (iii) market. This highlights a fundamental flaw in current enterprise policy – in essence, new graduates are a disregarded constituency by EDAs. This seems to go against government rhetoric and policy expectations of HEIs as reservoirs of entrepreneurial talent (Report of the Small Business Forum, 2006; Innovation Taskforce, 2010; Hunt Report, 2011). It highlights a need for a national entrepreneurship policy to focus on supporting all forms of graduate entrepreneurship, not just those with maturation, money and markets. Meeting each of these criteria soon after completion of their undergraduate study is more difficult in a recessionary climate of slow growth and a culture of poor lending by banks, venture capitalists and business angels nationally and internationally. Within this context, the views of the EDA personnel appears harsh *vis-à-vis* young graduates and this may be because there is a lack of engagement between EDAs, HEIs, lecturers and the undergraduate community. This may go in some way to explain the lack of understanding of the challenges facing young graduates in establishing their businesses.

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7.2.5 How are HEIs, SMEs and EDAs Working Together to Promote Student and Graduate Entrepreneurship?

This research highlights that the relationship between HEIs and EDAs, particularly EI, are strong at graduate level. In effect, EI works closely with WIT to interview and select SEEPP participants and to monitor their progress throughout the year. However, it appears that their focus has been primarily in assisting graduate entrepreneurs, rather than the undergraduate community. When asked what EDAs could do to promote greater graduate enterprise activity, the EDA personnel responded in the following ways:

"There is a really good infrastructure in place in HEIs but there is a need to function more professionally and focus more on entrepreneurial outputs. I understand that academics have an academic focus but I would like to see colleges having and developing an enterprise-friendly focus." (Enabler 9)

"I think there ought to be more involvement with past participants, develop links with alumni. There is a guillotine effect when it comes to the end of SEEPP. Particiants are cut off and there are few if any any supports. This is a critical time for entrepreneurs. I would like to see ongoing supports for graduate entrepreneurs." (Enabler 15)

"The new generation of entrepreneurs is adept at scouting supports i.e., identifying who they need and who adds value to their business. Essentially, they are strategic and get what they want." (Enabler 14)

The EDA personnel conceded that there is a need to strengthen links between EDAs and HEIs, in order to promote greater graduate entrepreneurship. In short, the EDA personnel support the development of stronger links with HEIs but they cautioned that this requires an enterprise champion to broker and exploit such links.

7.2.6 Summary of Research with EDA Personnel

The findings reveal that the EDA personnel believed that there are merits for EE; however, EE at third level does not adequately prepare graduates for self-employment. It is worrying that EDA personnel, as key exponents of entrepreneurship, are unconvinced of HEIs' commitment to: (i) the enterprise agenda or (ii) preparing students for self-employment. A reasonable explanation could be that EE has only entered the realm of Irish higher education since the mid-1990s. However, the EDA personnel expressed concern about the appropriateness and indeed the suitability of academics in EE. Given the majority of academics had little first-hand experience of setting up business, the EDA personnel believed that this led to a theoretical approach to EE at third level. There is some frustration expressed by EDA personnel at the *ad hoc* nature of their previous engagement with HEIs and they would like to be more involved in promoting entrepreneurship, particularly to undergraduate students. Undoubtedly, the EDA personnel have a clear insight into the requisite skills and knowledge required by all entrepreneurs to succeed in business.

Reflecting on their perspectives of EE and graduate entrepreneurs, their views appear to be rather harsh and seem to lack an understanding of what EE can achieve. Raw graduates do not stand a chance of gaining the support of EDAs because in the main, they lack the requisite: (i) industry experience; (ii) finance; and (iii) market(s). This highlights a fundamental flaw in current enterprise policy privision *i.e.,* that there are few, if any, supports available for raw graduates. It highlights inconcruenecy in the belief that more EE provision will lead to more graduate entrepreneurs or in other words, EE is not a linear activity of mere inputs and outputs. Setting up a business is a difficult and lonely process and graduate entrepreneurs need support and time to assist them in the development of their business. Notwithstanding the fact that the EDA personnel are target focused, they appear to lack an understanding of the challenges involved in becoming a successful entrepreneur. This was particularly apparent in their criticism of HEIs as 'hiding places' and their apparent lack of appreciation that EE is a qualitative process of growth and development for the individual entrepreneur and also for the business they are growing.

7.3 Section 3: Synthesis of Key Research Findings

A synthesis of the research data found both convergence and divergence in enterprise enablers' perspectives on a number of key issues that have a relevance to EE at third level, particularly at graduate level. What is particularly striking about the findings of the research amongst the SEEPP lecturers is that they believed that HEIs are still preparing students for employment, rather than self-employment. They believed that HEIs have not fully embraced the enterprise agenda and some believed that HEIs are playing lip service to it. Initially, this appears to be at variance with government policy but it may be in part due to the complacency of graduates and lecturers who expected employment as opposed to self-employment during the *Celtic Tiger* era. More significantly, this anomaly could be explained by the fact that entrepreneurship has only begun to permeate higher education curriculum in the past twenty years (Wilson, 2008). The findings revealed that outside of the School of Business, there is a pronounced absence of commitment to the enterprise agenda. Notwithstanding the investment in the physical campus incubators and SEEPP, both initiatives it must be said are focused on supporting graduate entrepreneurs. EE at undergraduate and graduate level continues to be within the domain of the School of Business. The SEEPP lecturers believed that graduate entrepreneurs need space to develop their business, whereas, some EDA personnel regarded SEEPP as cocooning graduates from the harsh realities of commercial business. There was recognition amongst both SEEPP lecturers that SEEPP should not provide a 'hiding place' for graduate entrepreneurs. This was articulated by all enterprise enablers, and was expressed as a need for absolute candour when preparing graduate entrepreneurs for the marketplace.

Specifically, SEEPP participants must be required to present evidence of sales, sales projections and customers. In essence, business is about making sales and graduate entrepreneurs must not hide behind fictitious/abstract business plans, rather they have to convince EDAs of the viability and sustainability of their business. The EDA personnel believed that rather than building a sustainable business model, graduates were more focused on writing the perfect business plan. This has resonance with researchers such as Mullins (2006), Honig (2004), Potter (2008) and O'Gorman (2010), who have been equally critical of the centrality given to the business plan in EE.

It is evident from the findings that the EDA personnel place a greater emphasis on a business-ready proposition than on a perfectly crafted business plan. In short, they believed that SEEPP, whilst more practical than other forms of EE, nonetheless it too was academic in nature. In practice, the EDA personnel were more concerned with the quality of the business proposition and this raises a fundamental question how can raw graduates secure EDA support for their business without meeting these criteria.

The EDA personnel expect graduate entrepreneurs to gain experience within the workplace before embarking on self-employment. Whilst this expectation is largely consistent with international literature *e.g.,* Bandura (1997), it does highlight a fundamental flaw in enterprise policy in Ireland that new or raw graduates are a largely disregarded constituency. Whilst both SEEPP lecturers and EDA personnel conceded that there has been some excellent collaboration between WIT and the EDAs *i.e.,* EI, CEBs and SEBIC, notably through SEEPP, this collaboration has not been optimised at undergraduate level. I conclude that the real focus of entrepreneurship in WIT is at graduate level (high end of EE continuum). Similar to the research findings from the graduate entrepreneurs, the enterprise enablers articulated a willingness and appetite for engagement with HEIs in order to promote the enterprise agenda. This is particularly pertinent with respect to undergraduate students. The EDAs regard themselves as an untapped or latent resource for HEIs, lecturers and students.

Whilst there has been good collaboration between WIT and the EDAs for SEEPP, there is a real need for HEIs to work with the EDAs to develop a coordinated plan for enterprise development amongst the undergraduate constituency. The EDA personnel expressed a genuine willingness to engage with HEIs to promote student and graduate entrepreneurship. However, this enthusiasm needs to be harnessed and exploited by entrepreneurship educators. There is a need for lecturers to broker linkages between EDAs, students and graduates through formal links with EDAs.

A key point of differentiation between the SEEPP lecturers and EDA personnel is that the former are more concerned with embedding entrepreneurship across the HEI curriculum, whereas, the latter are more concerned with HEIs producing greater numbers of graduate entrepreneurs. HEIs have a broader educational agenda *i.e.,* to democratise EE, to develop students' entrepreneurial mindset and to give them the requisite skills to set up their own business. Conversely, EDAs, particularly EI, have unreasonable expectations of EE and HEIs that they can produce graduates with the trinity of factors. In short, they are interested in 'picking winners' (Porter, 2007) or supporting HPSUs and it is patently clear from this research that EE at undergraduate level has a long way to go in meeting their expectations.

7.4 Conclusion

Notwithstanding the initiatives to promote entrepreneurship at third level, all enterprise enablers concluded that HEIs: (i) are not entrepreneurial; and (ii) do not adequately prepare graduates for self-employment. This is evident given the small numbers of 'raw graduates' seeking EDA assistance. The findings revealed that the EDA personnel are more focused on supporting viable, sustainable businesses, not necessarily graduate entrepreneurs. Whilst EE at graduate level has greater conversion rates of students to graduate entrepreneurs, the EDA personnel believed that there is an over-emphasis on the business plan in EE which can be to the detriment of developing a commercially viable business. SEEPP lecturers regarded SEEPP as a precious space, where graduate entrepreneurs can develop their business, whereas some EDA personnel regarded SEEPP as a hiding place. Collectively, the EDA personnel articulated an appetite for greater engagement with HEIs in order to promote entrepreneurship because currently they regard themselves as an untapped resource for HEIs, academics and students. Such links require a coherent plan for HEI/EDA engagement rather than a reliance on the informal arrangements of the past. The current economic conditions are spawning 'necessity entrepreneurs', however, it cannot be overstated that the focus of EE at third level must remain on developing sustainable businesses. Enterprise enablers have a key role to play in supporting graduate entrepreneurship and must show an appreciation of the challenges faced by graduates in developing their business.

Admittedly, EDA personnel have to attain certain targets, however, I believe there is a need for a more humane approach to dealing with graduate entrepreneurs by looking beyond their current status to the potential of their business. In summary, these research findings will form the basis of the discussion chapter, Chapter 8, wherein all these findings will be discussed through the lens of the extant literature, policy and the conceptual framework. This will provide a triangulated perspective of EE at third level and assist me in the development of a refined conceptual framework.

Chapter 8 Discussion of Research Findings

8.0 Introduction

The Literature Review highlighted that previous research has provided a limited insight into graduate entrepreneurs' perspectives of EE at third level which may be because of the difficulty in evaluating its effectiveness. A more plausible explanation may be that no one asked graduate entrepreneurs what they really thought of EE at third level. The process of triangulation facilitated the integration of findings from both the quantitative and the qualitative research to provide a nuanced understanding of EE at third level from the perspective of SEEPP participants, non-SEEPP graduate entrepreneurs and enterprise enablers. This population represented a 'blackbox' of critical data to provide a holistic perspective of EE at third level to add to the rigour of this study. These perspectives will be discussed within the context of the extant literature, policy and the conceptual framework to inform a revised conceptual framework for EE at third level. Creswell (2005) posited that the identification of a research problem consists of specifying an issue of study, developing a justification for studying it and suggesting the importance of the study for select audiences. In exploring the research problem, the research questions were identified and aligned to the conceptual framework as depicted in Table 8.1.

Table 8.1 Aligning the Research Questions with the Conceptual Framework

Theme of Conceptual Framework	Research Questions
Entrepreneurial HEI and Leadership	1. What are HEIs doing to promote entrepreneurship amongst students?
Entrepreneurial Staff	2. What factors can affect the efficacy of academics teaching entrepreneurship?
Entrepreneurial Students & Graduates	3. What factors may affect the efficacy of graduate entrepreneurs to be entrepreneurial? Is education central to this self-efficacy?
Dynamic Learning Environment	4. What are the benefits and the limitations of EE? 5. What is the focus of EE at third level? 6. Is there a difference in the approach to EE at undergraduate and at graduate level?
Part of a Broader Entrepreneurial Ecosystem	7. How are HEIs, SMEs and EDAs working together to promote student and graduate entrepreneurship?

Source: Current Research

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As an interpretive study, the conceptual framework was examined in light of both graduate entrepreneurs' and enterprise enablers' perspectives of EE at third level. This chapter is structured around the five themes of the conceptual framework and the findings will be discussed in light of the extant literature and policy. Linkages between various stages of the research are examined in order to present an accurate representation of all of the research cohorts' perspectives of EE at third level. The chapter is divided into the following three sections, namely: (i) section 1 provides a synthesis and discussion of the salient research findings from the qualitative research amongst the SEEPP and non-SEEPP graduate entrepreneurs and enterprise enablers *vis-à-vis* the conceptual framework and extant literature and policy; (ii) section 2 highlights the emerging themes from the research findings; and (iii) section 3 proposes a revised conceptual framework for EE at third level.

8.1 Section 1: Synthesis of Graduate Entrepreneurs' and Enterprise Enablers' Perspectives of EE at Third Level

This section provides a synthesis of both graduate entrepreneurs' and enterprise enablers' perspectives of EE at third level and discusses the research findings *vis-à-vis* the extant literature and policy and the five core themes of the conceptual framework.

8.1.1 Entrepreneurial HEI and Leadership

Stevenson *et al.* (2001) concluded that the government's role is to stimulate a culture of social capital exchange based on indigenous entrepreneurship and to create the appropriate institutional framework at a national level to address the supply side of entrepreneurship. In effect, governments worldwide are focusing on HEIs to produce the entrepreneurial talent with the motivation, the financial means and the entrepreneurial skills to launch a new business. The Literature Review highlighted that there has been a fundamental change in the nature of the work carried out by HEIs and their mission has evolved from teaching to include research, the development of new knowledge, and entrepreneurship through teaching, research and the commercialisation of research (Flexner, 1930; Leydesdorff *et al.*, 1998; Etzkowitz *et al.*, 2000; Barry, 2004; Neck *et al.*, 2004; Potter, 2008).

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The findings provide little evidence that Etzkowitz *et al.'s* (2000) 'entrepreneurial university' exists in Ireland. Notwithstanding the laudable initiatives to promote entrepreneurship at third level in Ireland including: campus incubators, EPPs, EE at undergraduate and graduate level, flexible semesters, it would be naïve to conclude that these initiatives make a HEI entrepreneurial. This gives credence to Brennan *et al.'s* (2007) belief that the presence of entrepreneurial activity within a HEI does not necessarily make it entrepreneurial. Whilst these initiatives are success metrics of HEIs in broad entrepreneurial terms, they are disproportionately focused on graduates rather than undergraduate students. This may be because funding and supports have heretofore focused on supporting HPSUs or graduates with significant experience, capital and market intelligence.

A fundamental question remains: Who is responsible for promoting entrepreneurship in higher education? Table 8.2 depicts Neck *et al.'s* (2004) initiatives or pathways for HEIs to become entrepreneurial and differentiates between the roles and responsibilities of HEI management, the Industrial Liaison/Technology Transfer (ILO/TTO) function and academic Schools/Departments for promoting entrepreneurship within HEIs.

