



COUNTRY ANALYSIS of KEY COMPETENCIES

WestBIC - Ireland

This publication reflects the views only of the authors, and the Education, Audiovisual and Culture Executive Agency and the European Commission cannot be held responsible for any use which may be made of the information contained therein.

Content

1	<i>Introduction</i>	6
2	<i>Analysis of 10 Key Competences</i>	8
2.1	<i>Leadership</i>	8
2.1.1	How much is leadership competence valued in society?	8
2.1.2	Is the leadership competence strongly embedded in society and culture?	9
2.1.3	Is leadership competence taught in primary/secondary level education?	9
2.1.4	Is leadership competence taught in VET education?	10
2.1.5	Is there a difference regarding leadership competence when assessed in terms of gender?	10
2.1.6	Is the development of leadership competence supported via other non-formal educational offerings?	10
2.1.7	To what extent is the acquisition of leadership competence facilitated by unemployment / other services?	11
2.1.8	Is leadership competence supported by adequate enterprise infrastructure?	12
2.1.9	To what extent is leadership competence evident amongst young entrepreneurs in the country?	12
2.1.10	What is the preferred format of the development of leadership competence amongst young entrepreneurs?	13
2.2	<i>Willingness to explore</i>	13
2.2.1	How much is the willingness to explore valued in society?	13
2.2.2	Is the willingness to explore strongly embedded in society and culture?	14
2.2.3	Is the willingness to explore taught in primary/secondary level education?	14
2.2.4	Is the willingness to explore taught in VET education?	14
2.2.5	Is there a difference regarding the willingness to explore when assessed in terms of gender?	14
2.2.6	Is the development of the willingness to explore supported via other non-formal educational offerings?	14
2.2.7	To what extent is the acquisition of the willingness to explore facilitated by unemployment / other services?	15
2.2.8	Is the willingness to explore supported by adequate enterprise infrastructure?	16
2.2.9	To what extent is the willingness to explore evident amongst young entrepreneurs in the country?	16
2.2.10	What is the preferred format of the development of the willingness to explore amongst young entrepreneurs?	16
2.3	<i>Ability to plan</i>	17

2.3.1	How much is the ability to plan valued in society?	17
2.3.2	Is the ability to plan strongly embedded in society and culture?	17
2.3.3	Is the ability to plan taught in primary/secondary level education?	18
2.3.4	Is the ability to plan taught in VET education?	18
2.3.5	Is there a difference regarding the ability to plan when assessed in terms of gender?	19
2.3.6	Is the development of the ability to plan supported via other non- formal educational offerings?.....	19
2.3.7	To what extent is the acquisition of the ability to plan facilitated by unemployment / other services?	19
2.3.8	Is the ability to plan supported by adequate enterprise infrastructure?	19
2.3.9	To what extent is the ability to plan evident amongst young entrepreneurs in the country?	20
2.3.10	What is the preferred format of the development of the ability to plan amongst young entrepreneurs?	20
2.4	<i>Ability to take decisions</i>	20
2.4.1	How much is the ability to take decisions valued in society?	20
2.4.2	Is the ability to take decisions strongly embedded in society and culture?	21
2.4.3	Is the ability to take decisions taught in primary/secondary level education?	21
2.4.4	Is the ability to take decisions taught in VET education?	21
2.4.5	Is there a difference regarding the ability to take decisions when assessed in terms of gender?	22
2.4.6	Is the development of the ability to take decisions supported via other non-formal educational offerings?	22
2.4.7	To what extent is the acquisition of the ability to take decisions facilitated by unemployment / other services?	22
2.4.8	Is the ability to take decisions supported by adequate enterprise infrastructure?	23
2.4.9	To what extent is the ability to take decisions evident amongst young entrepreneurs in the country?.....	23
2.4.10	What is the preferred format of the development of the ability to take decisions amongst young entrepreneurs?	23
2.5	<i>Ability to prioritize</i>	23
2.5.1	How much is the ability to prioritize valued in society?	23
2.5.2	Is the ability to prioritize strongly embedded in society and culture?	24
2.5.3	Is the ability to prioritize taught in primary/secondary level education?	24
2.5.4	Is the ability to prioritize taught in VET education?	25
2.5.5	Is there a difference regarding the ability to prioritize when assessed in terms of gender?	25
2.5.6	Is the development of the ability to prioritize supported via other non-formal educational offerings?.....	25
2.5.7	To what extent is the acquisition of the ability to prioritize facilitated by unemployment / other services?	25
2.5.8	Is the ability to prioritize supported by adequate enterprise infrastructure?.....	26

2.5.9	To what extent is the ability to prioritize evident amongst young entrepreneurs in the country?.....	26
2.5.10	What is the preferred format of the development of the ability to prioritize amongst young entrepreneurs?	27
2.6	<i>Creativity</i>	27
2.6.1	How much is creativity valued in society?	27
2.6.2	Is creativity strongly embedded in society and culture?	27
2.6.3	Is creativity taught in primary/secondary level education?	28
2.6.4	Is creativity taught in VET education?	28
2.6.5	Is there a difference regarding creativity when assessed in terms of gender?	28
2.6.6	Is the development of creativity supported via other non-formal educational offerings?	29
2.6.7	To what extent is the acquisition of creativity facilitated by unemployment / other services?	29
2.6.8	Is creativity supported by adequate enterprise infrastructure?	29
2.6.9	To what extent is creativity evident amongst young entrepreneurs in the country?	30
2.6.10	What is the preferred format of the development of creativity amongst young entrepreneurs?	30
2.7	<i>Taking initiative</i>	30
2.7.1	How much is the competence of taking initiative valued in society?	30
2.7.2	Is the competence of taking initiative strongly embedded in society and culture?.....	31
2.7.3	Is the competence of taking initiative taught in primary/secondary level education?.....	31
2.7.4	Is the competence of taking initiative taught in VET education?.....	32
2.7.5	Is there a difference regarding the competence of taking initiative when assessed in terms of gender?	32
2.7.6	Is the development of the competence of taking initiative supported via other non-formal educational offerings?	32
2.7.7	To what extent is the acquisition of the competence of taking initiative facilitated by unemployment / other services?	33
2.7.8	Is the competence of taking initiative supported by adequate enterprise infrastructure?	33
2.7.9	To what extent is the competence of taking initiative evident amongst young entrepreneurs in the country?.....	34
2.7.10	What is the preferred format of the development of the competence of taking initiative amongst young entrepreneurs?	34
2.8	<i>Digital competences</i>	34
2.8.1	How much are digital competences valued in society?	34
2.8.2	Are digital competences strongly embedded in society and culture?	34
2.8.3	Are digital competences taught in primary/secondary level education?	35
2.8.4	Are digital competences taught in VET education?.....	35
2.8.5	Is there a difference regarding digital competences when assessed in terms of gender? ..	35

2.8.6	Is the development of digital competences supported via other non- formal educational offerings?.....	36
2.8.7	To what extent is the acquisition of digital competences facilitated by unemployment / other services?	36
2.8.8	Are digital competences supported by adequate enterprise infrastructure?.....	36
2.8.9	To what extent are digital competences evident amongst young entrepreneurs in the country?.....	36
2.8.10	What is the preferred format of the development of digital competences amongst young entrepreneurs?	37
2.9	<i>Competitiveness</i>	37
2.9.1	How much is the competence of competitiveness valued in society?.....	37
2.9.2	Is the competence of competitiveness strongly embedded in society and culture?	37
2.9.3	Is the competence of competitiveness taught in primary/secondary level education?	38
2.9.4	Is the competence of competitiveness taught in VET education?.....	38
2.9.5	Is there a difference regarding the competence of competitiveness when assessed in terms of gender?	38
2.9.6	Is the development of the competence of competitiveness supported via other non-formal educational offerings?	38
2.9.7	To what extent is the acquisition of the competence of competitiveness facilitated by unemployment / other services?	38
2.9.8	Is the competence of competitiveness supported by adequate enterprise infrastructure?..	39
2.9.9	To what extent is the competence of competitiveness evident amongst young entrepreneurs in the country?.....	39
2.9.10	What is the preferred format of the development of the competence of competitiveness amongst young entrepreneurs?	39
2.10	<i>Ability to think critically</i>	40
2.10.1	How much is the ability to think critically valued in society?	40
2.10.2	Is the ability to think critically strongly embedded in society and culture?	40
2.10.3	Is the ability to think critically taught in primary/secondary level education?	40
2.10.4	Is the ability to think critically taught in VET education?	40
2.10.5	Is there a difference regarding the ability to think critically when assessed in terms of gender?	41
2.10.6	Is the development of the ability to think critically supported via other non-formal educational offerings?	41
2.10.7	To what extent is the acquisition of the ability to think critically facilitated by unemployment / other services?	41
2.10.8	Is the ability to think critically supported by adequate enterprise infrastructure?.....	41
2.10.9	To what extent is the ability to think critically evident amongst young entrepreneurs in the country?	42

2.10.10	What is the preferred format of the development of the ability to think critically amongst young entrepreneurs?	42
3	<i>Prioritization of Competencies</i>	42
3.1	<i>Methodology</i>	42
3.2	<i>Results</i>	44
4	<i>Expert Stakeholder Input</i>	45
5	<i>Conclusion</i>	46

Abbreviations

List of Figures

List of Tables

1 Introduction

The following is a review of key entrepreneurship competencies as seen from an Irish perspective. It looks at competencies including:

- Leadership
- Willingness to Explore
- Ability to Plan
- Ability to Take decisions
- Ability to Prioritise
- Creativity
- Taking Initiative
- Digital Competencies
- Competitiveness
- Ability to Think Critically

The **2013 GEM Report for Ireland** shows that entrepreneurial activity in Ireland increased significantly in 2013 in contrast to the trends noted in the previous three years. For the first time in four years the more positive trends are more significant than the less positive trends.