Table 8.2 Pathways for HEIs to Become Entrepreneurial

Initiative	Responsibility
The development of an interface environment in HEI to link academia with industry	ILO/TTO, individual Schools/ Departments & academics
The development of internal capacities to administer services to industry	ILO/TTO
A cultural change in the academic community's perception of the commercialisation of higher education research	ILO/TTO
A shift in the motivation of academic staff to engage in partnerships with industry	Individual Schools/ Departments & academics
The development of campus incubators	HEI Management & ILO/TTO
The growth in entrepreneurship activities including EE	HEI Management, iindividual Schools/ Departments & academics

Adapted from Neck *et al.* (2004) and Current Research

What is striking about the findings is that neither the graduate entrepreneurs nor the enterprise enablers believed that entrepreneurship has been fully embraced by HEI senior management. This is manifested in: (i) entrepreneurship not being articulated in HEIs' mission; (ii) a lack of visibility for entrepreneurship on campus; and (iii) a lack of legitimacy for entrepreneurship across the higher education curriculum. In order to sustain entrepreneurship within a HEI, Van der Sijde *et al.* (1999) argued that there is a need for the HEI itself to become entrepreneurial. Gibb *et al.* (2009) maintained that an entrepreneurial HEI requires a strong and committed Governing Body, HEI leadership, an enterprise infrastructure and the existence of cross-disciplinary structures to complement EE. This finding resonates with the ACE's (2009) conclusion that there was an absence of an explicit institutional entrepreneurship strategy in HEIs. Clearly, there is an inherent paradox in Irish higher education, namely the gap between HEI leaders' rhetoric to support and integrate entrepreneurship within their institutions and a lack of explicit and coherent entrepreneurship policies at an institutional level. This has a profound implication for the legitimisation of entrepreneurship and EE within Irish HEIs because an entrepreneurial institution is greater than the sum of its component parts. Whilst the need for reform of Irish HEIs is a given, international experience has shown that reform in the education sector is seldom, if ever, quickly achieved *i.e., 'Roma non fu fatta in un giorno'.* However, both the Hunt Report (2011) and the HEA's *Towards a Future Higher Education Landscape* (2012) have provided greater momentum for higher education reform and an acknowledgement of entrepreneurship as the 'third pillar' of HEIs' mission.

Although EI has invested significantly in the development of the physical campus enterprise infrastructure, this research shows that the absence of physical space for undergraduate entrepreneurship is a weakness. Given that the campus incubator is located off campus, it is invisible to the undergraduate constituency. Consequently, there appears to be little, if any, interactions between the campus incubator and EE at undergraduate level and this reinforces the finding that HEIs' entrepreneurial initiatives have been skewed towards graduate entrepreneurship. This has resulted in squandered opportunities for students, HEIs, EDA and SME engagement highlighting a need for greater engagement with all stakeholders.

Significantly, the findings highlight a need to balance entrepreneurial initiatives across the HEI and not focus exclusively on the physical infrastructure or graduate entrepreneurship. Ideally, HEIs need to develop 'innovation or enterprise hubs' to provide a stimulating and supportive environment for undergraduate student enterprise development. This would go a long way to satisfy Gibson's (2011) and Green's (2012) recommendations for entrepreneurship to become central to the academy. Much of the work in terms of developing the physical enterprise facilities has been done by HEI management and the ILO function, facilitated by significant investment by EI. The ILO/TTO function plays a strategic role in developing the enterprise infrastructure and facilitating and enabling links with industry, SMEs and the wider enterprise community. This research highlights a lack of cohesion and links between the internal stakeholders and this has resulted in a fractured approach to enterprise development in Irish HEIs.

The Industrial Liaison Manager (ILM) and entrepreneurship lecturers are responsible for discrete entrepreneurship initiatives, thus, the potential for the ILM to influence and inform current EE provision has been largely overlooked. S/he could enhance EE provision at both undergraduate and postgraduate level through: (i) the provision of case-study material; (ii) the identification of opportunities for authentic work experience in SMEs and micro-enterprises for undergraduate students; and (iii) informing students and staff of policies and supports regarding IP, the commercialisation of research, campus incubation, dealing with venture capitalists and business angels and new firm formation.

Hindle (2007) and Jones (2010) contended that EE as a field of study lacks basic legitimacy as a source of value within the broader education community and this research confirms this contention. Whilst entrepreneurship lecturers are responsible for promoting entrepreneurship amongst their students, there is a reliance on them to promote the enterprise agenda within HEIs, rather than it being regarded as a corporate phenomenon (Van der Sijde *et al.*, 1999; Brennan *et al.*, 2007). Clearly, if entrepreneurship is to gain legitimacy within the HE curriculum, as espoused by Green (2012), there is a need for diffusion of both across the HEI.

This research shows that the Streeter *et al.'s* (2002) 'focused approach' is the most dominant approach to EE in Irish higher education *i.e.*, EE is mainly offered by School of Business lecturers and there is little diffusion across other Schools/Departments. This research proves that Robinson's (2010) industrial metaphor of 'siloing' knowledge into distinct, traditional disciplines persists in Irish HEIs. In many cases, entrepreneurship remains as an elective module, effectively a bolt-on activity and challenges emerge in terms of inclusivity of access. There is merit in combining the resources within a single School/Department to co-ordinate, plan and deliver entrepreneurial activities *e.g.*, in the Business School. However, in order to ensure the diffusion and sustainability of entrepreneurship within the overall HEI curriculum, there is a need for an enterprise champion to promote and develop EE courses and his/her role must be framed within the context of an Institute-wide remit.

HEIs should adhere to the advice of the Brady and Hegarty (2010) who called upon HEIs to be brave and ambitious for their graduates and create the right conditions for entrepreneurship to flourish by embedding entrepreneurship across the spectrum of the curricula. However, the notion of an entrepreneurial HEI is a step too far for Irish HEIs yet because EE is at an embryonic stage in Irish HEIs. The findings are clear: self-employment is yet to be 'normalised' as a viable career option for students and HEIs are focused on preparing students to become knowledge workers in the Florida *et al.* (1999) tradition. A more realistic aspiration for HEIs would be for them to become more enterprise-oriented and to legitimise self-employment as an attractive career option for graduates, as advocated by Gibb *et al.* (2006), EC (2006) and Moreland (2007). If HEI leaders fail to understand the potential of entrepreneurship then they will be left behind by more progressive HEIs nationally and internationally who are being courageous and committed to the enterprise agenda.

8.1.2 Entrepreneurial Staff

The success of EE within the Irish HE sector is dependent on the presence of dynamic, enthusiastic educators to support and advise students to consider enterprise as a career option.

Teaching and learning is the heart and soul of education and the relationship between the lecturer and the student goes beyond the mere transmission of knowledge. Martin *et al.* (2011) highlighted one of the key challenges for HEIs is to recruit lecturers with the rare combination of both enterprise and teaching experience. The key issue is the credibility of academics in EE: the truth is that graduate entrepreneurs learn more from people with experience of business start-up and growth. Without such experience, lecturers lack credibility for not having 'walked the talk' and their role is negated to transmitters of knowledge. Similarly, the EDA personnel questioned if academics are suited to teach entrepreneurship, particularly if they may be devoid of a practical understanding of start-ups as they lack the critical insights of the challenges facing entrepreneurs and cannot adequately prepare students for self-employment. This reinforces Penaluna *et al.'s* (2008) call for pracademics in EE.

It would be unwise to discount the contribution of academics to EE and 'throw the baby out with the bath water' because they can add value to EE by distilling good practice in enterprise development, identifying the factors that promote and impede the growth of micro-enterprises and developing case studies of local, national and international entrepreneurs/SMEs. Academics can identify emerging trends and research in entrepreneurship which will inform their own teaching and their students' learning. This would involve lecturers exploring and reflecting upon their own entrepreneurial identity as well as examining how to align their prior and concurrent enterprise experience more closely to their practice in the classroom. In order for entrepreneurship to gain legitimacy within the academy, there is a need for entrepreneurship lecturers to highlight the scholarship of entrepreneurship teaching and learning by undertaking and disseminating research to the wider academy. Whilst Zahra *et al.* (2008) recommended faculty exchanges and placements in SMEs, there are no such initiatives currently in place in HEIs. Where practicable, the enterprise enablers believed that lecturers should be encouraged and incentivised to set up their own businesses, as espoused by the Hunt Report (2011). Ideally, HEIs could facilitate lecturers to gain enterprise experience and exposure through sabbaticals, career breaks or at the very least proactive engagement with SMEs and graduate entrepreneurs.

Such engagement with SMEs could reflect Etzkowitz *et al.'s* (2000) Triple Helix model of interaction with the development of relationships between students with entrepreneurs, other academics and EDA personnel. This research finding highlights the need for innovative approaches to the CPD of entrepreneurship lecturers, not just in appropriate pedagogies and assessment methodologies, but also to assist them in gaining an informed understanding of the needs of start-up entrepreneurs.

8.1.3 Entrepreneurial Students and Graduates

Carey *et al.* (2007) suggested that HEIs have a key role to play in building an enterprise culture and encouraging more dynamic start-ups. In turn, these enterprising graduates may develop high growth companies or *gazelles* and/or have greater employability. Interestingly, from a graduate entrepreneur perspective, HEIs do not adequately prepare students for self-employment because the focus of undergraduate education remains largely on preparing them to become 'job seekers' rather than 'job creators'. Solomon (2008) maintained that if EE is to produce real graduates capable of generating businesses, employment and wealth, lecturers must develop modules/programmes with the requisite academic rigour whilst maintaining a practical and real-world focus on the entrepreneurial climate. There is a need to rethink the fundamentals of EE and recalibrate the academic and practical elements of EE. Interestingly, this research reveals that EE at graduate level was more focused and relevant and this may be because they were more motivated and self-directed and their study of entrepreneurship was tangential to the development of their business.

Crucially, all respondents believed that no amount of EE would prepare them for the realities of real enterprise development and that this knowledge could only be attained through authentic experience. However, the same could be said of 'authentic experience' in all spheres of work which have an educational basis from across all of the academic disciplines. In any case, a fundamental weakness in EE at third level in that it fails to integrate authentic experience in EE programmes, through for example student placement in SMEs. The findings support Erikson's (2003) belief that entrepreneurship learning is dependent on an individual's exposure to experience.

The graduate entrepreneurs believed that work experience was essential in order to develop their business acumen and networks, but more crucially to raise the necessary capital to develop their business. The latter is a fundamental consideration for start-up entrepreneurs given the current difficulties entrepreneurs face in raising finance for capital-intensive businesses. This is a barrier to immediate business start-up and highlights the importance of CORD funding in supporting burgeoning entrepreneurs.

8.1.4 Dynamic Learning Environment

Cooney et al. (2008) maintained that EE is still in its infancy and this research reveals that the majority of graduate entrepreneurs interviewed had not studied entrepreneurship as part of their undergraduate programme. The findings reveal that the question of whether entrepreneurship can be taught has become redundant given the majority of respondents concluded that it could be learned or at least encouraged through EE (Anselm, 1993; Gorman et al., 1997; Drucker, 1993; Kuratko, 2003; Dorf et al., 2005). The respondents believed that through EE, students can gain a greater insight into the realities, challenges and benefits of setting up a business which would help them make an informed decision if self-employment was consistently presented as a viable option for them. This gives credence to Brady et al.'s (2010) call for a significant cultural change from a risk-averse approach to one that encourages risk-taking and a sense of adventure. The reality is that cultural norms regarding business failure persist but Irish HEIs need to challenge these cultural norms, rather than replicate or indeed exacerbate them. This requires innovative approaches to teaching and assessing entrepreneurship and embracing failure as an important learning outcome.

Winslow's (1999) analysis of EE in HEIs highlights both the similarities and differences in design delivery and assessment and concluded that the conceptual difference is often blurred, in both academic and real worlds. The findings revealed that from the perspective of graduate entrepreneurs, EE at third level lacks a focus on small business. A key criticism of EE at third level is that it did not focus on real-world case studies of start-up businesses.

The assumption that lecturers can cite examples of large companies and expect students or graduate entrepreneurs to distill the learning and apply it to a small business context is nonsensical. This finding concurs with McGrath's (2008) belief that micro-enterprises cannot be considered miniature versions of large corporations, thus, EE should focus on appropriate case studies.

Given EE is still at an embryonic stage in higher education in Ireland, it is difficult to extrapolate from the findings the key differences in approach to EE at undergraduate and at graduate level. A key finding of this research gives credence to Hannon's (2006) claim that in the rush to introduce and embed entrepreneurship in higher education, educators have forgotten to examine what pedagogical approaches best support burgeoning or aspiring entrepreneurs. The findings show that the approach to EE at graduate level was more facilitative rather than directive in nature. The respondents no longer felt that they were *"mere students"* (SEEPP 1) but were regarded as peers by the lecturing staff. The introduction of subject experts in the field of corporate taxation, company law, IP and raising finance was regarded as worthwhile and practical. Respondents believed that they had greater input into the curriculum than they would have had within a prescribed undergraduate programme and could suggest guest speakers and site-visits to enhance their overall learning experience. The overall experience of EE at graduate level was one of an adult learner, respected for bringing their experience to the table. EE at graduate level is more dynamic and focused because the stakes are higher. It takes place in the real world within the HEI's campus incubator and the students are embedded in an enterprise environment with links to the academic and commercial worlds.

The SEEPP participants favoured the provision of customised learning supports over the formal group setting and recommended that future training should focus on the needs of the individual entrepreneur rather than the current 'one size fits all' provided by SEEPP. The needs of undergraduate students are different from those of graduates', therefore, there is a need to decouple the findings in terms of how they relate to EE at (i) undergraduate level and (ii) graduate level, as depicted in Table 8.3.

Table 8.3 Approaches to EE at Undergraduate and Postgraduate Level

Approaches to EE	Undergraduate Level	Graduate Level
Entrepreneurship modules	✓	✓
Feasibility studies	✓	✓
Business plan competitions	✓	✓
Case studies of micro-enterprises & SMEs	✓	✓
Entrepreneurs and EDA personnel as guest lecturers	✓	✓
Avatars – simulated enterprises	✓	✓
Campus incubators		✓
Enterprise Bootcamps	✓	
Enterprise Platform Programme		✓
Placements in SMES		
Links with graduate entrepreneurs	✓	✓
Consulting with SMES	✓	
Shadowing and profiling entrepreneurs		
Links with EDAs	✓	✓
Enterprise clinics with Enterprise Boards	✓	✓
Online learning materials		✓
Links with Industrial Liaison Office	**Limited**	**Limited**
Mentoring		✓
Flexible semester		✓
Entrepreneurs as guest lecturers	✓	✓
EDA staff as guest lecturers	✓	✓
Links with ILO/TTO	**Limited**	**Limited**

Source: Current Research

The graduate entrepreneurs believed that EE at undergraduate level is contingent on a dynamic, interactive learning environment with a strong emphasis on experiential and collaborative learning. Whilst there is significant merit in Handy's (2001), Robinson's (2010) and Hederman's (2011) calls for more creative approaches to EE, this has greater relevance at undergraduate level, where the lecturers are essentially whetting the entrepreneurial appetite of students. Within the context of EE at graduate level, the respondents were concerned about the academic nature of EE. They believed that the approach to EE was often theoretical with lecturers using business plans as the primary teaching tool. This observation mirrors Mullins' (2006), Honig's (2004), Potter's (2008) and O'Gorman's (2010) criticism of the dominance of the business plan in EE. Notwithstanding the usefulness of business plans in providing students with a framework for developing a business, teaching entrepreneurship through the prism of a business plan can limit students' practical understanding of entrepreneurship.