Among the more positive trends are:

New business owners

- Men as well as women have substantially increased the rate at which they are starting new businesses. The ratio between men and women who are owners of new businesses is now 1.4:1.

Early stage entrepreneurial activity

- One in eleven of the adult population in Ireland are engaged in some aspect of early stage entrepreneurial activity. This is the highest rate of early stage entrepreneurial activity recorded in Ireland since 2005.
- Relative to other countries, entrepreneurs in Ireland tend to be very well educated.
- Early stage entrepreneurship is higher among immigrant groups than it is among those born in Ireland.

Growth and innovation

- Most early stage entrepreneurs in Ireland expect to become employers and a significant minority expect to have significant jobs growth within five years.
- Early stage entrepreneurs tend to be more innovative and a greater proportion use the very latest technology compared to owner managers of established businesses.

Entrepreneurial aspirations

- The proportion of people in Ireland who indicate that they intend to start a business in the next three years increased significantly in 2013 and is now at the highest level since Ireland became involved in GEM research in 2000.

Attitudes and supports

- A high status, conferred on successful entrepreneurs, is more prevalent in Ireland than it is across the OECD and EU.
- The perception of supportive media attention for entrepreneurship continues to be stronger in Ireland compared to across the OECD and EU.

Less positive trends include:

Attitudes

- The rate at which entrepreneurship is considered a good career choice by the general public is relatively low.

According to the 2013 GEM Report, early stage entrepreneurship in Ireland is higher among immigrant groups (11%) than it is among the non-immigrant population (8.8%). More specifically, a higher percentage of immigrants (5.4%) have recently started a business in Ireland, compared to the non-immigrant population (3.4%). More immigrant early stage entrepreneurs are motivated by necessity (32%), than is the case for non-immigrant entrepreneurs (17%).

The Education System in Ireland is viewed by experts and entrepreneurs as a key strength. Primary and secondary schools have fostered entrepreneurial ideas and micro-businesses among students. School enterprise programmes such as the “*Young Entrepreneur*” scheme run by the City and County Enterprise Boards was mentioned specifically as being of merit in introducing students to entrepreneurial activity. There is, however, a call for a greater emphasis on enterprise education at all educational levels and to have entrepreneurship education embedded in all third level courses. It is felt that the early education stage in particular, was imperative in supporting future entrepreneurial activity. Those consulted felt that there was a need for further input of entrepreneurial education at the early stages to ensure a greater nurturing of entrepreneurial mindsets in the future generation.

2 Analysis of 10 Key Competences

2.1 Leadership

2.1.1 How much is leadership competence valued in society?

According to Irelands Expert Group on Future Skills Needs (EGFSN) 2015, almost all sectors of industry are becoming more knowledge-intensive. This involves a change in the types of skills required, with a rise in the importance of generic skills, including the ability of individuals to work more autonomously, be self-managing, work as part of flexible teams, lead, adapt to change, solve problems, think creatively and engage with innovation as a continuous process. EGFSN has identified the key and most widely shared elements that should be included in a generic skills portfolio as:

- Management Skills;
- People-related skills — leadership communication, interpersonal, team-working, customer-service skills;

- Conceptual/thinking skills — collecting and organising information, problem-solving, planning and organising, learning-to-learn skills, innovation and creative skills.

The objective, according to the EGFSN is not to address these skills separately but to embed them within programmes so that they can be practically applied and developed.

According to the GEM report for 2013, half the adult population (50%) in Ireland considered entrepreneurship to be a good career choice. Successful entrepreneurs are seen as leaders in society and they continue to be well considered in Irish society, with 81% of individuals considering that success at entrepreneurship has high status.

2.1.2 Is the leadership competence strongly embedded in society and culture?

According to The Entrepreneurship Forum Report 2014, it has been suggested that Ireland has a tradition of herding our children into ‘overpaid safe havens’. We encourage our children to work in ‘guaranteed secure’ jobs in high-paying areas like the public sector, in multinational corporations or in the professional services fields (eg. accountants, lawyers, doctors). If true, this may explain why Ireland currently has a relatively low rate of entrepreneurship. On the other hand, as outlined in 2.1.1 above, Ireland also holds a high regard for those who demonstrate leadership and take the initiative of starting a businesses.

2.1.3 Is leadership competence taught in primary/secondary level education?

According to Birdthistle, et al, (2007), overall, it appears that the Irish government, through the Department of Education, has contributed greatly in promoting enterprise to a vast range of students in Irish secondary schools. The various programmes available on the current curriculum within secondary schools have many common characteristics regarding enterprise education. All the programmes address enterprise education by emphasising the importance of teamwork, creativity and learning to understand and adopt entrepreneurial skills through for example the mini-companies. Promotion of enterprise within education at a national level has been good in recent years however it is necessary to build on this reputation.

The County & City Enterprise Boards ‘Student Enterprise Awards’, RTÉ’s Junior Dragons’ Den, Foróige’s ‘Network for Teaching Entrepreneurship’, The Young Entrepreneur Programme and the commercialisation of ideas from the BT Young Scientist & Technology Exhibition give children role models and structures to participate in. Indeed there is now a growing acceptance

in Ireland of the need to build work-related skills at an early age. Innovative enterprises require a pool of work-aware school leavers who will become future leaders. According to the Entrepreneurship Forum, there is an immediate need to introduce modules, courses, bootcamps, hackathons and startup weekends at primary and secondary school levels around the country.

- Bizworld runs 2-3 day immersion events in primary schools where students are put into teams and expected to set up a company, raise money, pitch to investors, and have an actionable result.
- Network for Teaching Entrepreneurship (NFTE), a worldwide youth entrepreneurship education and development programme, and Foroige, Ireland's youth organisation, have partnered for over a decade to deliver in-school and out-of-school courses, workshops, and awards at the secondary school level.

2.1.4 Is leadership competence taught in VET education?

The Qualifax Learners Database (VET) highlights many training options for various leadership programmes

2.1.5 Is there a difference regarding leadership competence when assessed in terms of gender?

According to the National Womens Strategy,; A Report published by the European Commission in January 2010 entitled 'More women in senior positions: Key to economic stability and growth' cites the example of a Finnish survey of 13,000 limited companies with more than ten employees which found "...that firms with a female CEO were in practice around 10 percent more profitable than comparable firms with a male CEO. A similar effect was found for companies with gender balanced boards compared to those with all male boards".

2.1.6 Is the development of leadership competence supported via other non-formal educational offerings

- Irish Management Institute offer fee based programmes in Leadership and Motivation.
- Leadership Management Ireland offer Leadership Development Programmes.
- Sureskills Learning Services also provide Leadership and Management development programmes.

In terms of **Leadership, Enterprise Ireland** offer:

- Management Development Programmes including: Innovation 4 Growth / Leadership 4 Growth Programme / Platform4Growth
- Tailored Company Management Supports including: Strategic Consultancy Grant / Mentors / Business Accelerators / HR and OD Consultants Directory

According to McDermott, et al, (2011), although the assumption that leaders can be developed underpins the significant investment in leader and leadership development by organizations, we have begun to move away from the sanitised “zero to hero” narratives evident in literature, and to illustrate the messy and personal nature of leader development. This shift raises the issue of how leadership development programmes are currently undertaken and the best way to develop leaders. In line with Byrne and Rees (2006), it is argued that leadership development requires a tailored and individual-focused approach to meet needs of the individual leader and the organizational context in which s/he is embedded as opposed to a generic “one size fits all” development model.

According to Fenton and Barry (2014), entrepreneurship holds much promise for navigating the current uncertainty of the Irish and global economies but it has yet to attain real legitimacy within Irish HEIs. There is a need for a holistic approach to develop the leadership and values required for entrepreneurship to flourish in higher education because graduate entrepreneurship will become a key success metric for HEIs. Unquestionably, HEIs’ rhetoric must be matched by a genuine commitment to fostering and supporting graduate entrepreneurship.

2.1.7 To what extent is the acquisition of leadership competence facilitated by unemployment / other services?

Unemployed persons, lone parents, people with a disability and are getting certain payments from the Department of Social Protection may attend a second-or third-level education course and get the Back to Education Allowance (BTEA). Other courses not covered under the BTEA, for example, personal development courses or general training courses can be facilitated under the Education, Training and Development option, Part-time Education option or the Vocational Training Opportunities Scheme (VTOS). There is a narrow range of Leadership programmes available under this structure.

2.1.8 Is leadership competence supported by adequate enterprise infrastructure?

According to the Expert Group for Future Skills Needs (EGFSN) 2013 – there is a need to establish initiatives to develop e-leadership professional skills (persons with deep expertise in ICT with competence in leadership and management) to drive increased business value and innovation from the use of ICT within enterprises – developed in conjunction with universities and enterprise.

Amongst many incubation facilities nationally, the New Frontiers Entrepreneur Development Programme provides entrepreneurs with a package of supports to help accelerate business development and skills and contacts needed to successfully start and grow a company including incubation space, mentoring, training, finance and access to key networks.

Also, see www.enterprise-ireland.com/startupweblinks for information on:

- Enterprise Support Organisations
- Start Up Information & Supports for Entrepreneurs & Companies
- Market Information Sources
- Finding & Developing Ideas & Technologies
- Legal / Regulatory / Standards
- Company Lists
- Networks
- Training & Mentoring for Entrepreneurs
- Finance for Entrepreneurs, Start Ups and SMEs
- Space for New Enterprises
- OnLine MarketPlaces
- Useful Resources

2.1.9 To what extent is leadership competence evident amongst young entrepreneurs in the country?

Over four in ten people in Ireland believe that they have the skills and knowledge to start a business thereby demonstrating leadership.

Other programmes such as the Gaisce Awards recognise young people showing determination in overcoming significant challenges while LEO School Enterprise Programmes and programmes such as Foróige / NFTY also foster leadership.

2.1.10 What is the preferred format of the development of leadership competence amongst young entrepreneurs?

According to Barry & Almar (2014) Higher Education Institutions are more focused on preparing students for employment; the academic nature of undergraduate Entrepreneurship Education; and a “one size fits all” approach to EE fails to recognise the heterogeneity of learners’ needs. However, the findings show that graduate entrepreneurs believed that EE at graduate level provided a welcome “breathing space” to develop their business.

According to the National Strategy for Higher Education to 2030 (2011), the Irish higher education system must be characterised by flexibility and innovation in terms of teaching and learning.

According to Hill & Leitch (2005), despite the growth in entrepreneurship education and training programmes, little uniformity can be found amongst them and there is a difference between the art and the science of entrepreneurship, with the consensus that at least some aspects of entrepreneurship can successfully be taught while other elements must be developed through experience.

2.2 Willingness to explore

2.2.1 How much is the willingness to explore valued in society?

There is no specific evidence of ‘willingness to explore’ being viewed as a specific ‘competence’ in Irish society. According to the National Strategy for Higher Education to 2030 (2011), however, higher education is central to the economic renewal needed to support individual well-being and social development. But it also plays a fundamental role *in fostering a spirit of inquiry and a strong sense of the value of learning among students*; it is the positive engagement that students have with higher education that stimulates the imagination and makes innovation possible. The quality of their learning experiences and the environment in which students learn will shape the future development of our society. The people who enter higher education in the coming decades are the job creators, policy-makers, social innovators and business leaders of the future. They are also citizens who will add to the richness of society – as parents, community leaders and teachers – and in their chosen area of work they will be the productive engine of a vibrant and prosperous economy.

2.2.2 Is the willingness to explore strongly embedded in society and culture?

It is well embedded but as highlighted in 2.2.1 above it needs to be more strongly embedded.

2.2.3 Is the willingness to explore taught in primary/secondary level education?

Much progress has been made in Ireland with initiatives such as the County & City Enterprise Boards 'Student Enterprise Awards', RTE's Junior Dragons' Den, Foróige's 'Network for Teaching Entrepreneurship', The Young Entrepreneur Programme and the commercialisation of ideas from the BT Young Scientist & Technology Exhibition giving children role models and structures to participate in. Indeed there is now a growing acceptance in Ireland of the need to build work-related skills at an early age. Innovative enterprises require a pool of work-aware school leavers. There is an immediate need to introduce modules, courses, bootcamps, hackathons and startup weekends at primary and secondary school levels around the country. There are a limited number of independent parties who have piloted various efforts that are worth mentioning and endorsing:

- Bizworld runs 2-3 day immersion events in primary schools where students are put into teams and expected to set up a company, raise money, pitch to investors, and have an actionable result. They also organise summer camps
- Network for Teaching Entrepreneurship (NFTE), a worldwide youth entrepreneurship education and development programme.

2.2.4 Is the willingness to explore taught in VET education?

The Qualifax Learners Database (VET) highlights some indirect training options for various exploration / analysis type programmes.

2.2.5 Is there a difference regarding the willingness to explore when assessed in terms of gender?

This is not a significant issue in Ireland.

2.2.6 Is the development of the willingness to explore supported via other non-formal educational offerings?

According to Birdthistle, et al, (2007), overall, it appears that the Irish government, through the Department of Education, has contributed greatly in promoting enterprise to a vast range of students in Irish secondary schools. The various programmes available on the current

curriculum within secondary schools have many common characteristics regarding enterprise education. All the programmes address enterprise education by emphasising the importance of teamwork, creativity and learning to understand and adopt entrepreneurial skills through for example the mini-companies. Promotion of enterprise within education at a national level has been good in recent years however it is necessary to build on this reputation.

The County & City Enterprise Boards ‘Student Enterprise Awards’, RTÉ’s Junior Dragons’ Den, Foróige’s ‘Network for Teaching Entrepreneurship’, The Young Entrepreneur Programme and the commercialisation of ideas from the BT Young Scientist & Technology Exhibition give children role models and structures to participate in and to explore their business skills and business opportunities. According to the Entrepreneurship Forum (2014), there is an immediate need to do more of this activity around the country.

Bizworld runs 2-3 day immersion events in primary schools where students are put into teams and expected to set up a company, raise money, pitch to investors, and have an actionable result. The Local Enterprise Offices around the country offer: *Enterprise Programmes, Student Enterprise Awards and Business Simulation Competitions*.

2.2.7 To what extent is the acquisition of the willingness to explore facilitated by unemployment / other services?

Unemployed persons, lone parents, people with a disability and are getting certain payments from the Department of Social Protection may attend a second-or third-level education course and get the Back to Education Allowance (BTEA). Other courses not covered under the BTEA, for example, personal development courses or general training courses can be facilitated under the Education, Training and Development option, Part-time Education option or the Vocational Training Opportunities Scheme (VTOS). There is a very narrow range of training topics under the heading of ‘willingness to explore’..

However, there are several elements of the programme that could be improved to support entrepreneurial development. Firstly, the Back to Work Enterprise Allowance is only attainable if you have been on the ‘Live Register’ for 12 months. Secondly, there are long waiting times for seeking approval for the allowance and the applicant must not take up self-employment until they have received written approval from the Local Development Company or the Department of Social Protection. If Ireland is to prioritise entrepreneurship, then we must fast track those people trying to take up self-employment from the live register. Thirdly, the payments system

for entrepreneurs' grants could be improved to support unemployed people starting out in business. Currently, grants are awarded after the expenditure is incurred by the entrepreneur. This is not feasible for unemployed people trying to start a business, who cannot afford this up-front expense, and who often wait several weeks for the grant payment refund to be processed.

There is little training available, however, via this system under the heading of 'willingness to explore'.

2.2.8 Is the willingness to explore supported by adequate enterprise infrastructure?

Yes, there are very many incubation centres (private and public) with good finance supports (private and public) available to entrepreneurs. The difficulty is that given the range and scope of the offerings available many entrepreneurs are not fully aware of the full extent of the supports and which of these supports are most suitable to their needs.

See www.enterprise-ireland.com/startupweblinks for information on:

- Enterprise Support Organisations
- Start Up Information & Supports for Entrepreneurs & Companies
- Market Information Sources
- Finding & Developing Ideas & Technologies
- Legal / Regulatory / Standards
- Company Lists
- Networks
- Training & Mentoring for Entrepreneurs
- Finance for Entrepreneurs, Start Ups and SMEs
- Space for New Enterprises
- OnLine MarketPlaces
- Useful Resources

2.2.9 To what extent is the willingness to explore evident amongst young entrepreneurs in the country?

See 2.2.6 above.

2.2.10 What is the preferred format of the development of the willingness to explore amongst young entrepreneurs?

There is no specific preferred learning format for the competence of willingness to explore. However, according to Barry & Almar (2014) Higher Education Institutions are more focused on preparing students for employment; the academic nature of undergraduate Entrepreneurship Education; and a “one size fits all” approach to EE fails to recognise the heterogeneity of learners’ needs, and,, according to the National Strategy for Higher Education to 2030 (2011), the Irish higher education system must be characterised by flexibility and innovation in terms of teaching and learning.

According to Hill & Leitch (2005), despite the growth in entrepreneurship education and training programmes, little uniformity can be found amongst them and there is a difference between the art and the science of entrepreneurship, with the consensus that at least some aspects of entrepreneurship can successfully be taught while other elements must be developed through experience.