It can also result in a didactic approach to EE which could stifle creativity, individuality and passion. Some EDA personnel maintained that there was a slavish adherence to the business plan by some SEEPP participants to the detriment of generating sales and business. The findings show that the accreditation of SEEPP was regarded by SEEPP participants, SEEPP lecturers and EDA personnel as a 'nice to have'. Interestingly, accreditation was more important for participants who did not succeed in establishing their business or with lower levels of educational attainment. Enabler 11 was particularly critical of the accreditation of SEEPP because he believed it "muddied the waters" and distracted participants from their primary focus *i.e.,* starting and growing their businesses.

Overall, the interpretation of the findings suggests that interactions between the SEEPP participants were positive and they welcomed the opportunity to work, study and network with like-minded peers who *"were in the same boat"* as themselves. Critically, SEEPP participants were adept at leveraging the experience, skills, and knowledge through interactions with other participants. This finding highlights the significant value to the community of learning which SEEPP provided. Such close co-operation led to the creation of a community of learners, particularly amongst similar or complimentary businesses, sharing resources, and expertise and referring business to one another. Much of this networking was organic in nature and took place in informal settings *e.g.,* in the canteen of Arc Labs or through email, mobile phone or Skype. The findings show that these relationships were more about moral support rather than business development and the nature of their relationships varied in terms of the degree of participant commitment and expectations. In contrast, the graduate entrepreneurs who did not participate on SEEPP were left to their own devices.

The evidence presented in Chapters 5 and 6 indicates that by and large, graduate entrepreneurs identified the benefits and limitations of current EE provision at third level. Table 8.4 highlights the perceived benefits and limitations of EE at third level.

Table 8.4 Summary of Perceived Benefits and Limitations of EE

Benefits of Undergraduate EE	Limitations of Undergraduate EE
• Exposure to alternative career path • Opportunity to participate in Institute and national enterprise awards • Continuous Assessment • Value of community of learning • Links with real and graduate Entrepreneurs • Passionate lecturers • Links with EDAs • Entrepreneur in residence • Positive role models	• Theoretical approach • Over-reliance on business plan as teaching tool • Lack of Ideas – sometimes going through the motions • Title of entrepreneurship can be off putting • Semesterisation
Benefits of Graduate EE	**Limitations of Graduate EE**
• Networking with like-minded peers • Definite business opportunity in place • More practical • The stakes are higher • Greater focus on self-directed learning • Graduate learning embedded in campus incubator	• Hiding place • Greater risk involved as the stakes are higher • Limited engagement with academic staff of HEI • Lack of engagement with undergraduate students • Campus incubator off campus

Source: Current Research

The findings reveal that graduate entrepreneurs are strategic and discerning learners and they question the relevance of what they learn and what application it has in their business and 'cherry pick' inputs which will add most value to their business. The SEEPP participants believed that EE at graduate level was more focused and practical because they had a definite business ideand and they were more strategic in their approach to learning *i.e.,* what could be applied to their business. Undoubtedly, EE at graduate level must provide students with the knowledge and skills to apply directly to their business. This has resonance with Rogers' (1983) thesis that adult learners grasp knowledge that they need and want to know. This is an important consideration for informing and influencing EE provision, particularly at graduate level. The findings highlight a mixed reaction amongst the respondents about how HEIs, SMEs and EDAs are working together to promote student and graduate entrepreneurship. Carey *et al.* (2007) concluded that successful EE at third level requires a combination of 'buy-in' from staff, students and the HEI, as well as the resources to fully equip and create better entrepreneurship lecturers.

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Table 8.5 Good Practice in EE in Irish Higher Education

HEI Management	Entrepreneurship Educators
• Support and commitment of an entrepreneurial HEI • Commitment to the core principles of EE • Embed entrepreneurship across the HEI curricula • Recruitment of dynamic entrepreneurship educators with enterprise experience • Optimisation of links with EDAs • Creative spaces for students to trial business ideas • Clear Intellectual Property policies for students and staff	• Create correct environment • Utilise experiential teaching & learning methods • Innovative forms of assessment • Continuous evaluation of the relevance and currency of EE • Links with real and graduate entrepreneurs • Greater links with campus incubator • Entrepreneurship Bootcamps
Students	**Enterprise Development Agencies**
• Active engagement in entrepreneurship classes • Development of enterprise clubs • Participation in local and national enterprise awards • Participation in placements in SMEs	• Facilitate links and networks with real entrepreneurs • Sponsor student enterprise competitions • Provide seed funding for graduate SME development

Source: Current Research

In summary, there is an onus on HEI leaders and entrepreneurship lecturers to create a challenging environment, where students are prepared to face the challenges and realities of doing business in an ever-changing marketplace.

8.1.5 Part of a Broader Entrepreneurial Ecosystem

Mitra (2008) argued that at the heart of any attempt by any HEI to promote entrepreneurship is its relationship with the wider enterprise community. According to both the graduate entrepreneurs and enterprise enablers, more could be done to link HEIs, students, graduate entrepreneurs and EDAs. This research concludes that there is little integration between the EDAs and HEIs given that the entrepreneurial process is separated and corralled with different policies for different aspects of the entrepreneurial process, as identified by Cooney et al. (2007). It is a considerable concern that some EDAs have what enabler 13 regarded as a "rebarbative approach" to raw graduates. This research highlights the need for HEIs to take a proactive part in the wider entrepreneurial ecosystem or enterprise community.

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HEIs do not exist in a vacuum rather they are a part of a complex enterprise ecosystem comprising regulation, tax, R&D, Government, policy and also include EDAs, entrepreneurs, alumni and the wider enterprise community (Innovation Task Force, 2010). Good practice in EE at third level is contingent on a supportive entrepreneurial ecosystem within and outwith the HEI. This key concept in the conceptual framework recognises the pivotal role of HEIs in developing an enterprise culture and promoting academic, student and graduate entrepreneurship. The GEM Report for Ireland 2011 (2012) maintained that a person who knows someone who is a recent entrepreneur is more than twice as likely to be an entrepreneur. Whilst significant progress has been made to promote entrepreneurship, more work needs to be done to promote entrepreneurship amongst the undergraduate constituency. There is a need to demystify entrepreneurship which could be done by inviting graduate entrepreneurs to tell their stories and promote entrepreneurship amongst the student body.

Whilst Martin *et al.* (2011) cautioned that depending on guest lecturers is not necessarily a 'magic bullet', this approach could serve to humanise and normalise self-employment as a realistic option for students. Rather than being passive recipients of knowledge, there is a need for students to take an active role in their own learning and commit to engaging with entrepreneurs through *e.g.,* enterprise societies and student placements. Such links may need to be facilitated by their entrepreneurship lecturers until students have developed the requisite self-confidence and self-efficacy to forge such links. There is a need for a co-ordinated or partner-approach to EE with EDAs, entrepreneurs and entrepreneurs provided that such an approach be part of a coherent programme so as to avoid Whitehead's (1929) fear that knowledge be presented as scraps of information.

The respondents believed that lecturers should maintain strong links with graduate entrepreneurs to develop opportunities for symbiotic relationships with existing undergraduates and graduates. Initially, the onus should be on the lecturer to facilitate such links through networks with students, campus incubator clients, EDAs and the wider enterprise community.

Graduate entrepreneurs can, in turn, support EE initiatives by becoming guest speakers, mentors and/or positive role models to existing students. There would be merit in developing symbiotic relationships between graduate entrepreneurs and current students but they argued that the sustainability of such relationships relies on developing symbiotic links between both parties. It is evident that the SEEPP manager plays a significant role in forging links and alliances between SEEPP participants and key local and national EDAs. However, the SEEPP manager's remit does not extend to the wider HEI community, thus, there is need for HEIs to appoint an enterprise champion to broker links between the wider HEI community *i.e.,* students, alumni and staff and the external enterprise community.

Figure 8.1 The Role of Enterprise Champion
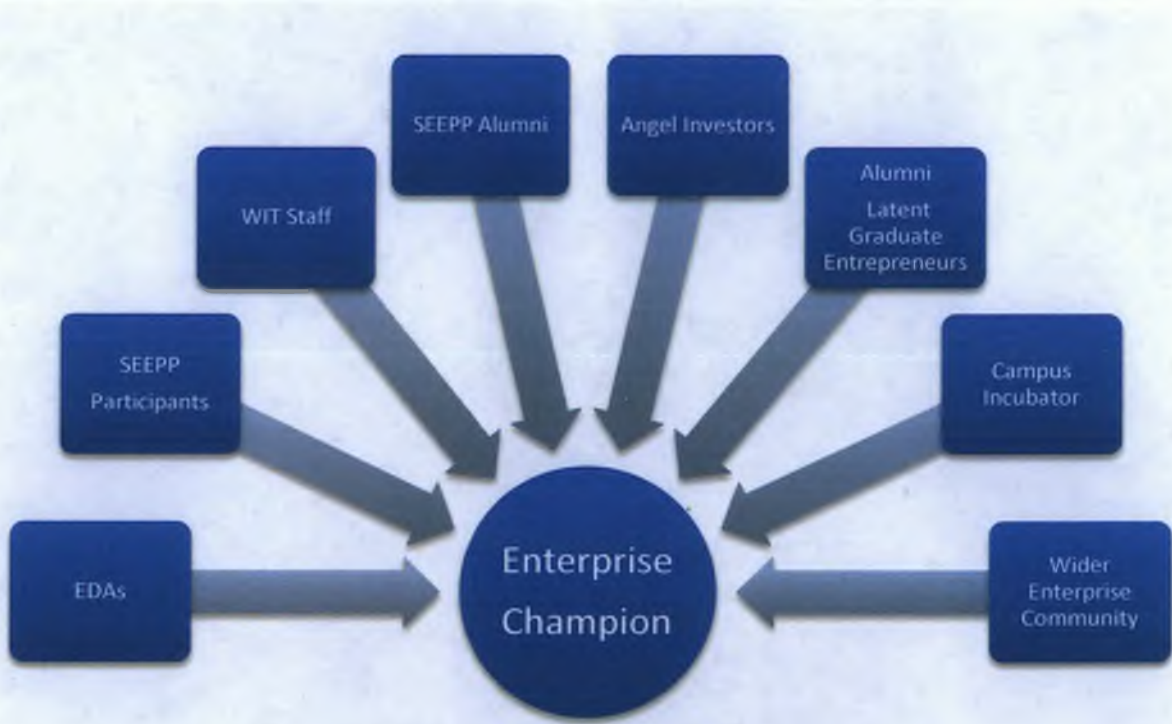
Source: Current Research

The enterprise champion could inform EE curriculum development, ensure its diffusion within the HEI curriculum and work closely with the 'entrepreneur in residence' to promote entrepreneurship amongst students, staff and alumni.

8.2 Section 2: Emergent Themes of Research

The key findings discussed in this chapter reveal a number of emerging themes relating to EE at third level. Each of these themes will now be considered and discussed individually.

8.2.1 The Effectiveness of EE in Preparing Graduates to Set Up their Own Business

Mitra *et al.* (2008) contended that entrepreneurship arises out of a fortuitous combination of factors that include knowledge and skills and concluded that there is regrettably insufficient evidence regarding the value of EE programmes, measured in terms of their effectiveness in fostering entrepreneurial culture or in terms of generating new ventures. Whilst the SEEPP participants conceded that there were benefits to be gained from EE at graduate level, there is a difficulty in evaluating the effectiveness of EE at undergraduate level given that the majority of the graduate entrepreneurs had not studied EE in their undergraduate studies. As far as the correlation between EE and graduate entrepreneurship is concerned, it is difficult to extrapolate from the research data the extent to which EE at third level affected graduate entrepreneurs' formation as entrepreneurs. This is consistent with Matlay's (2007) and Potter's (2008) beliefs that the effectiveness of EE is difficult, if not impossible, to measure. In short, this research provides little evidence to suggest the effectiveness of EE at undergraduate level in preparing students to 'hit the ground running' in the development of their business. This is a key finding of this research and it debunks the naïve assumption that more EE leads to a greater amount of entrepreneurial outcomes. The main reasons why EE does not adequately prepare graduates to set up their own business were, it did not: (i) provide them with the requisite knowledge, skills and competence; and/or (ii) develop their self-confidence and self-efficacy to become entrepreneurs.

8.2.2 Justification of the Lag Time

Jones (2010) maintained that there is an anomaly in EE, namely students frequently state that they have benefitted from EE, yet few seem to start a business during their studies or immediately on graduation.

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Whilst EE is perceived as the most cost-effective and speedy way to increase both the quality and the quantity of entrepreneurs entering an economy (Matlay, 2008; Carey *et al.*, 2010; Matlay, 2012), the findings suggest EE at undergraduate level does not lead to immediate graduate entrepreneurial activity. This finding concurs with Potter's (2008) claim that there is a 'lag time' between when people graduate and when they start their own business and it has significant implications for government, policy makers and indeed HEIs because they may not see an immediate return on their investment in EE. Graduate entrepreneurs do not regard this lag time as a weakness, rather they believe it is a necessary time for them to gain significant work experience prior to embarking on self-employment. The highest level of correlation between EE and graduate entrepreneurship is within the context of bespoke graduate enterprise programmes such as SEEPP. This is because there is a clearly defined pathway to self-employment and business supports in place to assist graduate entrepreneurs to develop their business.

8.2.3 Need for Graduated Approach to Entrepreneurship Education

It is evident from the findings that each graduate entrepreneur is on his/her own journey to self-employment and s/he defines success differently. This highlights a need to develop more sophisticated success metrics such as entrepreneurs' business performance, turnover, sales, as well their quality of life, work/life balance, their attitude towards their business and the long-term sustainability of their business. This research reveals that the focus of EE at graduate level is on the development of HPSUs rather than micro-enterprises and this has largely excluded graduate entrepreneurs who did not meet HPSU criteria from participating in SEEPP. Paradoxically, within SEEPP, not all participants could be regarded as HPSUs. Whilst there are benefits from having diversity within the classroom, a 'one size fits all' approach to EE is counterproductive because it can lead to frustration amongst students with different business growth aspirations.

This research shows that current EE provision is based upon a flawed principle that entrepreneurship can be neatly defined and studied by a homogeneous group of students. This constitutes one of the most critical and important findings of this study and concurs with Nabi *et al.'s* (2008) finding that there is no universal approach to EE that works for all contexts and graduates, therefore, EE, particularly at graduate level, requires a tailored approach. In effect, there is a need for a two-speed approach to EE, particularly at graduate level to cater for: (i) HPSU entrepreneurs; and (ii) graduate entrepreneurs who wish to develop a lifestyle or non-HPSU business. Such an approach is not without operational challenges because it appears to be highly resource intensive. However, the findings reveal an underutilisation of online or blended learning to support and deliver EE and there is great potential for HEIs and lecturers to exploit new technologies including virtual learning networks to facilitate self-directed learning and asynchronous learning, as recommended by Wall (2009) and Matlay (2011).

8.2.4 Raw Graduates are a Forgotten Constituency

The Literature Review raised a fundamental question: If HEIs continue to deliver EE through the lens of developing micro-enterprises are they missing out on the potential of developing HPSUs? Some of the graduate entrepreneurs and SEEPP lecturers confirmed that EDAs are not interested in talking to either 'raw graduates' or non-HPSU businesses. I believe there is a need to turn that strategy on its head because not every graduate entrepreneur is a HPSU but that does not mean that they do not require further training or supports. Given some graduate entrepreneurs did not meet the stringent EI HPSU criteria; they were largely left to their own devices and could be regarded as an ignored constituency. Significantly, raw graduates were disregarded because they did not meet their exacting criteria, namely having: (i) industry experience; (ii) finance in place; and (iii) market(s) in place. Restrictive criteria of this nature prevented much needed access to graduate EE for those with an interest in entrepreneurship and a lack of EE provision at third level created a cyclical process of delayed progression of entrepreneurship within the economy.