2.3 Ability to plan

2.3.1 How much is the ability to plan valued in society?

According to the GEM report for 2013, successful entrepreneurs continue to be well considered in Irish society, with 81% of individuals considering that success at entrepreneurship has high status. Indirectly, in order to be successful then one must be able to plan. Also, most of the entrepreneurship training programmes on offer nationally have strong elements built around being able to plan and organise and people expect that entrepreneurs are able to plan.

2.3.2 Is the ability to plan strongly embedded in society and culture?

Certain factors in the personal context of individuals, including the ability to plan, correlate strongly with entrepreneurial activity and suggest that individuals with these characteristics are more likely to be entrepreneurs than others in the population. They are alert to opportunities in their environment, believe that they have the knowledge and skills to successfully start and run a new business, are less susceptible to be inhibited by fear of failure and have entrepreneurial role models. As is the case internationally, men in Ireland, according to the 2013 GEM report, continue to possess these characteristics to a much greater extent than do women.

2.3.3 Is the ability to plan taught in primary/secondary level education?

The **Local Enterprise Offices** around the country offer:

- *Enterprise Programme*

This initiative seeks to develop in young people a curiosity for innovation. They try to enhance their natural skills and competencies by giving them the knowledge and opportunity to be creative in enterprise so that they can successfully manage personal, community and business opportunities, including working for themselves.

- *Business Simulation Competition*

This competition simulates all aspects of management. Students make decisions on strategy and tactics, policy, production, accounting, marketing, finance, quality control, human resources, leadership and teamwork. By taking part, they gain knowledge and skills for business and enterprise as well as personal life management.

The **Network for Teaching Entrepreneurship (NFTE)** is a cutting edge, world recognised, youth entrepreneurship education and development programme committed to changing the lives of young people in disadvantaged communities by enabling them to develop core skills in business and enterprise, and in doing so help them to unlock their individual talents and potential.

Other progress has been made in Ireland with initiatives such as RTE's Junior Dragons' Den, The Young Entrepreneur Programme and the commercialisation of ideas from the BT Young Scientist & Technology Exhibition giving children role models and structures to participate in. Indeed there is now a growing acceptance in Ireland of the need to build work-related skills at an early age. Innovative enterprises require a pool of work-aware school leavers. There is an immediate need to introduce modules, courses, bootcamps, hackathons and startup weekends at primary and secondary school levels around the country. Independent parties who have piloted various efforts include:

- Bizworld runs 2-3 day immersion events in primary schools where students are put into teams and expected to set up a company, raise money, pitch to investors, and have an actionable result. Bizworld also organises summer camps and works with educators and teachers to introduce entrepreneurial concepts to students.

2.3.4 Is the ability to plan taught in VET education?

The Qualifax Learners Database (VET) highlights limited, indirect training options for planning / ability to plan programmes.

2.3.5 Is there a difference regarding the ability to plan when assessed in terms of gender?

Men in Ireland, according to the 2013 GEM report, are somewhat alert to opportunities in their environment, believe that they have the knowledge and skills to successfully plan, start and run a new business, are less susceptible to be inhibited by fear of failure and have entrepreneurial role models.

2.3.6 Is the development of the ability to plan supported via other non-formal educational offerings?

Yes, absolutely. See 2.3.8 below.

2.3.7 To what extent is the acquisition of the ability to plan facilitated by unemployment / other services?

Unemployed persons, lone parents, people with a disability and are getting certain payments from the Department of Social Protection may attend a second-or third-level education course and get the Back to Education Allowance (BTEA).

Other courses not covered under the BTEA, for example, personal development courses or general training courses can be facilitated under the Education, Training and Development option, Part-time Education option or the Vocational Training Opportunities Scheme (VTOS).

There is a narrow range of planning programmes available under this structure.

2.3.8 Is the ability to plan supported by adequate enterprise infrastructure?

See www.enterprise-ireland.com/startupweblinks for information on:

- Enterprise Support Organisations
- Start Up Information & Supports for Entrepreneurs & Companies
- Market Information Sources
- Finding & Developing Ideas & Technologies
- Legal / Regulatory / Standards
- Company Lists

- Networks
- Training & Mentoring for Entrepreneurs
- Finance for Entrepreneurs, Start Ups and SMEs
- Space for New Enterprises
- OnLine MarketPlaces
- Useful Resources

2.3.9 To what extent is the ability to plan evident amongst young entrepreneurs in the country?

No great evidence available to this effect.

2.3.10 What is the preferred format of the development of the ability to plan amongst young entrepreneurs?

According to Barry & Almar (2014) Higher Education Institutions are more focused on preparing students for employment; the academic nature of undergraduate Entrepreneurship Education; and a “one size fits all” approach to EE fails to recognise the heterogeneity of learners’ needs. According to the National Strategy for Higher Education to 2030 (2011), the Irish higher education system must be characterised by flexibility and innovation in terms of teaching and learning. According to Hill & Leitch (2005), despite the growth in entrepreneurship education and training programmes, little uniformity can be found amongst them and there is a difference between the art and the science of entrepreneurship, with the consensus that at least some aspects of entrepreneurship can successfully be taught while other elements must be developed through experience.

2.4 Ability to take decisions

2.4.1 How much is the ability to take decisions valued in society?

According to the GEM report for 2013, successful entrepreneurs continue to be well considered in Irish society, with 81% of individuals considering that success at entrepreneurship has high status. Indirectly, in order to be successful then one must be able to plan. Also, most of the entrepreneurship training programmes on offer nationally have strong elements built around being able to plan, organise and take decisions and people expect that entrepreneurs are able to do this.

2.4.2 Is the ability to take decisions strongly embedded in society and culture?

While it is valued in society there is little evidence of it being 'strongly embedded' in Irish society and culture.

2.4.3 Is the ability to take decisions taught in primary/secondary level education?

The **Local Enterprise Offices** around the country offer:

- *Business Simulation Competition*

This competition simulates all aspects of management. Students make decisions on strategy and tactics, policy, production, accounting, marketing, finance, quality control, human resources, leadership and teamwork. By taking part, they gain knowledge and skills for business and enterprise as well as personal life management.

The **Network for Teaching Entrepreneurship (NFTE)** is a cutting edge, world recognised, youth entrepreneurship education and development programme committed to changing the lives of young people in disadvantaged communities by enabling them to develop core skills in business and enterprise, and in doing so help them to unlock their individual talents and potential.

Other progress has been made in Ireland with initiatives such as RTÉ's Junior Dragons' Den, The Young Entrepreneur Programme and the commercialisation of ideas from the BT Young Scientist & Technology Exhibition giving children role models and structures to participate in. Bizworld runs 2-3 day immersion events in primary schools where students are put into teams and expected to set up a company, raise money, pitch to investors, and have an actionable result.

2.4.4 Is the ability to take decisions taught in VET education?

The Qualifax Learners Database (VET) highlights limited training options for decision making programmes

2.4.5 Is there a difference regarding the ability to take decisions when assessed in terms of gender?

Females may be somewhat better in this regard.

2.4.6 Is the development of the ability to take decisions supported via other non-formal educational offerings?

For examples, see previous references to LEOs and NFTE, etc. in Sections 2.1.6 and 2.2.6.

See www.enterprise-ireland.com/startupweblinks for information on:

- Enterprise Support Organisations
- Start Up Information & Supports for Entrepreneurs & Companies
- Market Information Sources
- Finding & Developing Ideas & Technologies
- Legal / Regulatory / Standards
- Company Lists
- Networks
- Training & Mentoring for Entrepreneurs
- Finance for Entrepreneurs, Start Ups and SMEs
- Space for New Enterprises
- OnLine MarketPlaces
- Useful Resources

2.4.7 To what extent is the acquisition of the ability to take decisions facilitated by unemployment / other services?

Unemployed persons, lone parents, people with a disability and are getting certain payments from the Department of Social Protection may attend a second-or third-level education course and get the Back to Education Allowance (BTEA).

Other courses not covered under the BTEA, for example, personal development courses or general training courses can be facilitated under the Education, Training and Development option, Part-time Education option or the Vocational Training Opportunities Scheme (VTOS). There is a narrow range of Decision Making Programmes available under this structure.

2.4.8 Is the ability to take decisions supported by adequate enterprise infrastructure?

See 2.4.6 above.

2.4.9 To what extent is the ability to take decisions evident amongst young entrepreneurs in the country?

According to Birdthistle, et al, (2007), overall, it appears that the Irish government, through the Department of Education, has contributed greatly in promoting enterprise to a vast range of students in Irish secondary schools. All the programmes address enterprise education by emphasising the importance of teamwork, creativity and learning to understand and adopt entrepreneurial skills through for example the mini-companies.

According to the 2013 GEM Report over four in ten people in Ireland believe that they have the skills and knowledge to start a business thereby demonstrating leadership.

Other programmes such as the Gaisce Awards recognise young people showing determination in overcoming significant challenges.

2.4.10 What is the preferred format of the development of the ability to take decisions amongst young entrepreneurs?

According to Barry & Almar (2014) Higher Education Institutions fails to recognise the heterogeneity of learners' needs. The National Strategy for Higher Education to 2030 (2011), calls for flexibility and innovation in terms of teaching and learning. According to Hill & Leitch (2005), little uniformity can be found amongst entrepreneurship education and training programmes and there is a difference between the art and the science of entrepreneurship, with the consensus that at least some aspects of entrepreneurship can successfully be taught while other elements must be developed through experience.

2.5 Ability to prioritize

2.5.1 How much is the ability to prioritize valued in society?

According to the GEM report for 2013, successful entrepreneurs continue to be well considered in Irish society, with 81% of individuals considering that success at entrepreneurship has high status. Indirectly, in order to be successful then one must be able to plan and prioritise. Also, most of the entrepreneurship training programmes on offer nationally (at secondary level and

non-formal) have strong elements built around being able to prioritise plan and people expect that entrepreneurs are able to do this.

2.5.2 Is the ability to prioritize strongly embedded in society and culture?

It is difficult to say that it is 'strongly embedded' in society and culture.

2.5.3 Is the ability to prioritize taught in primary/secondary level education?

The **Local Enterprise Offices** around the country offer:

- *Enterprise Programme*

This initiative seeks to develop in young people a curiosity for innovation. They try to enhance their natural skills and competencies by giving them the knowledge and opportunity to be creative in enterprise so that they can successfully manage personal, community and business opportunities, including working for themselves.

- *Business Simulation Competition*

This competition simulates all aspects of management. Students make decisions on strategy and tactics, policy, production, accounting, marketing, finance, quality control, human resources, leadership and teamwork. By taking part, they gain knowledge and skills for business and enterprise as well as personal life management.

The **Network for Teaching Entrepreneurship (NFTE)** is a cutting edge, world recognised, youth entrepreneurship education and development programme committed to changing the lives of young people in disadvantaged communities by enabling them to develop core skills in business and enterprise, and in doing so help them to unlock their individual talents and potential.

Other progress has been made in Ireland with initiatives such as RTE's Junior Dragons' Den, The Young Entrepreneur Programme and the commercialisation of ideas from the BT Young Scientist & Technology Exhibition giving children role models and structures to participate in. Indeed there is now a growing acceptance in Ireland of the need to build work-related skills at an early age. Innovative enterprises require a pool of work-aware school leavers. There is an immediate need to introduce modules, courses, bootcamps, hackathons and startup weekends at primary and secondary school levels around the country. Independent parties who have

piloted various efforts include: • Bizworld runs 2-3 day immersion events in primary schools where students are put into teams and expected to set up a company, raise money, pitch to investors, and have an actionable result. Bizworld also organises summer camps and works with educators and teachers to introduce entrepreneurial concepts to students.

2.5.4 Is the ability to prioritize taught in VET education?

The Qualifax Learners Database (VET) highlights a significant number of training options for prioritizing / time management programmes.

2.5.5 Is there a difference regarding the ability to prioritize when assessed in terms of gender?

It can be argued that females are more effective in this regard.

2.5.6 Is the development of the ability to prioritize supported via other non-formal educational offerings?

For examples, see previous references to LEOs and NFTE, etc. in Sections 2.1.6 and 2.2.6.

See www.enterprise-ireland.com/startupweblinks for information on:

- Enterprise Support Organisations
- Networks
- Training & Mentoring for Entrepreneurs
- Useful Resources

2.5.7 To what extent is the acquisition of the ability to prioritize facilitated by unemployment / other services?

Unemployed persons, lone parents, people with a disability and are getting certain payments from the Department of Social Protection may attend a second-or third-level education course and get the Back to Education Allowance (BTEA).

Other courses not covered under the BTEA, for example, personal development courses or general training courses can be facilitated under the Education, Training and Development option, Part-time Education option or the Vocational Training Opportunities Scheme (VTOS).

There is a narrow range of Prioritisation Management programmes available under this structure.

2.5.8 Is the ability to prioritize supported by adequate enterprise infrastructure?

See www.enterprise-ireland.com/startupweblinks for information on:

- Enterprise Support Organisations
- Start Up Information & Supports for Entrepreneurs & Companies
- Market Information Sources
- Finding & Developing Ideas & Technologies
- Legal / Regulatory / Standards
- Company Lists
- Networks
- Training & Mentoring for Entrepreneurs
- Finance for Entrepreneurs, Start Ups and SMEs
- Space for New Enterprises
- OnLine MarketPlaces
- Useful Resources

2.5.9 To what extent is the ability to prioritize evident amongst young entrepreneurs in the country?

There is little evidence to say it is evident amongst young entrepreneurs but according to Birdthistle, et al, (2007), the Irish government, through the Department of Education, has contributed greatly in promoting enterprise to a vast range of students in Irish secondary schools. All the programmes address enterprise education by emphasising the importance of teamwork, creativity and learning to understand and adopt entrepreneurial skills through for example the mini-companies.

The **Local Enterprise Offices** around the country offer *Enterprise Programme* where they try to enhance students natural skills and competencies by giving them the knowledge and opportunity to be creative in enterprise so that they can successfully manage personal, community and business opportunities, including working for themselves. The *Business Simulation Competition* simulates all aspects of management including prioritisation.

Network for Teaching Entrepreneurship programmes help young people develop core skills in business and enterprise, and in doing so help them to unlock their individual talents and potential.

According to the 2013 GEM Report over four in ten people in Ireland believe that they have the skills and knowledge to start a business thereby demonstrating leadership.

2.5.10 What is the preferred format of the development of the ability to prioritize amongst young entrepreneurs?

According to Barry & Almar (2014) Higher Education Institutions fails to recognise the heterogeneity of learners' needs. The National Strategy for Higher Education to 2030 (2011), calls for flexibility and innovation in terms of teaching and learning. According to Hill & Leitch (2005), little uniformity can be found amongst entrepreneurship education and training programmes and there is a difference between the art and the science of entrepreneurship, with the consensus that at least some aspects of entrepreneurship can successfully be taught while other elements must be developed through experience.

2.6 Creativity

2.6.1 How much is creativity valued in society?

Arising from the Global Irish Economic Forum in 2013 the Irish Government designated 2015 the Year of Irish Design (ID2015). This presents an opportunity to promote and develop Ireland's capabilities in business-related design across all sectors of the economy and to improve capacity for quality design across the enterprise sector. In particular design is critical to success in new and emerging sectors like medical devices, ICT, gaming, mobile communications and media.

2.6.2 Is creativity strongly embedded in society and culture?

According to the GEM Report 2013, 27% of early stage entrepreneurs in Ireland believe that they produce or will produce a product or service that is new to all customers. Furthermore, 10% of early stage entrepreneurs consider that they use the very latest technology, while 19% use new technology (available in the last 1-5 years). Early stage entrepreneurs tend to be more innovative than established owner managers. In Ireland 27% of early stage entrepreneurs

consider that they offer a product or a service that is new to all customers while only 10% of established owner managers have this perception.

According to the EGFSN 2015, creative qualifications are highly sought-after by the best global companies because creative graduates are able to think independently and critically; work well as part of a team; multi-task; and generate new ideas through debate and discussion. Recent discussions on how to foster an innovative mindset in education has to date focused on Science, Technology, Engineering and Maths – the STEM subjects. Design thinking is by its very nature innovative: it involves examining how things work and how they can be improved, a process that continually generates new ideas and combinations. Investment in design education will ensure that this creative mindset can contribute to driving innovation across disciplines and throughout the Irish economy. Critical to this is integrating design thinking into all third level education to encourage creativity and interdisciplinary collaboration and to increase collaboration between education and industry. Creativity is probably difficult to pin down in skills terms but it is surrounded by identifiable and definable skills that are necessary for creativity to flourish. While there is some variation between occupations and across industries, some common skills are required to enhance creativity, design and innovation.

2.6.3 Is creativity taught in primary/secondary level education?

According to Birdthistle, et al, (2007), overall, it appears that the Irish government, through the Department of Education, has contributed greatly in promoting enterprise to a vast range of students in Irish secondary schools. The various programmes available on the current curriculum within secondary schools have many common characteristics regarding enterprise education. All the programmes address enterprise education by emphasising the importance of teamwork, creativity and learning to understand and adopt entrepreneurial skills through for example the mini-companies.

2.6.4 Is creativity taught in VET education?

The Qualifax Learners Database (VET) highlights some training options for various creativity programmes.

2.6.5 Is there a difference regarding creativity when assessed in terms of gender?

No evidence of distinct differences were uncovered in this regard.

2.6.6 Is the development of creativity supported via other non-formal educational offerings?

There are various creativity programmes offered by different bodies across the country.

- Creative Ireland provides information on various creative events and programmes.
- Public bodies in the North West of the country offer the Harnessing Creativity Programme for example.
- *Fund it* is an all-island crowdfunding website for Ireland's creative projects, giving everyone the power to help good ideas happen.
- Creative Edge is a project funded by the Northern Periphery Programme (NPP). The main objective of the project is to promote the active participation of local creative organisations and businesses in global markets, while also aiding them in their ability to attract and utilise local emerging creative talent in these markets. The activities of the project enable the further commercialisation, and support the sustainable development, of the creative economy.
- Etc.