Whilst EDAs may rationalise their decision not to support 'raw graduates' without the requisite trinity of factors, it appears to negate the notion of HEIs as reservoirs of entrepreneurial talent (Report of the Small Business Forum, 2006; Innovation Taskforce, 2010; Hunt Report, 2011). More significantly, it highlights a need for a national entrepreneurship policy to focus on supporting all forms of graduate entrepreneurship, not just HPSUs. 'Raw graduates' can no longer be an ignored constituency by EDAs and there is an urgent need to fasttrack their route to self-employment. The enterprise champion should maintain contact with the forgotten constituencies of alumni, latent entrepreneurs and work in tandem with EDAs to proactively reach out to this lost constituency. Whilst one may ask if this is the remit of HEIs, any HEI wishing to take entrepreneurship seriously needs to expand its role and promote enterprise opportunities to the latent enterprise community, locally regionally and nationally.

8.2.5 Breathing Space or Hiding Place?

EDA personnel stated that they do not differentiate between clients *i.e.*, graduates and non-graduates. They judge each business on its own merits *i.e.*, a trinity of factors, namely having: (i) industry experience; (ii) finance; and (iii) market(s) in place. Some EDA personnel believed that HEIs provide a 'cocooned environment' or 'hiding place' for graduate entrepreneurs, wherein they are shielded from the realities of the commercial world. Conversely, the research shows that SEEPP participants valued the 'breathing space' to assess the feasibility and to develop their business. Given many of them had given up secure employment, they were fully committed to developing a successful business and the stakes were higher than undergraduate EE. The findings reveal that graduate entrepreneurs did not expect or want SEEPP to shelter them from the challenges of the marketplace. Instead, they placed great importance on receiving honest feedback from SEEPP lecturers, mentors and the SEEPP Manager about the direction of their business. It is important that both perspectives are considered because they highlight a polarity of perspectives of EE at third level. Critically, the perspectives of the EDA personnel could inform and influence policy regarding future EE provision at third level. It is important to balance their perspective with those of graduate entrepreneurs *i.e.*, the end users of EE at third level.

8.3 Section 3: Revisiting the Conceptual Framework for EE at Third Level

In an overall sense, the findings suggest that the conceptual model for EE at third level, as depicted in Figure 4.1 (Chapter 4, p.104), needs to be revisited in light of the research findings. The revised conceptual framework for EE at third level places both students and graduate entrepreneurs at the heart of all EE endeavours, as depicted in Figure 8.2.

Figure 8.2 Revised Conceptual Framework for EE at Third Level

Enterprise-centric HEI

Links with Wider Enterprise Community

Graduated Approach to EE

Entrepreneurial Students & Graduates

Authentic Experience

Pracademics

Challenging Learning Environment

Source: Current Research

Good practice in EE is mindful of the wealth of knowledge that students can bring to the classroom and a respect for students and their prior experience is an integral part of the ethos of EE and underpins the conceptual framework, comprising core concepts which act as core pillars of EE theory, practice and policy. This conceptual framework for EE at third level is informed by synthesising the extant literature, policies and the salient research findings and reflects the values of EE. The research findings highlight that HEIs could do more to enhance EE at third level.

This could be achieved by: (i) committing to becoming an enterprise-centric HEI; (ii) promoting 'pracademy' amongst both academic and administrative staff; (iii) developing a graduated approach to EE to cater for the disparate needs of students; (iv) creating a challenging learning environment, where students get the opportunity to apply their knowledge through experiential learning; (iv) integrating authentic experience in all EE courses; (v) engaging proactively and systematically with the wider enterprise community; and (vi) creating the space, both physical and time, in the curriculum, to enable entrepreneurship to flourish.   The seven core concepts of this conceptual framework can be meaningfully integrated and weaved into the design and delivery of EE programmes at third level.

8.4 Conclusion

This chapter provided a critical discussion of graduate entrepreneurs' and enterprise enablers' perspectives of EE at third level by reviewing the findings *vis-à-vis* the extant literature, policy and the conceptual framework. It highlights that entrepreneurship has not gained legitimacy within the academy nor are HEIs doing enough to legitimise entrepreneurship as a career option, particularly at undergraduate level. The nexus of the problem is that HEIs have not fully embraced the enterprise agenda. In the past decade, HEIs placed greater emphasis on the physical enterprise infrastructural development and EE at graduate level.   There is a need for greater focus on the provision of access to EE and a graduated approach to EE to cater for the disparate needs and growth aspirations of students.   Whilst conceding that customised EE is operationally challenging, some of these challenges could be countered through the use of blended learning. This research suggests that EE at third level requires a more holistic approach focusing generally on the development of an entrepreneurial mindset as well as emphasising the importance of growth-oriented businesses *i.e.,* HPSUs. There is a need to: (i) agree on a definition of entrepreneurship and consider EE's focus at third level; and (ii) use innovative teaching and learning approaches and methodologies to develop students' self-efficacy and openness to pursuing entrepreneurial careers. The final chapter will draw together the main conclusions of this study and make recommendations for enhancing EE at third level *i.e.,* it provides the glue that binds the dissertation together (McGrath, 2008).

Chapter 9 Conclusion and Recommendations

We shall not cease from exploration and the end of all our exploring will be to arrive where we started and know the place for the first time.

9.0 Introduction

The previous chapter critically examined and discussed the research findings within the context of the extant literature, policy and the conceptual framework relating to EE at third level. This chapter summarises the salient conclusions and recommendations of this research. Additionally, the theoretical, practical and policy contributions of this research are outlined together with recommendations for future research in EE. This chapter acknowledges the limitations of this study, provides a reflexive analysis of my role as a 'pracademic' in higher education and signposts areas worthy of future research. The overall aim of this research was to examine graduate entrepreneurs' perspectives of EE at third level and this was achieved through meeting the following four research objectives:

1. To contextualise the role of HEIs in enterprise development and entrepreneurship education with a specific focus on the Irish Institutes of Technology;

2. To examine graduate entrepreneurs' perspectives of entrepreneurship education at third level *i.e.,* at undergraduate and, where applicable, at graduate level;

3. To conduct a detailed case study of a bespoke graduate enterprise programme *i.e.,* South East Enterprise Platform Programme;

4. To examine enterprise enablers' perspectives of the role of HEIs in fostering and supporting graduate enterprise development through entrepreneurship education.

In order to achieve these objectives, I used a predominantly qualitative research methodology to examine both graduate entrepreneurs' and enterprise enablers' perspectives of EE at third level. The following section will synthesise the key conclusions of this study.

9.1 Conclusions of Research

From a synthesis of both the literature and policy review chapters and a detailed analysis of the research findings, the conclusions can be categorised as follows: (i) graduate entrepreneurs' perspectives of the role of HEIs in fostering and supporting graduate enterprise development through EE; and (ii) enterprise enablers' perspectives of the role of HEIs in fostering and supporting graduate enterprise development through EE. Each conclusion will now be considered individually.

The findings highlighted that EE is a relatively recent phenomenon in Irish higher education and the majority of the graduate entrepreneurs interviewed had not studied the subject at undergraduate level. They believed that higher education does not prepare students for self-employment as HEIs' primary mission remains to prepare graduates for employment. Given the obsolescence of a job for life, they believed that EE had a role to play in increasing students' awareness of self-employment as a plausible career option. However, they cautioned that not everyone is or can be an entrepreneur. Notwithstanding the worthy initiatives to promote graduate entrepreneurship, this research concludes that the whole is less than the sum of the parts *i.e.*, entrepreneurship lacked legitimacy within the HE sector and the presence of entrepreneurial activity within a HEI does not necessarily make it entrepreneurial. Neither the graduate entrepreneurs nor the enterprise enablers believed that HEIs were entrepreneurial because: (i) HEIs' focus remains on preparing students for employment rather than self-employment; (ii), the lack of diffusion of entrepreneurship within the curriculum; (iii) the largely theoretical approach to EE; (iv) a lack of multi-disciplinary approach to EE; and (v) an imbalance of entrepreneurial initiatives at graduate level. They believed that HEI management should show greater leadership in promoting and embedding entrepreneurship within the curriculum and regard it as an institutional rather than an individual phenomenon, linked to a national enterprise policy. Whilst government investment in developing the physical enterprise infrastructure is to be welcomed, greater emphasis needs to be placed on human capital development *i.e.*, of both students and staff. Such investment would improve the quality and relevance of EE that students receive whilst expanding access and increasing participation further.

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Graduate entrepreneurs are a sophisticated and discerning learning cohort. They were critical of current EE provision, particularly at undergraduate level which they described as didactic and abstract. In contrast, they regarded EE at graduate level (SEEPP) as being more relevant and applied. The emphasis of EE should be on pedagogies that encourage learning but the graduate entrepreneurs were critical of the primacy of the business plan as the main pedagogical and assessment tool. The graduate entrepreneurs believed that an academic focus of EE distracts from the priority of developing a viable business. A balance needs to be struck between the academic and practical aspects of EE and lecturers need to develop EE modules/programmes with the requisite academic rigour whilst maintaining a practical, real-world focus on the entrepreneurial environment. Figure 9.1 highlights the need to balance the academic and practical focus of EE in order to meet the needs of students.

Figure 9.1 Towards a Pracademic Approach to EE

Academic

Practical
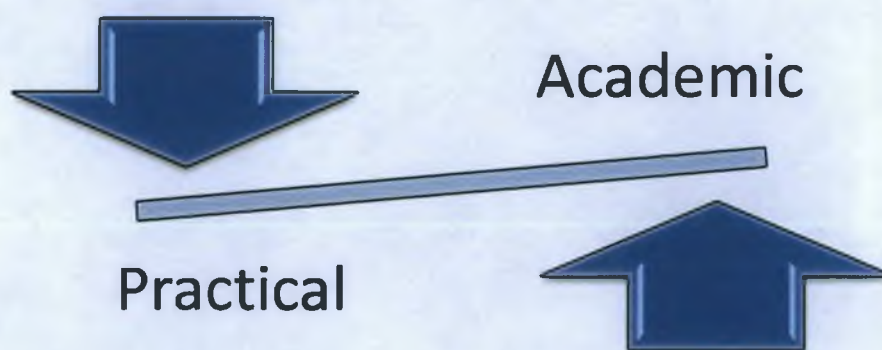
Source: Current Research

Graduate entrepreneurs were more concerned about what they learn and how it could be applied to benefit their business. Innovative and creative approaches to EE are more relevant to earlier stages of EE, whereas, it is more important to focus on the development of entrepreneurial knowledge and skills at graduate level. They believed that they had a role to play in shaping the curriculum so that it meets their needs which has significant implications for entrepreneurship lecturers. The enterprise enablers believed that HEIs should recognise and promote the type of skills and competencies necessary to drive enterprise development, particularly HPSUs yet the findings reveal that this aspect of skills training has been ignored by EE, particularly at undergraduate level.

EDAs want a trinity of factors, namely: (i) industry experience; (ii) finance; and (iii) market(s) in place. This may explain why so few 'raw graduates' approach EDAs for support in setting up their business. Within the context of EE at undergraduate level, authentic engagement is not widespread, therefore, there appears to be a mismatch in EDAs' expectations of what undergraduate EE can achieve.

Some EDA personnel criticised SEEPP by describing it as a hiding place or a cocooned environment, where graduate entrepreneurs were protected from the harsh realities of commercial business. Conversely, SEEPP participants claimed that SEEPP provided them with both the physical and mental space to develop their business. They likened this to a 'breathing space' and believed that it was critical in the development of their business. SEEPP participants benefitted from the structured learning environment, access to CORD funding, access to a business network and peer-learning. They also honed their entrepreneurial skills whilst creating a real business. Essentially, EE was tangential to the development of their business, thus, making their learning real and applied. Given that the stakes were higher, they were more committed and self-directed learners. A community of learning can counter some of the sense of isolation and lonlieness endemic to self-employment.

This research highlighted the importance of CORD funding in influencing graduate entrepreneurs' decision to participate in SEEPP. It provided SEEPP participants with a financial safety net to help them make the transition from employment to self-employment and to focus on developing their business. Judging from the survival rate of SEEPP businesses, the programme was successful. However, in terms of the development of HPSUs, SEEPP was less successful. This raises a fundamental question: Is SEEPP trying to be all things to all people?

This research highlighted that a 'one size fits all' approach is unsuitable for EE, particularly at graduate level. This conclusion concurs with the work of Nabi *et al.* (2008) who claimed that there is no universal approach to graduate entrepreneurship that works for all contexts and graduates and different contexts require tailored approaches that best suit their individual needs.

Given the heterogeneity of SEEPP participants *vis-à-vis* their growth aspirations, background and experience, it is evident from this research that a generic approach to EE did not meet the needs of HPSU entrepreneurs. They recommended that EE at graduate level should have a two-speed approach, namely: (i) for HPSU entrepreneurs; and (ii) for non-HPSU entrepreneurs wishing to develop smaller, lifestyle-type businesses. HEIs should focus on increasing the supply of entrepreneurial talent which could develop high-growth businesses. Conversely, not all graduate entrepreneurs achieve HPSU status, therefore, if all forms of entrepreneurship are to be valued, EE must be put in place to cater for non-HPSU graduate entrepreneurs.

This study highlighted how some graduate entrepreneurs can slip through the cracks *i.e.,* neither meeting CEB nor EI criteria and in effect are left to their own devices in terms their business development. Non-HPSU graduate entrepreneurs represent a largely forgotten constituency of entrepreneurs and it is important not to alienate a constituency because they do not meet stringent EDA criteria.

Graduate entrepreneurs had greater regard for lecturers who had set up a business or had worked in a business start-up. Without such experience, lecturers were perceived as lacking credibility and their role was regarded as transmitters of theoretical knowledge. Critically, this does not satisfy the needs of a more sophisticated adult learner. Cognisant of the difficulties of lecturers having the rare combination of entrepreneurship and teaching experience, the EDA personnel called for greater engagement with successful, local entrepreneurs in EE. They could become guest lecturers and act as positive role models to inspire and encourage students towards entrepreneurship, however, their input needs to be part of a coherent EE programme, rather than an 'ad hoc', once-off input. Encouragingly, this research highlighted an appetite amongst the EDA personnel, SEEPP lecturers and graduate entrepreneurs to work together to develop a stimulating and supportive environment for future student enterprise development. In addition to raising the profile of entrepreneurship, students could network informally and formally with real and graduate entrepreneurs and become aware of commercial opportunities.

There is some irrationality in the government's expectation that greater EE will lead to an immediate increase in graduate entrepreneurship. EE is not a linear process of inputs and outputs (Robinson, 2010) and graduate entrepreneurship is a crude metric for evaluating the success of EE. This research showed that graduate entrepreneurs developed their business skills and self-confidence through work and they believed that there is no substitute for work experience to hone graduates' business skills, develop their professional network, their 'street smarts' and indeed their interpersonal skills. Graduate entrepreneurs identified obstacles that militate against immediate graduate entrepreneurship, namely: a lack of experience; a lack of finance; a lack of business ideas; lack of contact with clients and customers and a lack of self-confidence. Thus, Potter's (2008) concept of a 'lag time' between when students complete their studies and start their business is justified. This is important in highlighting a need for government and policy makers to temper their expectations of HEIs as a seedbed for entrepreneurial talent.