2.6.7 To what extent is the acquisition of creativity facilitated by unemployment / other services?

There is no real evidence of creativity being supported by national unemployment services. However programmes such as the WDC Micro-Loan Fund: Creative Industries is open to businesses non-incorporated businesses are also considered.

2.6.8 Is creativity supported by adequate enterprise infrastructure?

Yes. See www.enterprise-ireland.com/startupweblinks for a sample of the information available on:

- Enterprise Support Organisations
- Start Up Information & Supports for Entrepreneurs & Companies
- Market Information Sources
- Finding & Developing Ideas & Technologies
- Legal / Regulatory / Standards
- Company Lists
- Networks
- Training & Mentoring for Entrepreneurs
- Finance for Entrepreneurs, Start Ups and SMEs

- Space for New Enterprises
- OnLine MarketPlaces
- Useful Resources

2.6.9 To what extent is creativity evident amongst young entrepreneurs in the country?

According to Birdthistle, et al, (2007), overall, it appears that the Irish government, through the Department of Education, has contributed greatly in promoting enterprise to a vast range of students in Irish secondary schools. All the programmes address enterprise education by emphasising the importance of teamwork, creativity and learning to understand and adopt entrepreneurial skills through for example the mini-companies.

The **Local Enterprise Offices** around the country offer: *Enterprise Programme* which try to enhance their natural skills and competencies by giving them the knowledge and opportunity to be creative in enterprise so that they can successfully manage personal, community and business opportunities, including working for themselves.

Bizworld runs 2-3 day immersion events in primary schools where students are put into teams and expected to set up a company, raise money, pitch to investors, and have an actionable result.

2.6.10 What is the preferred format of the development of creativity amongst young entrepreneurs?

According to Barry & Almar (2014) Higher Education Institutions fails to recognise the heterogeneity of learners' needs. The National Strategy for Higher Education to 2030 (2011), calls for flexibility and innovation in terms of teaching and learning. According to Hill & Leitch (2005), little uniformity can be found amongst entrepreneurship education and training programmes and there is a difference between the art and the science of entrepreneurship, with the consensus that at least some aspects of entrepreneurship can successfully be taught while other elements must be developed through experience.

2.7 Taking initiative

2.7.1 How much is the competence of taking initiative valued in society?

According to the GEM report for 2013, half the adult population (50%) in Ireland considered entrepreneurship to be a good career choice. This has increased from 45% in 2012. Despite the improvement, the rate considering entrepreneurship as a good career choice is still lower than it was in 2006, when it was 70%. Successful entrepreneurs continue to be well considered in Irish society, with 81% of individuals considering that success at entrepreneurship has high status.

2.7.2 Is the competence of taking initiative strongly embedded in society and culture?

According to the 2013 GEM report, certain factors in the personal context of individuals, including the ability to act on initiative, correlate strongly with entrepreneurial activity and suggest that individuals with these characteristics are more likely to be entrepreneurs than others in the population. They are alert to opportunities in their environment, believe that they have the knowledge and skills to successfully start and run a new business, are less susceptible to be inhibited by fear of failure and have entrepreneurial role models. As is the case internationally, men in Ireland continue to possess these characteristics to a much greater extent than do women. The likelihood that an individual engages in early stage entrepreneurial activity is influenced by their gender. Irish men are 1.9 times more likely than Irish women to be an early stage entrepreneur.

A metric of the impact of taking initiative is job creation. A significant majority of early stage entrepreneurs in Ireland expect to become employers (85%). A significant minority of early stage entrepreneurs in Ireland (22%) expect to have significant jobs growth (10 or more) within five years and nearly six in every ten Irish early stage entrepreneurs have, or expect to have, customers outside the country (59%).

2.7.3 Is the competence of taking initiative taught in primary/secondary level education?

According to Birdthistle, et al, (2007), overall, it appears that the Irish government, through the Department of Education, has contributed greatly in promoting enterprise to a vast range of students in Irish secondary schools. All the programmes address enterprise education by emphasising the importance of teamwork, creativity and learning to understand and adopt entrepreneurial skills through for example the mini-companies.

The **Local Enterprise Offices** around the country offer: *Enterprise Programme* which try to enhance their natural skills and competencies by giving them the knowledge and opportunity to be creative in enterprise. *Business Simulation Competitions* simulates all aspects of management. Students make decisions on strategy and tactics, policy, production, accounting, marketing, finance, quality control, human resources, leadership and teamwork.

Network for Teaching Entrepreneurship enable young people to develop core skills in business and enterprise, and in doing so help them to unlock their individual talents and potential while Bizworld runs 2-3 day immersion events in primary schools where students are put into teams and expected to set up a company, raise money, pitch to investors, and have an actionable result.

2.7.4 Is the competence of taking initiative taught in VET education?

The Qualifax Learners Database (VET) highlights limited specific training options for programmes to do with taking initiative.

2.7.5 Is there a difference regarding the competence of taking initiative when assessed in terms of gender?

As is the case internationally, men in Ireland continue to possess entrepreneurial characteristics (see 2.7.2 above) to a much greater extent than do women. While, in general terms, the capacity for entrepreneurship was mentioned by a number of the experts and entrepreneurs as a potential constraint for Irish entrepreneurs, a lack of confidence among women was cited frequently as a particular constraint. Self- perception of entrepreneurial capabilities is rated amongst men at 53% and women at 33% in 2013 as in the previous year. This represents the area of most pronounced difference between men and women across all the personal context indicators, with just one in three women having a positive view of her entrepreneurial capabilities.

2.7.6 Is the development of the competence of taking initiative supported via other non-formal educational offerings?

Yes, absolutely. There are many business start-up programmes available across the country through different bodies (private and public). By participating in such programmes people are demonstrating initiative!

2.7.7 To what extent is the acquisition of the competence of taking initiative facilitated by unemployment / other services?

Unemployed persons, lone parents, people with a disability and are getting certain payments from the Department of Social Protection may attend a second-or third-level education course and get the Back to Education Allowance (BTEA).

Other courses not covered under the BTEA, for example, personal development courses or general training courses can be facilitated under the Education, Training and Development option, Part-time Education option or the Vocational Training Opportunities Scheme (VTOS).

There is a narrow range of Taking Initiative programmes available under this structure.

The Back to Work Enterprise Allowance, administered by the Department of Social Protection, is a great support for unemployed people trying to set up a business. The allowance encourages the long-term unemployed to take up self-employment. However, there are several elements of the programme that could be improved to support entrepreneurial development. We must fast track those people trying to take up self-employment from the live register. Upfront payment of certain grants (from LEOs and the Dept. of Social Protection Technical Assistance and Training Fund) would support unemployed people who do not have access to savings or other forms of financing for starting-up.

2.7.8 Is the competence of taking initiative supported by adequate enterprise infrastructure?

Yes, see www.enterprise-ireland.com/startupweblinks for information on:

- Enterprise Support Organisations
- Start Up Information & Supports for Entrepreneurs & Companies
- Market Information Sources
- Finding & Developing Ideas & Technologies
- Legal / Regulatory / Standards
- Company Lists
- Networks
- Training & Mentoring for Entrepreneurs
- Finance for Entrepreneurs, Start Ups and SMEs
- Space for New Enterprises
- OnLine MarketPlaces
- Useful Resources

2.7.9 To what extent is the competence of taking initiative evident amongst young entrepreneurs in the country?

See 2.6.9 above. Another strong reference point is the very popular annual BT Irish Young Scientist Exhibition

2.7.10 What is the preferred format of the development of the competence of taking initiative amongst young entrepreneurs?

According to Barry & Almar (2014) Higher Education Institutions fails to recognise the heterogeneity of learners' needs. The National Strategy for Higher Education to 2030 (2011), calls for flexibility and innovation in terms of teaching and learning. According to Hill & Leitch (2005), little uniformity can be found amongst entrepreneurship education and training programmes and there is a difference between the art and the science of entrepreneurship, with the consensus that at least some aspects of entrepreneurship can successfully be taught while other elements must be developed through experience.

2.8 Digital competences

2.8.1 How much are digital competences valued in society?

Digital competencies are highly valued in society because, according to the Expert Group on Future Skills Needs (2015), a key factor for Ireland will be to ensure an adequate supply of ICT talent and skills from the domestic supply pool and global talent, to meet the needs of both foreign-owned and indigenous enterprises. This is against the background of a strong global demand for high-level ICT skills and talent in other countries actively competing for these skills. The on-going ICT wave of innovation is driving strong demand for new high-level ICT skills and competences, particularly to design, develop and deploy new applications and services. Some of these are core technology skills but others, for example Big Data and social media, require skillsets with a combination of skills, such as technology, statistics and business skillsets and marketing skillsets for Social Media. Consequently, high-level ICT skills requirements will become increasingly complex and will demand more of the education and training systems and from in-company training.