A consistent theme of the research is the notion of failure, even in the most abstract form, is anathema to higher education despite all the calls for failure to be embraced as an important learning strategy. It gives credence to the belief that HE teaches people more about risk aversion and concentrates almost exclusively on academic achievement. It highlights a need for lecturers to include failure as a key learning strategy and assessment methods to capture the value of this learning. These conclusions address the research objectives 1, 2 and 4 to provide rich insights into both graduate entrepreneurs' and enterprise enablers' perspectives of EE at third level.

These insights facilitated the development of a refined conceptual framework for EE at third level to include: an enterprise-centric, HEI; a graduated approach to EE; pracademics; a challenging learning environment; authentic experience; and links with the wider community, as depicted in Figure 9.2.

Figure 9.2 Revised Conceptual Framework for EE at Third Level

Source: Current Research

9.2 Recommendations

Acknowledging that the following recommendations will not address all of the challenges inherent in EE provision at third level, they are a synthesis of both graduate entrepreneurs' and enterprise enablers' recommendations for enhancing EE at third level. The recommendations are aligned to the revised conceptual framework, namely: creating an enterprise-centric HEI; graduated approach to EE at third level; the importance of pracademics in EE; dynamic and applied learning environment; authentic experience; links with wider enterprise community; need for an enterprise champion; and creation of National Centre for Entrepreneurship.

9.2.1 Creating an Enterprise-centric HEI

The best guarantee for the sustainability of entrepreneurship within a HEI is to change it into an entrepreneurial organisation and the notion of entrepreneurial HEIs has gained momentum in Ireland following the publication of the Hunt Report (2011) and the HEA *Towards a Future Higher Education Landscape* document (2012). International experience has shown that reform of the HE sector is seldom, if ever, quickly achieved. I believe that it may be a step too far to expect HEIs to become truly entrepreneurial *i.e.,* creating an inter-disciplinary, interactive environment to facilitate academic/graduate entrepreneurship. The present research raises fundamental questions regarding the mission of HEIs as this requires a paradigm shift in terms of embracing risk, promoting failure as an important learning strategy, reducing their reliance on Exchequer funding and promoting self-employment as a plausible career option for students. Undeniably, there is a need for HEIs to be ambitious for their graduates and to create the right conditions for entrepreneurship to flourish by embedding entrepreneurship across the spectrum of their curricula. It is of strategic importance for HEIs to plan, prepare and implement innovation, knowledge and enterprise development strategies as a key part of their institutional mission. This involves HEI management and lecturers: (i) agreeing on a focus for EE; and (ii) using innovative teaching and learning approaches and methodologies to develop students' self-confidence, self-efficacy and openness to pursuing entrepreneurial careers.

HEIs should commit unequivocally to becoming enterprise-centric by *inter alia*: (i) giving greater visibility and legitimacy to entrepreneurship within the curriculum; (ii) providing 'breathing space' for students to pursue entrepreneurship at undergraduate level; and (iii) actively engaging with the broader enterprise community to promote entrepreneurship amongst the undergraduate and graduate constituencies. There is a need for what Robinson (2010) called for a revolution in thinking and HEIs' rhetoric must be matched by a genuine commitment to the enterprise agenda.

9.2.2 Graduated Approach to EE at Third Level

The lack of accepted theoretical paradigms and definition of entrepreneurship has led to ambiguity in the conceptual, pedagogical and assessment approaches to EE at third level in Ireland. HEI management and lecturers need to agree on a definition of entrepreneurship and the focus of EE in third level. It does not serve HEIs to mystify entrepreneurship as an arcane activity for Business graduates, rather it should be regarded as an everyday practice for all students. The traditional understanding of entrepreneurship as starting a business needs to be replaced with a broader concept of entrepreneurship to include *inter alia*, new business creation, entrepreneurial activities within both self-employment and employment, and social entrepreneurship. This would facilitate more inclusive EE and attract a broader cohort of entrepreneurship students from traditionally unrepresented faculties *e.g.*, Humanities and Social Sciences. I recommend that each HEI clarifies the concept(s) of entrepreneurship that it wishes to promote and this/these should be informed by: (i) international best practice; (ii) academics, entrepreneurs and EDAS; and (iii) the unique and idiosyncratic factors at play in the regional HEI hinterland. This should result in the provision of EE with robust philosophical underpinnings, clear learning outcomes, appropriate delivery modes and rigorous but innovative assessment methods. These findings suggest a need to calibrate EE across the spectrum of EE. It is evident from this study that much of the emphasis of EE at third level is at graduate level. There is a need to integrate EE initiatives across the spectrum of education but this is difficult given the current lack of engagement between the key stakeholders in enterprise development and education. Entrepreneurship competence can be acquired from primary school right through to second level, further and higher education.

A graduated approach to EE would address the heterogeneous and diverse needs of learners at different stages of their entrepreneurial development. Students could gain a greater insight into the realities, challenges and benefits of setting up a business and be in a greater position to make an informed decision if self-employment or social entrepreneurship were viable options for them. Figure 9.3 provides an overview of EE as lifelong learning process across the spectrum of education.

Figure 9.3 Entrepreneurship Education: A Lifelong Learning Process
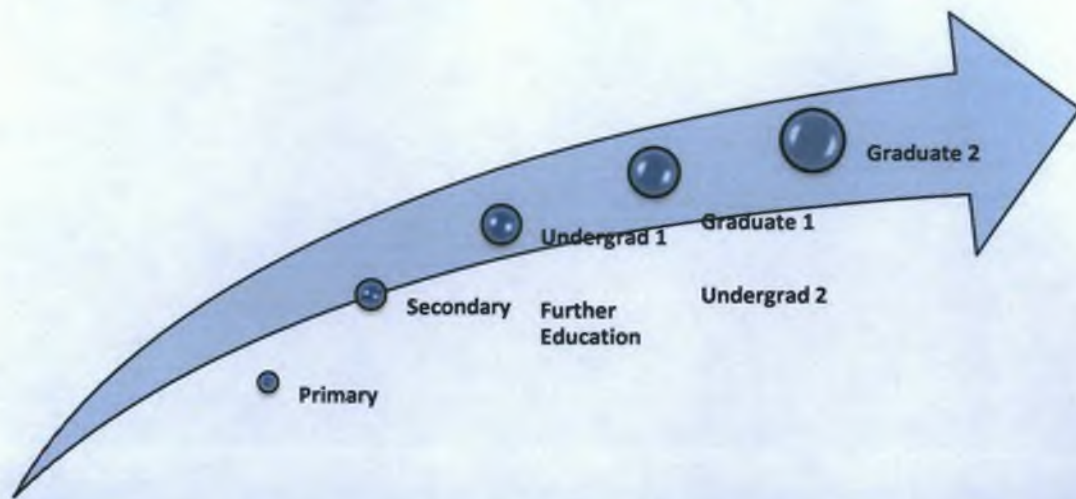
Level	Paradigm	Focus	Learning Intent	Pedagogical Approach
Graduate 2	New Venture Creation HPSU Development	Growth	Coping with the issues of expansion; ongoing learning and skill development.	Case Studies Experiential Learning
Graduate 1 Higher Education 2	EE for Social Entrepreneurship New Venture Creation	Start Ups	New venture creation & the further development of competencies; Access available supports.	Case Studies Experiential Learning Role Models
Higher Education 1 Further Education Secondary 2	EE for Social Entrepreneurship New Venture Creation	Creative Applications	The exploration of business ideas & creation of business concept.	Case Studies Experiential Learning Role Models
Secondary 1	Entrepreneurship for Life EE for Social Entrepreneurship New Venture Creation	Competency Awareness	The language of business; appreciation of small business issues; competency development.	Experiential Learning Role Models
Primary	Entrepreneurship for Life - What do you want to be when you grow up? EE for Social Entrepreneurship	Basics	Understanding basics of the economy & career opportunities, appreciation of the need for skills; motivation to learn. Value of contribution	Group Work Guest Speakers Mini-Dragons' Den

Adapted from: Etzkowitz *et al.* (1999); Blenker *et al.* (2011); Current Research

There is a need for a bespoke EE programme for 'raw graduates', where they can hone their entrepreneurial skills and knowledge whilst creating a real business. This suggests a two-pronged approach to graduate EE. Whilst graduate entrepreneurs highlighted the need for bespoke training to meet the needs of individual entrepreneurs, this may be difficult to manage at an operational level. Therefore, the use of an online or a virtual learning environment *e.g.*, Moodle could offer a possible solution for the call for just-in-time training and learning resources which the entrepreneur could access at her/his own discretion and time.

9.2.3 Pracademics

This research recommends that ideally HEIs should recruit 'pracademics' *i.e.*, lecturers who are also enterprise practitioners or *vice versa*. In addition, HEI management needs to encourage and incentivise lecturers to gain some form of SME experience and/or exposure. In defining the criteria for academic promotion, engagement with enterprise could readily be included into the existing category of external contribution to discipline/profession/community. Whilst this may not necessarily mean lecturers would work in SMEs, they may forge greater links with entrepreneurs who have gone through various business development routes and develop case studies of SMEs and entrepreneurs. Cognisant of the current embargos on public service recruitment, in the event of lecturers not having the rare combination of enterprise and academic experience, there is a need for a partner approach to EE *i.e.*, working with SMEs, graduate entrepreneurs and EDA personnel to deliver relevant EE.

9.2.4 Challenging Learning Environment

The challenge for HEIs is to fully embed entrepreneurship within all its courses so that entrepreneurship modules will be informed by international best practice and be of a quality, weighting and quantity that would result in a noticeable impact upon a student's entrepreneurial mindset. Ideally, curricula and assessment mechanisms should promote the development of critical thinking, self-directed learning, communications and teamwork, all of which are implicit in EE.

The graduate entrepreneurs suggested a variety of approaches to EE at undergraduate level *e.g.,* case studies, avatars, shadowing and profiling entrepreneurs, meeting successful graduate entrepreneurs and networking with EDAs. Lecturers need to convey knowledge about enterprise and employ teaching and learning approaches to strengthen students' entrepreneurial self-efficacy and pursue entrepreneurial careers. They should focus on key business growth strategies such as raising finance, boot-strapping, sales, risk-taking, strategic making, leadership, negotiation building strategic alliances and IP protection. Equally important is the need for innovative teaching and learning approaches and methodologies to develop students' self-confidence, self-efficacy and openness to pursuing entrepreneurial careers. Students need to take ownership for the development of organic, informal networks amongst students, initiated by them where they support each other, particularly across interdisciplinary lines. However, this research highlighted challenges provided by the tight deadlines implicit in a semesterised timetable, a theoretical rather than experiential approach to learning and a disjoint between academia and entrepreneurs.

Measures must be taken to rebalance EE so that it reflects the practical world of enterprise whilst maintaining academic rigour. There is significant potential to include a blended approach in EE. This approach would support theory-based learning (*i.e.* sector/industry specific); effective pedagogic learning (*i.e.* knowledge and practice of EE linked to SME-based case studies); competency and efficacy-driven learning (*i.e.* observing enterprise champions and role models of success and failure); and inter-personal skills learning (*i.e.* role-playing in face-to-face sessions and group-work online). Analysing the skills learning from each of these perspectives, a blended approach would greatly enhance the experience of learning for students and enable HEIs to attract a more diverse group of potential graduate entrepreneurs who otherwise would not have the chance to access EE.

9.2.5 Authentic Experience

Experience-based learning as the best method to acquire tacit knowledge associated with setting up and running a business and as a useful way of improving a technical person's business skills. Entrepreneurship learning is dependent on an individual's exposure to experience, and includes observation of an entrepreneurial role model. The effectiveness of authentic experience in developing entrepreneurial skills, attitudes and intentions make it an important issue for policy and curriculum designers to address. This requires EE to move away from a teaching centred-pedagogy to a learning-centred pedagogy. Links between HEIs and entrepreneurs, particularly if entrepreneurs are willing to engage with students, to mentor business plans and or to help in the creation and analysis of case studies would encourage deep learning and aid experiential learnin. This research recommends embedding elements of authentic experience into EE programmes if they are to have enduring effects on entrepreneurial intent and self-efficacy. Authentic engagement is missing in many undergraduate programmes because it has significant resource implications. The challenge for educators is to determine how authentic experience might be integrated and embedded in EE programmes, particularly at undergraduate level. Student placements in micro-enterprises and SMEs would provide opportunities to students to build upon their formal learning and identify opportunities for commercial exploitation. Such experience would prepare interested graduates to 'hit the ground running' in their entrepreneurial career.

9.2.6 Links with Wider Enterprise Community

The onus is on enterprise and education policy-makers to promote a broad concept of entrepreneurship and its advantages in all facets of a student's life. There is a need for an integrative approach to EE across the spectrum of education. There needs to be greater engagement with real entrepreneurs, alumni and EDAs. Networking with real-world entrepreneurs is regarded as a vital component of successful EE and the lecturer is instrumental in facilitating and developing both formal and informal networks between students, SMEs and EDAs. The lecturer's role is to initiate links between students, local and national entrepreneurs and EDA personnel who could assist students in developing their business.

There is also great value in the organic, informal networks amongst students, initiated by them where they support each other, particularly interdisciplinary networks. The graduate entrepreneurs believed that lecturers ought to maintain strong links with graduate entrepreneurs to develop opportunities for symbiotic relationships with existing undergraduates and graduates. Initially, the onus should be on the lecturer to facilitate such links through networks with students, campus incubator clients, EDAs and the wider enterprise community. In turn, students could create and lead an Enterprise Society, affiliated to the Students Union which would give them greater control of the entrepreneurial activities they wish to promote and pursue.

9.2.7 Creation of National Centre for Entrepreneurship

Mindful of the government's reluctance to create quangos, there is a need for a national centre for entrepreneurship education, similar to NCEE in the UK. In Ireland, there is no systematic approach for the development of good practice criteria and/or cases. The lack of overarching policy frameworks that would incorporate the interests and activities of the Departments of Enterprise and Innovation and Education and Skills respectively affect EE across the spectrum of education. The lack of integrated structures at tertiary level means that both positive stories are not communicated or celebrated in both HEIs themselves and in the media. Within this framework, Irish HEIs need to each appoint an enterprise champion to: (i) co-ordinate the development and implementation of EE; (ii) work with EI, the IDA, Forfás and EDAs in development a coherent enterprise policy focused the effective provision of EE nationally; (iii) liaise with the ILO function of HEIs, the academic community and potential industry partners in developing the entrepreneurial talents emerging from undergraduate and graduate programmes in HEIs; and (iv) communicate with primary and secondary schools on the potential to integrate EE in the form of initiatives to cultivate the creativity and possibilities for innovation in younger generations before they go to third level.