2.8.2 Are digital competences strongly embedded in society and culture?

They have become strongly embedded in recent years and this trend is expected to continue. Ireland is home to 10 top 'born on the internet' companies such as Google or Facebook. The

EGFSN study reports that in 2012, there were an estimated 68,280 ICT professionals working both within the ICT sector and across other sectors of the economy, e.g. ICT, Financial Services, Business Services, Manufacturing and that Ireland is likely to face an average increase in demand for high-level ICT skills of around 5% a year out to 2018. A key factor for Ireland will be to ensure an adequate supply of ICT talent and skills from the domestic supply pool and global talent, to meet the needs of both foreign-owned and indigenous enterprises. This is against the background of a strong global demand for high-level ICT skills and talent in other countries actively competing for these skills.

2.8.3 Are digital competences taught in primary/secondary level education?

In addition to all of the offerings from the LEOs, NFTE, Bizworld, etc. There are offerings such as CoderDojo, which is a not-for-profit movement that runs free coding clubs with regular weekly sessions for people aged 7 to 17. At CoderDojo youth learn how to code, develop websites, apps, programmes, games and more. Dojos are set up, run by and taught by volunteers. These volunteers are the lifeblood of the organisation. Dojos organise tours of technology companies, bring in guest speakers to talk about their career and what they do, and organise events. In addition to learning to code, members meet like-minded people to show off what they've been working on. According to the Entrepreneurship Forum Report 2014, every week, approximately 5,000 kids develop their computer skills in 100 CoderDojos throughout Ireland. Ideally they would hope to increase this by at least a factor of 10 in the coming years.

2.8.4 Are digital competences taught in VET education?

The Qualifax Learners Database (VET) highlights a very extensive range of training options for digital competencies.

2.8.5 Is there a difference regarding digital competences when assessed in terms of gender?

According to the EGFSN, 2013, there is a need to attract more talent, with the right aptitude, to careers in ICT, especially women. Strengthen advocacy and career advice provided to young people, especially girls at second level – and to their parents on the range of rewarding ICT career opportunities available. The aim is to raise female acceptances on ICT undergraduate programmes from 15% to 25% by 2018, drawing upon best international practice.

2.8.6 Is the development of digital competences supported via other non-formal educational offerings?

The EGFSN 2013 report calls for the establishment of initiatives to develop e-leadership professional skills (persons with deep expertise in ICT with competence in leadership and management) to drive increased business value and innovation from the use of ICT within enterprises – developed in conjunction with universities and enterprise.

2.8.7 To what extent is the acquisition of digital competences facilitated by unemployment / other services?

Unemployed persons, lone parents, people with a disability and are getting certain payments from the Department of Social Protection may attend a second-or third-level education course and get the Back to Education Allowance (BTEA).

Other courses not covered under the BTEA, for example, personal development courses or general training courses can be facilitated under the Education, Training and Development option, Part-time Education option or the Vocational Training Opportunities Scheme (VTOS).

There is an extensive range of digital competencies courses available under this structure.

2.8.8 Are digital competences supported by adequate enterprise infrastructure?

Yes, see www.enterprise-ireland.com/startupweblinks for information on:

- Enterprise Support Organisations
- Start Up Information & Supports for Entrepreneurs & Companies
- Finding & Developing Ideas & Technologies
- Training & Mentoring for Entrepreneurs
- OnLine MarketPlaces
- Useful Resources

2.8.9 To what extent are digital competences evident amongst young entrepreneurs in the country?

Over four in ten people in Ireland believe that they have the skills and knowledge to start a business. In this, Ireland (43%) is broadly similar to the average across the OECD. Many of the experts and entrepreneurs consulted as members of the key informant panel, however, felt that

there was a lack of ability and knowledge to successfully start and manage a new business among the general public.

2.8.10 What is the preferred format of the development of digital competences amongst young entrepreneurs?

According to Barry & Almar (2014) Higher Education Institutions fails to recognise the heterogeneity of learners' needs. The National Strategy for Higher Education to 2030 (2011), calls for flexibility and innovation in terms of teaching and learning. According to Hill & Leitch (2005), little uniformity can be found amongst entrepreneurship education and training programmes and there is a difference between the art and the science of entrepreneurship, with the consensus that at least some aspects of entrepreneurship can successfully be taught while other elements must be developed through experience.

2.9 Competitiveness

2.9.1 How much is the competence of competitiveness valued in society?

According to Irelands Competitiveness Challenge (2014), national competitiveness is a broad concept that encompasses a diverse range of factors and policy inputs including education and training, entrepreneurship and innovation, Ireland's economic and technological infrastructure and the taxation and regulatory framework. Competitiveness is not an end in itself, but is a means of achieving sustainable improvements in living standards and quality of life. Only by ensuring that Irish based firms can compete successfully here and abroad can we create the employment, income and wealth necessary to improve the lives of all of our citizens.

2.9.2 Is the competence of competitiveness strongly embedded in society and culture?

According to Irelands Competitiveness Challenge (2014), Ireland's international competitiveness has improved. Costs have fallen and a number of structural reforms introduced. Many of the competitiveness gains achieved in recent years, however, have arisen because of cyclical factors. External pressure to reform also played an important role. Paradoxically, an improving economy could quickly erode these gains and choke off recovery if costs increase; skills become scarcer, infrastructure congested, etc. We must learn the lessons of past mistakes. It is important that we do not become complacent about the need for continuous reform. We must tackle those factors that affect our competitiveness negatively.

2.9.3 Is the competence of competitiveness taught in primary/secondary level education?

Much progress has been made in Ireland with initiatives such as the County & City Enterprise Boards 'Student Enterprise Awards', Foróige's 'Network for Teaching Entrepreneurship', The Young Entrepreneur Programme and the commercialisation of ideas from the BT Young Scientist & Technology Exhibition giving children role models and structures to participate in. Indeed there is now a growing acceptance in Ireland of the need to build work-related skills at an early age. Innovative enterprises require a pool of work-aware school leavers. There is an immediate need to introduce modules, courses, bootcamps, hackathons and startup weekends at primary and secondary school levels around the country.

2.9.4 Is the competence of competitiveness taught in VET education?

The Qualifax Learners Database (VET) highlights very few specific training options in the area of competitiveness.

2.9.5 Is there a difference regarding the competence of competitiveness when assessed in terms of gender?

There is little evidence in this regard.

2.9.6 Is the development of the competence of competitiveness supported via other non-formal educational offerings?

Yes, there are many programmes offering training in the areas of Lean Business Principles and Competitiveness.

2.9.7 To what extent is the acquisition of the competence of competitiveness facilitated by unemployment / other services?

Unemployed persons, lone parents, people with a disability and are getting certain payments from the Department of Social Protection may attend a second-or third-level education course and get the Back to Education Allowance (BTEA).

Other courses not covered under the BTEA, for example, personal development courses or general training courses can be facilitated under the Education, Training and Development option, Part-time Education option or the Vocational Training Opportunities Scheme (VTOS).

There is a narrow range of Competitiveness Programmes available under this structure.

2.9.8 Is the competence of competitiveness supported by adequate enterprise infrastructure?

Yes, see www.enterprise-ireland.com/startupweblinks for information on:

- Enterprise Support Organisations
- Start Up Information & Supports for Entrepreneurs & Companies
- Finding & Developing Ideas & Technologies
- Networks
- Training & Mentoring for Entrepreneurs

2.9.9 To what extent is the competence of competitiveness evident amongst young entrepreneurs in the country?

No specific evidence of this. However, according to Birdthistle, et al, (2007) the Department of Education, has contributed greatly in promoting enterprise to a vast range of students in Irish secondary schools by emphasising the importance of teamwork, creativity and learning to understand and adopt entrepreneurial skills through for example the mini-companies.

Enterprise Programmes try to enhance their natural skills and competencies by giving young people the knowledge and opportunity to be creative in enterprise so that they can successfully manage personal, community and business opportunities, including working for themselves. Bizworld runs 2-3 day immersion events in primary schools where students are put into teams and expected to set up a company, raise money, pitch to investors, and have an actionable result.

2.9.10 What is the preferred format of the development of the competence of competitiveness amongst young entrepreneurs?

According to Barry & Almar (2014) Higher Education Institutions fails to recognise the heterogeneity of learners' needs. The National Strategy for Higher Education to 2030 (2011), calls for flexibility and innovation in terms of teaching and learning. According to Hill & Leitch (2005), little uniformity can be found amongst entrepreneurship education and training programmes and there is a difference between the art and the science of entrepreneurship, with the consensus that at least some aspects of entrepreneurship can successfully be taught while other elements must be developed through experience.

2.10 Ability to think critically

2.10.1 How much is the ability to think critically valued in society?

There is no specific evidence of ‘ability to think critically’ being viewed as a specific ‘competence’ in Irish society. According to the National Strategy for Higher Education to 2030 (2011), however, higher education is central to the economic renewal needed to support individual well-being and social development. But it also plays a fundamental role *in fostering a spirit of inquiry and a strong sense of the value of learning among students*; it is the positive engagement that students have with higher education that stimulates the imagination and makes innovation possible. The quality of their learning experiences and the environment in which students learn will shape the future development of our society. The people who enter higher education in the coming decades are the job creators, policy-makers, social innovators and business leaders of the future.