9.2.8 Need for an Institutional Enterprise Champion

The data showed that networking with real-world entrepreneurs is regarded as a vital component of successful EE and the lecturer is instrumental in facilitating and developing both formal and informal networks between students, entrepreneurs and EDAs. However, if entrepreneurship is to be taken seriously by HEIs, there is a need for each HEI to appoint an enterprise champion to initiate links between students, local and national entrepreneurs, EDA personnel, the SEEPP manager and campus incubator manager. S/he could assist students in developing their businesses. Equally important is that HEIs stay in touch with alumni so as to inform them of opportunities and support services available to entrepreneurs. Mindful of reduced HEI budgets, a pracademic with a proven track record in enterprise development and a passion for entrepreneurship could be seconded to this important, strategic role. I believe these recommendations are not a panacea for the challenges inherent in EE at third level. I acknowledge that they cannot be applied generically to all HEIs given each HEI's idiosyncratic nature, strengths and focus. However, they do reflect some of the suggestions articulated by graduate entrepreneurs and enterprise enablers for enhancing EE at third level, therefore, they have implications for: (i) theory development; (ii) practice; and (iii) policy and thus make a methodological and theoretical contribution to understanding EE.

9.3 Contribution of Research

This research provides a better understanding of how both graduate entrepreneurs and enterprise enablers regard EE at third level. Whilst this research was conducted using SEEPP as a case study, it attempted to reflect a wider perspective of graduate entrepreneurs and enterprise enablers within the South East region of Ireland. This research differed from the traditional focus on EE from the perspective of lecturers and HEIs so as to provide a deeper understanding of how graduate entrepreneurs learn and how HEIs and lecturers can refine EE to meet their diverse needs. Table 9.1 summarises the key recommendations of this study and their contribution to: (i) knowledge; (ii) practice; and (iii) policy.

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Table 9.1 Contribution of Research Recommendations

Recommendation	Knowledge	Practice	Policy
Development of enterprise-centric HEIs		✓	✓
Graduated approach to EE	✓	✓	
Need for pracademics		✓	✓
Dynamic and applied learning environment	✓	✓	
Authentic experience		✓	
Links with wider enterprise community		✓	
Establishment of National Centre for EE			✓
Appointment of enterprise champion		✓	

Source: Current Research

One of the strengths of this research is the methodology employed *i.e.,* conducting semi-structured interviews with graduate entrepreneurs and enterprise enablers in order to obtain as comprehensive a view of EE at third level.

9.3.1 Contribution of Research to Theory Development

This study contributes to the theory of EE and benefits entrepreneurship lecturers, HEIs and enterprise policy makers. The literature review pointed to a lacuna of research regarding graduate entrepreneurs' perspectives of EE at third level. This research has added to the considerable body of knowledge of EE by conceptualising their perspectives of EE at third level and by providing a deeper *understanding of how* they learn and what they value *vis-à-vis* EE. The findings have highlighted the theoretical links between EE and adult education which should inform the pedagogical approaches to EE to reflect the sophistication of adult learners. I recommend lecturers continue to enhance their scholarship of entrepreneurship teaching and learning (SoETL), approach their practice in a spirit of enquiry and disseminate their research to the academy.

9.3.2 Contribution of Research to Practice

This research highlights some practical actions to be taken to strengthen the visibility and legitimacy of entrepreneurship at third level, most notably through a graduated approach to EE to meet the diverse needs of start-up entrepreneurs. This research emphasises that HEI leaders should embrace the enterprise agenda and move away *from rhetoric* to provide a framework for embedding entrepreneurship within the HEI.

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HEIs and entrepreneurship lecturers will benefit from this study as it provides a deeper understanding of the educational needs of graduate entrepreneurs at the critical start-up stage of their business development. This will lead to a greater refinement of the objectives of EE in relation to its participants. Furthermore, the findings were useful in reflecting upon whether current EE provision within my own institution meets the needs of graduate entrepreneurs.

9.3.3 Contribution of Research to Policy

This research identified that more needs to be done with regard to curriculum development, the creation of critical mass of entrepreneurship lecturers, funding graduate entrepreneurship, multi-disciplinary faculty and student collaboration. HEIs need to give greater visibility to entrepreneurship by including SMEs within the curriculum and legitimising self-employment as a viable career choice. This research contributes to enterprise policy by highlighting that not all graduate entrepreneurs are HPSUs. Non-HPSU entrepreneurs have become a neglected, if not forgotten constituency, therefore, policies and measure need to be put in place so as to bridge the gap between government and EDA expectations and harsh entrepreneurial realities to determine what is realistic in terms of entrepreneurial success.

9.4 Limitations of Research

The findings underpin the conclusions presented, however, it must be acknowledged that there are some limitations inherent in this study which confined and influenced the research findings. Both time and budgetary constraints limited this research study to Ireland, therefore, this study did not examine any international case studies. Arguably, by concentrating on EE in Irish higher education, this study provides a critical perspective of current EE provision at third level. It is for other researchers in Ireland to show that their EE does not repeat these shortcomings. This research represents a synchronic view of EE *i.e.,* a snapshot in time of a single graduate enterprise programme. It does not purport to be a comparative analysis of national or international EPPs. SEEPP shares a common approach to other EPPs but it cannot be regarded as representative of all EPPs given the regional factors and institutional idiosyncrasies at play.

The qualitative nature of this research necessitated the completion of 45 in-depth qualitative interviews with respondents comprising SEEPP participants, non-SEEPP graduate entrepreneurs, SEEPP lecturers and EDA personnel. This was a time-consuming but worthwhile exercise and yielded a triangulated perspective of EE at third level. This research focused exclusively on EE within the context of entrepreneurial new venturing and it did not consider the emerging paradigms of EE, as identified by Blenker *et al.* (2011). Given the limitations of this research, this study should be considered as an important first step in conceptualising graduate entrepreneurs' perspectives of EE at third level and highlight what HEI leadership, lecturers and EDA personnel should focus upon in order to ensure that HEIs become vibrant and sustainable ecosystems for student, graduate and academic entrepreneurship. As such, this research provides a springboard for further research in the field of EE.

9.5 Directions for Future Research

I skate to where the puck is going to be, not where it has been.
Wayne Gretzky

Research of EE is still at an embryonic stage in Ireland, however, it is growing in relevance and importance. Future research should investigate the economic impact of graduate entrepreneurship on economic development to inform and guide policy and future funding for graduate EE. This study identified a need for a qualitative research study to examine how graduate entrepreneurs define their business success. This is important given the divergence in how enterprise enablers and graduate entrepreneurs regard business success. Further research could be conducted to examine what specific profiles of graduate entrepreneurs benefit most from EE. Such a study could examine the types of EE required by different participants and lead to a more targeted approach to EE. Given this study was focused on one HEI with its attendant regional and national links to EDAs, there is an opportunity for a team of researchers to widen the lens of this study to examine EE at third level in all Irish HEIs to analyse and synthesise the various pedagogical approaches to EE in HEIs. This would lead to the development of a best practice repository to be disseminated to entrepreneurship lecturers, EDAs and policy makers in order to enhance EE provision.

Furthermore, there is significant potential for a pan-European wide comparison. This study highlighted a growth in necessity entrepreneurship within the South East region and this trend is replicated throughout Ireland and indeed internationally. There is a need for a detailed study of necessity entrepreneurs in order to identify and understand what specific EE interventions are required to assist them in creating viable businesses. The Literature Review revealed that the concept of social entrepreneurship is gaining legitimacy as an EE paradigm but critical questions have not been answered regarding the effectiveness of EE in producing social entrepreneurs. In the context of future research, the implications of these research projects will have implications for theory development, practice and policy. The pursuit of new knowledge and the identification of emerging trends in EE can inform HEIs' and lecturers' approach to EE in order to enhance student learning. It is imperative for future researchers to ground their research in theory, develop new theory and demonstrate how EE is theoretically, practically and intrinsically compelling. The dissemination of research is of strategic importance for academics to contribute to contemporary discourses in EE and to shape future EE provision.

9.6 Reflexivity

My initial interest was to investigate the efficacy of EE, however, this proved to be the 'cul de sac' that Potter (2008) predicted it would be. I began this research with certain preconceived notions about EE and the role of HEIs in graduate enterprise development. In order to address potential researcher bias, I needed to as Hearne (2010) recommended to 'bracket off' my own values and assumptions as I engaged with the respondents. Sometimes throughout the research, I regarded myself as a 'poacher turned gamekeeper' i.e., seeing EE through the lens of both graduate entrepreneurs and enterprise enablers. Interviewing the graduate entrepreneurs challenged my own preconceptions of EE and HEIs' role in supporting their development. Uncomfortable truths emerged e.g., HEIs do not adequately prepare students for self-employment or academics without critical enterprise experience lack credibility amongst graduate entrepreneurs. Hearne (2010) posited that reflexivity in an interpretative study can make a researcher humble and I agree.

Handy (2001) likened entrepreneurs to alchemists and his analogy captures the idealism, creativity, innovation and 'can-do' attitude of entrepreneurs. I was inspired by their courage and gumption and I believe their perspectives of EE at third level will inform and influence my professional practice.

9.7 Conclusion

Entrepreneurship holds much promise for navigating the current uncertainty of the Irish and global economies but it has yet to attain legitimacy within the Irish education system. This could be achieved by embedding it across the spectrum of the Irish education system so that students could develop an entrepreneurial mindset and the concomitant skills through lifelong learning. Within higher education, there is a need for a holistic approach to develop the leadership and values required for entrepreneurshipg to flourish. Graduate entrepreneurship will become a key success metric for HEIs, therefore, institutions who pay lip service or are ambivalent to EE and the enterprise agenda will be left behind. It is a fallacy to assume that more EE provision will lead to immediate graduate entrepreneurship because a graduate's route to self-employment is circuitous and is influenced by personal circumstances, namely: opportunity, necessity, self-confidence and/or availability of capital. Therefore, government expectations of HEIs as seedbeds of entrepreneurial talent must be tempered with realism and an understanding of human behaviour. It would be gratifying to envisage Irish HEIs embracing entrepreneurship, encouraging students and staff to become entrepreneurial (in all its guises) and engaging with the wider enterprise community. To paraphrase Chukovsky (1963), the present belongs to the sober, the cautious, the routine-prone but the future belongs to HEIs who do not rein in their imaginations.

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Appendix A Taxonomy of Entrepreneurs

Type of Entrepreneur	Description
Latent	A person who has an insatiable curiosity, bored by mundane tasks but enthusiastic to explore new ideas, adaptability, learning as they go to overcome difficulties, intense bursts of energy, and impatient for early results. The use of the word 'latent' suggests that the person does not yet have the capital *i.e.* age and resources, to be an entrepreneur.
Nascent	A person who is considering a career as a self-employed person, but has not yet started the process of setting up a business or becoming self-employed.
Necessity	A person, who believes that s/he has no other career choice except to start up her/his own business.
Novice	A person with no prior experience of minority or majority business ownership.
Opportunity	A person that sees an opportunity to provide a product/service to customers, and therefore starts her/his own business to supply this product/service.
Serial	A person who has sold or closed a business in which they held a share and currently own a stake in another business. A person with a minority or majority shareholding in one or more independent businesses that are new, purchased and/or inherited.
Social	A person with a social mission, which is explicit and central. A social entrepreneur plays the role of a change agents in the social sector, by: (i) adopting a mission to create and sustain social value (not just private value); (ii) recognizing and relentlessly pursuing new opportunities to serve that mission; (iii) engaging in a process of continuous innovation, adaptation, and learning; (iv) acting boldly without being limited by resources currently in hand; and (v) exhibiting a heightened sense of accountability to the constituencies served and for the outcomes created.

Source: Dees (1998), Gilbertson (2003), Westhead, Ucbasaran and Wright (2005, p.413), O'Gorman (2007), McGowan (2010)

Appendix B Challenges in Teaching Entrepreneurship at Third level

Stakeholders	Types of Challenges
Curricula Designers	• It can be difficult to obtain academic rigour from purely entrepreneurship Degrees and difficult to attract students to these degrees. Practical entrepreneurship outcomes are not guaranteed. • It is necessary to maintain academic rigour and HEI independence whilst adapting to the concerns of other stakeholders • The right point must be found in a trade –off between the benefits of proximity and tailoring to subject specificities through separate courses for each department and the benefits of economies of scale and greater experience through centralised & inter-disciplinary
Entrepreneurship Lecturers	• Classroom lectures need to be combined with more experiential approaches to learning. Theory needs to be combined with practice and lectures must be made relevant to real-world entrepreneurship problems • Significant resources are required to develop case studies. Case studies must focus on problems potential entrepreneurs will actually face • Ways are required to develop insights on the world of the entrepreneur for teachers who have no entrepreneurship experience and to develop teaching abilities in existing or former entrepreneurs
Non-Entrepreneurship Lecturers	• Ignorance and myopia about what entrepreneurship is and who entrepreneurial people are • Pre-conceived notions about its associations with starting a new business and with the profit motive • The legitimacy or credibility of the subject *vis a vis* real academic subjects
Pedagogy and Assessment	• Business plans must be realistic and there is a need to test business plans against market conditions and potential shocks. Teaching must also look at turning business plan ideas into real practice • It can be difficult to assess how well feasibility studies have been undertaken compared with real conditions on the ground
HEIs	• Pre-determination that entrepreneurship agenda poses a threat to the traditional university status • Scalability • Funding: Funds will be required to create start-ups and to develop virtual firm technologies. Rules must be established for sharing rewards from successful starts • Perceived as additional effort and a distraction from proper university work • HEIs must find ways of attracting entrepreneurs to teaching programmes - they must also support entrepreneurs in their teaching practice, notably in drawing out the learning from their experiences • The requirements for developing or purchasing the technology should not be underestimated. Efforts are needed to integrate games with other teaching. Teachers need training to provide a framework for learning from the games

	• Firms must be found to provide good quality placements. University staff must support the student during the placement • Sufficient funds must be generated for the support. Decisions must be made about the right amount and duration of support. Where possible links should be made with existing support providers outside of the HEI
External Stakeholders	• Nurturing is required to make networks successful. Activities must be found to animate the networks. Networks should be expanded to include experienced entrepreneurs, investors, consultants • It is necessary to find suitable companies and consulting opportunities. Although academics will often be expected to lead, ways must be found of involving students in the project
Students	• Communication skills need to be developed under pressure and real-world conditions • Student learning rhythm must be maintained and students' isolation should be avoided • Lack of experience • Lack of finance • Lack of business ideas • Lack of contact with clients and customers and a lack of courage, which block the path towards their preferred choice

Adapted from Birdthistle (2007), Potter (2008), Hannon (2010) & McGowan (2010)

Appendix C – The Evolution of Enterprise Policy in Ireland

Era	Key Enterprise Policies
1920s-1950s	**1932**: Large increase in tariffs on imported goods.
	1933: Establishment of Industrial Credit Corporation to provide finance to indigenous industry.
	1950: Establishment of Industrial Development Authority to attract FDI.
	1952: Establishment of An Foras Tionscial to grant aid companies setting up in underdeveloped areas.
	1956: Industrial Grants Act provides grants up to 66% for new company start ups in all regions. Finance Act (1956) gives 50% tax relief on profits from exports.
	1958: First Programme for Economic Development (Whitaker); Finance Act (1958) increases export tax relief to 100%. Easing of restrictions on foreign ownership of industry.
	1959: Shannon Free Airport Development (SFADCO) established to promote industrial development in Shannon region.
1960s-1980s	**1960**: Finance Act (1960) extends export tax relief of 100% for 15 years with a reduced relief for a further five years.
	1961: Ireland applies to join European Economic Community (EEC).
	1963: Application to join EEC withdrawn in light of collapse of talks between Britain and EEC.
	1965: Anglo-Irish Free Trade Act merges IDA and An Foras Tionscail.
	1969: Export profit tax relief extended to 1990.
	1973: Ireland joins EEC. Tariffs on imports of almost all EEC-manufactured goods to be phased out over five years.
	1981: Industrial Development Act allows grants to be paid for designated internationally traded services. IDA establishes International Services Programme. Export tax relief replaced by a 10% tax on all profits in the manufacturing sector, but remains in place until 1990 for already qualifying companies.
	1982: Teleis Report criticizes excessive reliance on FDI. It

	proposes a reduction in grant aid to overseas companies and a greater emphasis on building indigenous industry/enterprise. **1984**: White Paper on Industrial Policy proposes greater focus on indigenous industry. **1986**: Industrial Development Act provides new statutory framework for enterprise support. **1987**: Programme for National Recovery negotiated between Government and social partners. Financial Services Act establishes International Financial Services Centre (IFSC) in Dublin with a special 10% tax rate on profits to 2005 as an incentive to attract international finance companies. **1987**: First Minister for State for Science and Technology appointed and Science and Technology development programme initiated. **1989**: First EU-funded Industry Operational Programme launched.
1990s - 2012	**1992**: Culliton report calling for greater emphasis on the importance of productive enterprise in Irish society. **1993**: EU Single Market in goods, services, capital and labour takes effect; Industrial Development Act establishes three Agencies namely Forbairt (indigenous enterprise development), IDA Ireland (FDI) and Forfas (advisory and co-ordination body). **1994**: Task Force on Small Business. **1998**: Industrial Development Act establishes **Enterprise Ireland** charged with the development of indigenous enterprise and replacing Forbairt, An Bord Trachtala and some services to industry functions of FAS; Agreement with EC on standard corporation tax of 12.5% from 2003. **1999**: Establishment of Economic Monetary Union (EMU) and changeover to single currency *i.e.*, Euro. **2002**: The National Spatial Strategy 2002-2020. **2000**: Government approves 646m Technology Foresight Fund and establishes Science Foundation Ireland to manage it. Establishment of Inter-Trade Ireland to promote all-island trade and enterprise development. **2004**: Forfas report on enterprise development Ahead of the Curve: Towards on Enterprise Strategy.

	2007: Forfas Towards an Enterprise Strategy for Ireland. 2008: Publication of Smart Economy (2008). 2010: Publication of Innovation Taskforce Report (2010). 2011: Programme for Government: National Recovery Plan; National Strategy for Higher Education to 2030 *aka* the Hunt Report (2011) 2012: Jobs Initiative

Source: Current Research

Letterkenny Institute
of Technology

Institute of Technology, Sligo

Dundalk Institute
of Technology

Institute of Technology,
Blanchardstown

Castlebar Campus
of GMIT

Institute of
Technology, Tallaght

Galway-Mayo Institute
of Technology (GMIT)

Dun Laoghaire Institute of
Art, Design and Technology

Athlone Institute
of Technology

Limerick Institute
of Technology

Institute of
Technology, Carlow

Institute of
Technology, Tralee

Waterford Institute
of Technology

Cork Institute
of Technology

Source: IoTI (2011)

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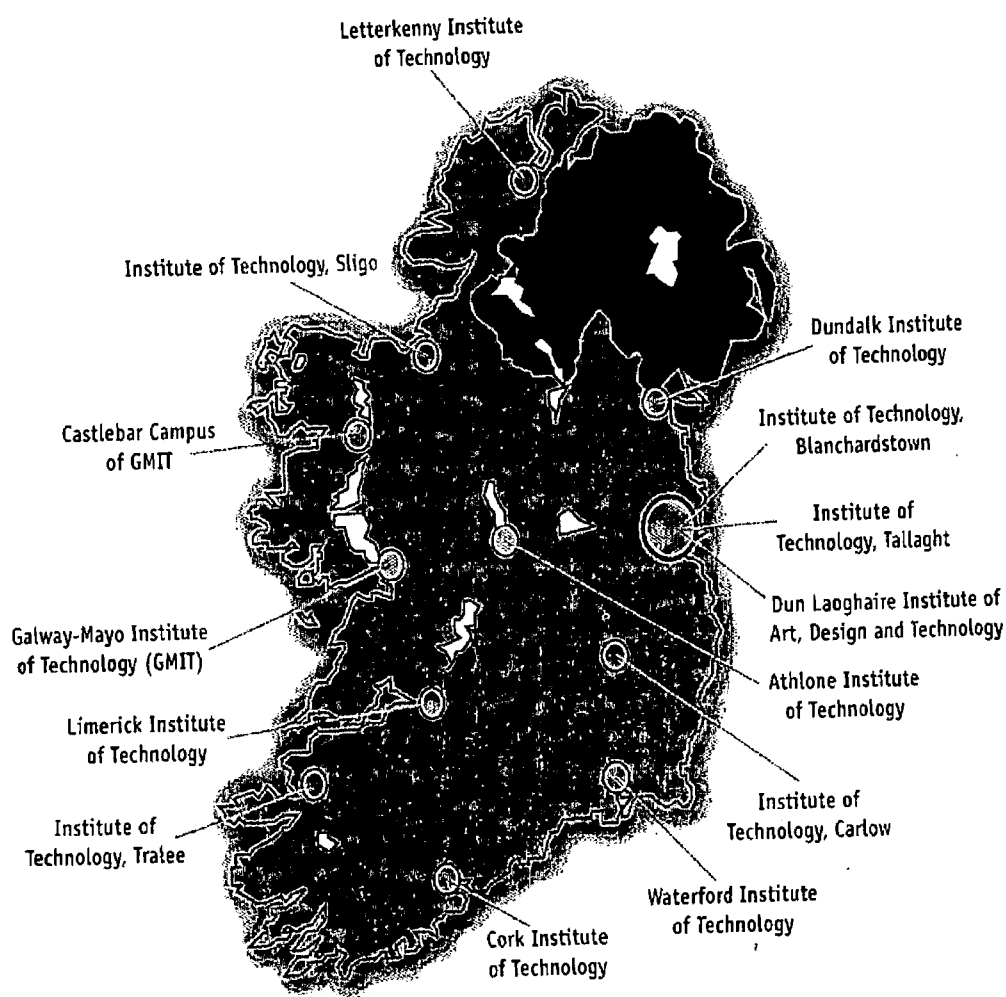
14 July 2011

Re: **PhD Research e-Questionnaire**

Dear SEEPP participant,

My colleague Mary Fenton, Head of Department of Adult Education, WIT is undertaking a PhD to investigate graduate entrepreneurs' perspectives of entrepreneurship education. She wishes to conduct research amongst SEEPP participants in order to gain their perspective on SEEPP.

I have given my full support for this research because the research findings will be valuable in developing a profile of graduate entrepreneurs in the South East region. The research findings will inform WIT, SEEPP, enterprise development agencies, education and enterprise policy makers how they can enhance supports for future entrepreneurs to develop and grow their businesses.

I would be very grateful if you could complete the online questionnaire by Friday 22 July 2011. Please be assured that this research is confidential in nature and it will not identify either you or your business.

If you have any queries, please contact Mary by email mfenton@wit.ie or @ 087-2029070.

Kind Regards,

Eugene Crehan

Introduction

19 July 2011

Dear SEEPP participant,

My name is Mary Fenton, Head of Department of Adult and Continuing Education at WIT. I am currently undertaking PhD research at St Patrick's College/DCU to examine graduate entrepreneurs' perspectives of graduate entrepreneurship education.

I wish to gain your perspective and experience as a participant of SEEPP. The research findings should provide a detailed analysis of graduate entrepreneurs' perspectives of a graduate enterprise programme.

I would apprecite if you could complete this online questionnaire by Friday 29 July 2011. Please note that all information will be treated in strictest confidence and will not be published in any identifiable form.

If you have any queries, please contact me directly @ 087-2029070.

Many thanks for your time and support.

Yours faithfully,
Mary

SEEPP

1. What year did you participate on SEEPP? Please tick where appropriate

[ ]

2. How did you learn about SEEPP?

[ ]

Other (please specify)

[ ]

3. What were the main three reasons for you participating on SEEPP? (Please tick as appropriate)

[ ] Reputation and track record of SEEPP

[ ] To avail of CORD funding

[ ] To network with graduate entrepreneurs

[ ] Business training and advisory support

[ ] SEEPP gave me the space, time and support to start my own business

[ ] Access to a business mentor

[ ] Structured environment to help me start my company

[ ] Working with other start up entrepreneurs

[ ] Access to incubation space in Arc Labs

[ ] Enhanced profile/credibility of my business

[ ] Recommendation/referral from Enterprise Development Agency

[ ] Recommendation/referral from friend/family member

＊4. On successful completion of SEEPP, did you receive?

[ ]

＊5. How important was attaining accreditation i.e., either Postgraduate Diploma in Enterprise Development or Higher Certificate in Business in Enterprise Development on successful completion of SEEPP?

( ) Very Important   ( ) Important   ( ) Not Important

Please provide a reason for your answer

[ ]

*6. Please indicate your level of agreement or disagreement with each of the following statements:

	Strongly Agree	Agree	Undecided	·Disagree	Strongly Disagree
SEEPP lived up to my expectations as a graduate enterprise programme	◯	◯	◯	◯	◯
My primary objective in participating in SEEPP was to develop a viable business	◯	◯	◯	◯	◯
SEEPP helps participants to assess the viability of their business idea	◯	◯	◯	◯	◯
Through participation on SEEPP, I developed the practical management skills to develop my business	◯	◯	◯	◯	◯
Through participation on SEEPP, I developed my leadership skills	◯	◯	◯	◯	◯
My mentor was instrumental to the development of my business	◯	◯	◯	◯	◯
The major benefit of SEEPP is that I developed contacts with WIT/TSSG staff, who could assist me in my business development	◯	◯	◯	◯	◯
My confidence in my own ability increased as a result of my participation on SEEPP	◯	◯	◯	◯	◯
Most of what I learned on SEEPP was from interacting with the other participants	◯	◯	◯	◯	◯
As it is currently structured, SEEPP is too long in duration	◯	◯	◯	◯	◯
My business would not have succeeded/progressed so far without my participation on SEEPP	◯	◯	◯	◯	◯

*7. Please rate your satisfaction with the following features of SEEPP:

	very satisfied	satisfied	undecided	dissatisfied	very dissatisfied
Overall management of SEEPP	◯	◯	◯	◯	◯
Experience of SEEPP team	◯	◯	◯	◯	◯
Level of support from SEEPP management team	◯	◯	◯	◯	◯
Scheduling of training inputs	◯	◯	◯	◯	◯
Relevance of training content	◯	◯	◯	◯	◯
Knowledge and expertise of lecturers/presenters	◯	◯	◯	◯	◯
Availability of online learning materials	◯	◯	◯	◯	◯
Access to lecturers/presenters outside of training	◯	◯	◯	◯	◯
Incubation space	◯	◯	◯	◯	◯
Access to IT support	◯	◯	◯	◯	◯
Access to meeting rooms	◯	◯	◯	◯	◯
Access to WIT Library	◯	◯	◯	◯	◯
Knowledge and expertise of mentor	◯	◯	◯	◯	◯
Links with Enterprise Development Agencies	◯	◯	◯	◯	◯
Peer support from other participants	◯	◯	◯	◯	◯
Access to other WIT/TSSG academic staff	◯	◯	◯	◯	◯

*8. Please rate your satisfaction with the following SEEPP training:

	very satisfied	satisfied	undecided	dissatisfied	very dissatisfied
Presentation skills/Making a successful pitch	○	○	○	○	○
The development of an online presence	○	○	○	○	○
General management development	○	○	○	○	○
Leadership development	○	○	○	○	○
Business planning	○	○	○	○	○
Marketing/Sales	○	○	○	○	○
Customer service	○	○	○	○	○
Financial planning	○	○	○	○	○
Raising finance	○	○	○	○	○
Corporate governance	○	○	○	○	○
Legal / patents	○	○	○	○	○
People management	○	○	○	○	○
Team building and motivation	○	○	○	○	○
Taxation	○	○	○	○	○
Business presentation	○	○	○	○	○
Negotiation skills	○	○	○	○	○
Creative thinking	○	○	○	○	○
IT skills	○	○	○	○	○

*9. What was the key benefit to you from your participation on SEEPP?

10. What, if any, were the limitations of SEEPP?

*11. What suggestions do you have for enhancing SEEPP?

*12. Would you recommend SEEPP to other graduate entrepreneurs?

○ Not at all   ○ For some people only   ○ Yes, unreservedly

13. Did you set up your original SEEPP business?

○ Yes   ○ No

*14. Have you established any other business since completing SEEPP?

○ Yes   ○ No

15. Please rate your links with the SEEPP team

	Very Strong	Strong	Undecided	Weak	Very Weak
Pre SEEPP	◯	◯	◯	◯	◯
During SEEPP	◯	◯	◯	◯	◯
Post SEEPP	◯	◯	◯	◯	◯

*16. Please rate your links with WIT/TSSG staff

	very strong	strong	undecided	weak	very weak
Prior to SEEPP	◯	◯	◯	◯	◯
During SEEPP	◯	◯	◯	◯	◯
Post SEEPP	◯	◯	◯	◯	◯

*17. Do you have links with other Higher Education Institutes i.e., Institutes of Technology or Universities in Ireland or abroad?

◯ Yes   ◯ No

18. If yes, please name the Institute or University

1
2
3
4
5

19. What is the nature of your engagement with this Institute?

☐ Consultancy

☐ Research and Development - New Product Development

☐ Use of Institute's Facilities

☐ Training and Education

☐ I work as a guest lecturer

☐ Student Placements

☐ Graduate Placements

☐ Supplier

Other (please explain)

Business Profile

This section aims to develop a profile of SEEPP entrepreneurs.

*20. What sector do you operate in?

[   ]

21. When did you set up your business?

[   ]

*22. Where is your business located?

[   ]

23. If your company is based in the South East Region, why did you choose to locate in this region?
Please tick the relevant box(es).

[ ] Proximity to market

[ ] Availability of skilled labour

[ ] Proximity to WIT

[ ] Personal/Domestic reasons

[ ] Access to other entrepreneurs within the region

[ ] Proximity to SEEPP participants

[ ] I am originally from the area

Other (please specify)

[   ]

24. If your company is not located in the South East region, why did you choose to locate outside of this region? [Please tick the relevant box(es)]

[ ] I am originally from this area

[ ] Proximity to market

[ ] Availability of skilled labour

[ ] Proximity to other Higher Education Institute

[ ] Personal/Domestic reasons

[ ] Access to other entrepreneurs within the region

Other (please specify)

[   ]

*25. Excluding yourself, how many people do you currently employ?

( ) 0   ( ) 1   ( ) 2-4   ( ) 5-9   ( ) 10-14   ( ) 15-20

Other (please specify)

[   ]

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*26. What is the current annual turnover of your business?

[   ]

Other (please specify)

[   ]

*27. Is your business currently?

[   ]

*28. What percentage of your output is exported?

( ) None   ( ) 1-20%   ( ) 21-40%   ( ) 41-60%   ( ) 61-80%   ( ) 81-100%

29. Which of the following global locations does your company export to at the moment?

[ ] UK   [ ] Europe   [ ] USA/Canada   [ ] Middle East   [ ] Far East

Rest of World (please specify)

[   ]

*30. Please answer Yes or No to the Following questions

	Yes	No
Is your business on line?	( )	( )
Are you an Enterprise Ireland client?	( )	( )
Are you classified as a High Potential Start Up (HPSU)?	( )	( )
Did you receive CORD funding?	( )	( )
Are you a client of City/County Enterprise Board?	( )	( )
Are you a client of a LEADER company?	( )	( )
Did you receive grant aid for the development of your business	( )	( )

31. If you received grant aid please specify from which agency/agencies you received funding

[   ]

*32. What is the highest level of education attained before your commencement of SEEPP?

[ ]

Other (please specify)

[ ]

33. Undergraduate Education

Name of College	[ ]
Qualification	[ ]
Year of Graduation	[ ]

34. Postgraduate Education

Name of College	[ ]
Qualification	[ ]
Year of Graduation	[ ]

35. Prior to commencement of SEEPP, describe your work status immediately before commencing the SEEPP. (Please select 1 option only)

	Private Sector	Public Sector
Working as a senior manager	○	○
Working as a middle manager	○	○
Working in administration	○	○
Made redundant	○	○
Self-employed	○	○
Unemployed	○	○

Other (please specify)

[ ]

*36. How many years were you employed before commencing SEEPP?

[ ]

Over 20 years please specify

[ ]

*37. Did you study entrepreneurship before commencing SEEPP?

○ Yes   ○ No

38. Where did you study entrepreneurship?

[ ]

Other (please specify)

[ ]

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39. If at Third Level, in what year of your course/programme?

◯ 1st Year ◯ 2nd Year ◯ 3rd Year ◯ 4th Year

Other (please specify)

[   ]

40. Did studying entrepreneurship encourage you to set up your own business?

◯ Yes ◯ No

41. If Yes, why was this the case?

42. If No, why was this the case?

General Information

43. Does your family have a background in business?

◯ Yes   ◯ No

44. If Yes, what type of business were/are they in?

45. If yes, in what way did your family background influence your career path to self-employment?

*46. What was the primary motivation for establishing your business?

Other (please specify)

*47. Please specify your age group (Please tick the relevant box).

◯ Under 24   ◯ 25-34   ◯ 35-44   ◯ 45-54   ◯ 55-64   ◯ 65 or over

48. Gender

Thank You

I really appreciate your time, help and assistance in completing this e-questionnaire. If you have any queries, or require clarification on any points, please contact me directly @ 087-2029070.

Many Thanks,
Mary

Agenda for Semi-structured Interview with SEEPP Participants

Name	
Business	
Sector	
Year Established	
Number of Employees	
Status of Business	
Previous Qualifications	
Work History	
Motivation for setting up a business	
Family Background in Business	
Additional Information	

SEEPP

Did you study entrepreneurship prior to commencing with SEEPP? If yes, In your opinion, does higher education adequately prepare graduates to set up their own business?
When did you participate on SEEPP?
How did you learn about SEEPP?
What were the *main* reasons for you participating on SEEPP?
What were the key benefits to you in participating in SEEPP?
What, if any, were the limitations of SEEPP to you?
Did SEEPP live up to your expectations as a graduate enterprise programme?
Did SEEPP help you to assess the viability of your business?
What were the key skills that you developed through SEEPP participation?
What was your relationship with your mentor? How did s/he assist you in developing your business?
Did your self-confidence develop as a result of your participation on SEEPP?
Did you learn a lot from interacting with other SEEPP participants?
Was the accreditation of SEEPP a significant factor for you?
Would your business have succeeded/progressed so far without you participating on SEEPP?
Are you still in contact with the SEEPP team?
Are you still in contact with other SEEPP participants?
Do you think SEEPP, as it is currently structured, is too long? How would you like to see it structured in the future?
How could SEEPP be enhanced to meet the needs of future graduate entrepreneurs?
Describe your links with WIT/TSSG staff post SEEPP Are these links stronger as a result of SEEPP?
In the future, what could WIT do to promote greater graduate enterprise activity?
Ideally, how would you like to see WIT and enterprise development agencies working together to support graduate entrepreneurs?

Agenda for Semi-structured Interview with Non-SEEPP Participants

Name	
Business	
Sector	
Year Established	
Number of Employees	
Status of Business	
Qualifications	
Work History	
Motivation for setting up a business	
Family Background in Business	
Additional Information	

Entrepreneurship Education

- Did you study entrepreneurship prior to starting your own business?
- If yes, did higher education adequately prepare you to set up your own business?
- What were the benefits of entrepreneurship education?
- What were the limitations of entrepreneurship education?
- In your experience, did entrepreneurship education create an awareness of entrepreneurship as a career choice or develop your entrepreneurial skills?
- Is the focus of entrepreneurship education in higher education on the development of micro-enterprises or HPSUs?
- How could entrepreneurship education be enhanced to meet the needs of graduate entrepreneurs?
- What factors can affect academics' effectiveness in teaching entrepreneurship?
- Did you consider participating on a bespoke graduate enterprise programme *e.g.,* Enterprise Platform Programme?
- What were the *main* reasons for you not participating on such a programme?
- (Where applicable) Was there a difference in the approach to EE at undergraduate versus postgraduate level?

Graduate Enterprise Development

- What are HEIs doing to promote entrepreneurship amongst students?
- What more could HEIs do to promote greater graduate enterprise development?
- How are HEIs, SMEs and EDAs working together to promote student and graduate entrepreneurship?
- Ideally, how would you like to see HEIs and enterprise development agencies working together to support graduate entrepreneurs?
- Have you other suggestions for promoting graduate enterprise development?

Agenda for Interview with SEEPP Lecturers

Graduate Entrepreneurs
- Have you seen an increase in graduate entrepreneurs over the past number of years?
- Is there a typical profile of graduate entrepreneurs within the region?
- How, if at all, has this profile changed given the current economic climate?
- Do graduate entrepreneurs have significant work experience prior to setting up their own business?

Role of Higher Education in Supporting Enterprise Development
- In your opinion has the increase in entrepreneurship education at undergraduate level led to greater graduate enterprise development?
- In your opinion, does higher education adequately prepare graduates to set up their own business?
- What more could higher education institutes do to promote enterprise development?

Role of HEIS in Supporting Graduate Entrepreneurs
- Do HEIs have a specific policy to support graduate entrepreneurs?
- What are the key supports required by graduate entrepreneurs?
- What supports do HEIs provide to (graduate) entrepreneurs?
- Is there an over-emphasis on developing HPSUs?
- How many graduate entrepreneurs meet HPSU criteria?

Role of SEEPP and EPPs
- What are the key benefits to graduates by participating in SEEPP?
- What, if any, are the limitations of SEEPP in supporting graduate entrepreneurs?
- How could SEEPP be enhanced to meet the needs of graduate entrepreneurs?
- In your opinion, is the accreditation of SEEPP a significant factor for graduate entrepreneurs?

Future of Graduate Enterprise Development
- In the future, what could HEIs do to promote greater graduate enterprise activity?
- Are you aware of any best practice in graduate entrepreneurship education nationally and internationally?
- Ideally, how would you like to see HEIs and EDAs working together to support graduate enterprise development?

Agenda for Interview with EDA Personnel

Graduate Entrepreneurs
- Have you seen an increase in graduate entrepreneurship over the past number of years?
- Is there a typical profile of graduate entrepreneurs in the region?
- How has this profile changed given the current economic climate?
- Do graduate entrepreneurs have significant work experience prior to setting up their own business?

Role of Higher Education Institutes (HEIs) in Supporting Enterprise Development
- In your opinion has the increase in entrepreneurship education at undergraduate level led to greater graduate enterprise development?
- In your opinion, does higher education adequately prepare graduates to set up their own business?
- What more could higher education institutes do to promote enterprise development?

Role of EI in Supporting Graduate Entrepreneurs
- Does your organisation have a specific policy to support graduate entrepreneurs?
- Is there an over-emphasis on developing HPSUs?
- Do many start-up graduate entrepreneurs meet HPSU criteria?
- What are the key supports required by graduate entrepreneurs?
- How do HEIs prepare graduates to set up their own business?
- What is your organisation doing to facilitate graduate entrepreneurs, who decide not to pursue the formal graduate enterprise programme route?

Role of SEEPP and EPPs
- What are the key benefits to graduates by participating in SEEPP?
- What, if any, are the limitations of SEEPP in supporting graduate entrepreneurs?
- How could SEEPP be enhanced to meet the needs of graduate entrepreneurs?
- Is the accreditation of SEEPP a significant factor for graduate entrepreneurs?
- Is the accreditation of SEEPP a significant factor for your organisation?

Future of Graduate Enterprise Development
- In the future, what could your organisation do to promote greater graduate enterprise activity?
- Are you aware of any best practice in graduate entrepreneurship education nationally and internationally?
- Ideally, how would you like to see HEIs, your organisation and other enterprise development agencies working together to support graduate enterprise development?

Participant Consent Form

In signing this document, I hereby consent to be interviewed by Ms Mary Fenton, a PhD student at St Patrick's College, Drumcondrea, DCU and Head of Adult and Continuing Education at Waterford Institute of Technology. I understand that I will be taking part in a small research study to ascertain a better comprehension of graduate entrepreneurship education and graduate enterprise development in the South East region.

I am aware that these interviews will be conducted in my workplace at a time convenient to me. I also understand that these interviews will be audio-taped. I understand that I was selected to take part in these interviews because of my work within an enterprise development agency.

Confidentiality and anonymity will be preserved throughout the interview process. No names will be used in the compilation of data. An identity code will be devised, known only to the researcher. Tape recordings of interviews will be kept in a locked cupboard in the researcher's home. The researcher will be the only key holder. The data will only be stored on the researcher's laptop computer. Accessibility to this computer is protected by a password known only to the researcher. I understand that should any issue emerge that requires professional intervention, the limit of confidentiality may need to be breached.

I understand that:

- my participation is completely voluntary and that I may withdraw from the research project at any time or I may terminate the interview if I so wish.
- That I will receive no direct benefit as a result of participation;
- I may obtain the results of the completed research study if I so wish and that any queries I may have regarding the study or my rights as a participant will be answered by the researcher.

I hereby consent to participate in this research

Participant's signature:

Researcher's signature:

Date:

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Appendix I: Module Descriptor Enterprise and Innovation (10 credits, level 9)
MA in Management in Education

Enterprise and Innovation in Education (10 Credits – Level 9)

This module provides you with the knowledge and skills for effective entrepreneurship education. It explores good practice in entrepreneurship education both nationally and internationally and identifies pedagogical approaches to engage students effectively. You will be expected to reflect on your role as a teacher or facilitator of entrepreneurship, your teaching philosophy and document through the use of a portfolio and action research how the course impacts on your practice in the classroom and/or in your school/organisation.

Learning Outcomes

On successful completion of this module, you will be able to:

1. Explain the role of education in promoting enterprise;
2. Demonstrate knowledge in the subject matter of enterprise studies;
3. Assess various entrepreneurship education methodologies;
4. Articulate your teaching philosophy;
5. Describe how a portfolio may be designed and structured;
6. Reflect on the use of Portfolio in assessment of learning;
7. Demonstrate, through reflection, how your teaching practice has been influenced.

Indicative Content

- Defining enterprise and entrepreneurs; defining innovation; characteristics of entrepreneurs; links between enterprise, innovation and creativity.
- Enterprise Policy in Ireland; The role of education in enterprise development; SMART economy.
- Entrepreneurship Education; teaching methodologies; theories of teaching and learning; instructional design and methodologies; curriculum planning.
- Multiple Intelligence: definitions, application to teaching and learning.
- Idea generation; creative thinking, brainstorming,
- Market Research: definitions, primary and secondary research, qualitative and quantitative information, questionnaire design,
- Marketing Selling and Advertising: The marketing concept, the marketing mix, process of selling, advertising process.
- Managing Growth: Current and emerging issues in SME management, the importance of growth orientation, identifying the challenges facing growth orientated businesses e.g. market failure, product failure, overtrading, operations failure, cash flow and liquidity issues and management failure
- Supports for SMEs: Higher education institutes, enterprise development agencies, FAS etc
- Presentation skills: Crafting a realistic business plan, sales presentations, promotional material and negotiating finance from a financial institution.

Assignment Brief	Word Count
1: Examine the importance of entrepreneurship to the Irish Economy. Identify the role which your school/organisation can play in encouraging and supporting entrepreneurship.	2,500-3,000 words
2: Design a portfolio illustrating and/or documenting your approach to promoting or teaching entrepreneurship. Reflect on your role and philosophy as an entrepreneurship teacher/enabler and how you can encourage entrepreneurship in your school/organisation.	3,000-5,000 words

Peer Reviewed Journals
O'Connor, J., Fenton, M., and Barry, A., (2012), 'Entrepreneurship Education in Irish Higher Education - A Panacea for Generating Employment and Economic Development?' Industry and Higher Education, Vol. 26, No. 3, June 2012.

Fenton, M. and Barry, A. (2011) The Efficacy of Entrepreneurship Education: Perspectives of Irish Graduate Entrepreneurs. Industry and Higher Education, Vol. 25, No. 6, December 2011, pp 1-10.

Conference Papers
Williams, P. and Fenton, M. (2012) Towards an Entrepreneurial Higher Education Institution Paper presented at the 3rd International Conference on Networks, Learning and Entrepreneurship, organised by the Institute for Small Business and Entrepreneurship (ISBE), Dublin, November 2012.

Barry, A.M. and Fenton, M., (2012) 'Gender differences in university-industry links in science and technology-based subjects in Irish HEIs during Ireland's Celtic Tiger Period'. Paper presented at the 3rd International Conference on Networks, Learning and Entrepreneurship, organised by the Institute for Small Business and Entrepreneurship (ISBE), Dublin, November 2012.

Fenton, M., Barry, A. and Crehan, E. (2011) Graduate Entrepreneurship Education: Perspectives of Graduate Entrepreneurs, SNLIW Conference, WIT, December 2011.

Greene Beatty, J. and Fenton, M. (2011) Approaches to Entrepreneurship Education in Tourism and Hospitality Programmes. SNLIW Conference, WIT, December 2011.

Fenton, M., Barry, A. and Crehan, E. (2011) Graduate Enterprise Programmes: The Real Deal in Supporting HPSU Entrepreneurs? ISBE Conference, Sheffield, November 2011.

Greene Beatty, J. and Fenton, M. (2011) Approaches to Entrepreneurship Education in Tourism and Hospitality Programmes. THRIC Conference, Athlone, June 2011.

Fenton, M. and Barry, A. (2010) Efficacy of Entrepreneurship Education: Perspectives of Irish Graduate Entrepreneurs. ISBE Conference, London, November 2010.

O'Connor, J., Fenton, M and Barry, A (2010,) Entrepreneurship Education: Ireland's Answer to Economic Regeneration? INTENT Conference, The Netherlands, 4-5 July 2010 .

Murphy, H. and Fenton, M. (2010), Entrepreneurship Education in Irish Higher Education: A Panacea for Economic Regeneration? Presentation to Learning by Developing Conference, Laurea University, Helsinki ,14-15 October 2010.

Fenton, M and Barry, A (2010,) Entrepreneurship Education – Ireland's Answer to Economic Re-generation? EUNIP Conference, Spain June 2010.

Fenton, M. (2009) "An investigation of how entrepreneurship education and training initiatives promote and/or impede enterprise development in Irish Institutes of Technology", Regional Science Association International Conference, Limerick.

Fenton, M., (2008) "Accredited Continuing Professional Development of Teachers: An Economic Imperative", TUI National Conference Journal, 2008.