2.10.2 Is the ability to think critically strongly embedded in society and culture?

Yes, see 2.10.1 above.

2.10.3 Is the ability to think critically taught in primary/secondary level education?

Yes, and furthermore, the **Local Enterprise Offices** around the country offer:

- *Business Simulation Competition*

This competition simulates all aspects of management. Students make decisions on strategy and tactics, policy, production, accounting, marketing, finance, quality control, human resources, leadership and teamwork. By taking part, they gain knowledge and skills for business and enterprise as well as personal life management.

The **Network for Teaching Entrepreneurship (NFTE)** is a cutting edge, world recognised, youth entrepreneurship education and development programme. It is managed and provided by Foróige in Ireland and is affiliated to [NFTE International](#). Involvement in the NFTE programme has been shown to improve the business, academic and life skills of young people.

2.10.4 Is the ability to think critically taught in VET education?

The Qualifax Learners Database (VET) highlights some limited training options relating to the specific area of critical thinking.

2.10.5 Is there a difference regarding the ability to think critically when assessed in terms of gender?

Not particularly, but according to Thompson and Downing (2007), for those enabling / supporting entrepreneurs, there is a clear need to distinguish between when one is focusing on the business or the business idea and when he or she is focusing on the development of the entrepreneur. At the same time it is important to assess whether a directive or non-directive style is more appropriate.

2.10.6 Is the development of the ability to think critically supported via other non-formal educational offerings?

Yes, see 2.10.3 above and other examples exist such as The Wheels Clear & Critical Thinking Programme which aims to strengthen thinking techniques and so improve work productivity. CCT develops skills in effective leadership, problem solving, decision making, innovation and influence.

2.10.7 To what extent is the acquisition of the ability to think critically facilitated by unemployment / other services?

Unemployed persons, lone parents, people with a disability and are getting certain payments from the Department of Social Protection may attend a second-or third-level education course and get the Back to Education Allowance (BTEA).

Other courses not covered under the BTEA, for example, personal development courses or general training courses can be facilitated under the Education, Training and Development option, Part-time Education option or the Vocational Training Opportunities Scheme (VTOS). There is a narrow range of Critical Thinking programmes available under this structure.

2.10.8 Is the ability to think critically supported by adequate enterprise infrastructure?

Yes, see www.enterprise-ireland.com/startupweblinks for information on:

- Enterprise Support Organisations
- Start Up Information & Supports for Entrepreneurs & Companies
- Market Information Sources
- Finding & Developing Ideas & Technologies
- Training & Mentoring for Entrepreneurs

- Finance for Entrepreneurs, Start Ups and SMEs

2.10.9 To what extent is the ability to think critically evident amongst young entrepreneurs in the country?

Over four in ten people in Ireland believe that they have the skills and knowledge to start a business. In this, Ireland (43%) is broadly similar to the average across the OECD. Many of the experts and entrepreneurs consulted as members of the key informant panel, however, felt that there was a lack of ability and knowledge to successfully start and manage a new business among the general public.

2.10.10 What is the preferred format of the development of the ability to think critically amongst young entrepreneurs?

According to Barry & Almar (2014) Higher Education Institutions fails to recognise the heterogeneity of learners' needs. The National Strategy for Higher Education to 2030 (2011), calls for flexibility and innovation in terms of teaching and learning. According to Hill & Leitch (2005), little uniformity can be found amongst entrepreneurship education and training programmes and there is a difference between the art and the science of entrepreneurship, with the consensus that at least some aspects of entrepreneurship can successfully be taught while other elements must be developed through experience.

3 Prioritization of Competencies

3.1 Methodology

The methodology involved review of primarily online material including reports, commentaries, journal articles, statements, etc. and an expert analysis questionnaire conducted online.

Key publications included:

Reports and Articles

- The National Strategy for Higher Education to 2030 (2011)
- Irelands Competitiveness Challenge (2014),
- EGFSN, Addressing Future Demand for High-Level ICT Skills (2013)

- Expert Group on Future Skills Needs Guidance for Higher Education Providers on Current and Future Skills Needs of Enterprise: Springboard 2015
- Expert Group on Future Skills Needs Monitoring Ireland's Skills Supply – Trends in Education and Training Outputs (2014)
- GEM report for Ireland (2013)
- Entrepreneurship Forum Report (2014)

Journal Articles

- Naomi Birdthistle Briga Hynes Patricia Fleming, (2007),"Enterprise education programmes in secondary schools in Ireland", Education + Training, Vol. 49 Iss 4 pp. 265 - 276
- Mary Fenton Almar Barry , (2014),"Breathing space – graduate entrepreneurs' perspectives of entrepreneurship education in higher education", Education + Training, Vol. 56 Iss 8/9 pp. 733 - 744
- Colette Henry Frances Hill Claire Leitch, (2005),"Entrepreneurship education and training: can entrepreneurship be taught? Part I", Education + Training, Vol. 47 Iss 2 pp. 98 – 111
- Aoife McDermott Rachel Kidney Patrick Flood, (2011),"Understanding leader development: learning from leaders", Leadership & Organization Development Journal, Vol. 32 Iss 4 pp. 358 – 378

Web Searches

- www.enterprise-ireland.com/startupweblinks
- The Wheel
- Qualifax Learners Database (VET)
- Network for Teaching Entrepreneurship (NFTE) programme
- Local Enterprise Offices
- Creative Ireland
- Harnessing Creativity Programme
- Fund it
- Creative Edge
- Irish Management Institute
- Leadership Management Ireland
- Sureskills Learning Services
- National Womens Strategy

3.2 Results

It should be noted that many reports reviewed during the desk research point to a need to innovate and change in terms of Entrepreneurship Education in Ireland and that learning and training needed to take account of structured learning but also of the socialisation of the learner, thereby introducing new methods of supporting and encouraging entrepreneurship.

In looking at the desk research below one can see that issues such as Ability to Plan, Creativity, Ability to Prioritize and Ability to Make Decisions are rated as the lesser competencies whereas they are more highly rated by the experts. This is because these issues cannot be easily delivered through formalised learning structures – rather they are intuitive based on the individual and are better developed through practice as well as facilitation by expert guidance.

Results based on Desk Research	Results based on Expert Feedback
1. Taking Initiative	a) Taking Initiative
2. Digital Competencies	b) Willingness to Explore
3. Leadership	c) Ability to Make Decisions
4. Willingness to Explore	d) Creativity
5. Ability to Think Critically	e) Ability to Prioritize
6. Competitiveness	f) Ability to Think Critically
7. Ability to Plan	g) Ability to Plan
8. Creativity	h) Leadership
9. Ability to Prioritize	i) Competitiveness
10. Ability to Make Decisions	j) Digital Competencies

Based on this observation, and apart from the key competence being required which is the drive and ambition of the entrepreneur to take the initiative in starting a new business, it is difficult to identify a clear pattern in terms of what are viewed as the key competencies for youth entrepreneurship in Ireland.

Further feedback from the experts indicated that other difficulties faced by Young Entrepreneurs include:

- Difficulties in accessing funding
- Lack of appreciation for the value of entrepreneurship
- Fear of failure and lack of suitable support structures
- Skills / information deficit

The experts also indicated that for Emigrant Entrepreneurs we need to be cogniscant of:

- Language issues
- Possible gaps in education / skills
- Lack of trust and related cultural stereotypes
- Lack of knowledge of the ,system‘ and ,structures‘
- Lack of embedded social capital or local market knowledhe and lack of access to networks
- Possible need for tailored supports / mentoring

4 Expert Stakeholder Input

In terms of the key issues of competencies and the expert stakeholder views, the key competencies required (as determined by the experts) in order of preference are:

- Taking initiative and the ability to take decisions
- Ability to prioritise and willingness to explore
- Ability to think critically
- Competitiveness and creativity
- Ability to Plan
- Leadership
- Digital competencies

In terms of the skills lacked by young Irish entrepreneurs the experts responded that the competency most lacking is ability to plan followed by:

- Ability to think critically and leadership
- Ability to prioritise
- Creativity, taking initiative and competitiveness
- Ability to take dexisions, willingness to explore and digital competencies

When asked about the extent to which lack of competencies act as a barrier to young entrepreneurs, the main issues arising was that it is lack of experience and skills which cannot be thought which were the main barriers for young entrepreneurs. These could be overcome by linking up with peers, mentors and simply experience over time. The lack of entrepreneurial culture and a fear of failure or a lack of willingness to take risks were also cited as barriers. Apart from competencies, access to suitable funding was also cited as a barrier.

Finally, in terms of minority entrepreneurs, experts felt that major issues / barriers included language issues, isolation in terms of access to contacts, state supports and customers, racial discrimination, etc.

5 Conclusion

Based on the outcomes of this analysis, the key competence required by entrepreneurs is the drive and ambition to take the initiative in starting a new business. Apart from that, it is difficult to identify a clear pattern in terms of what are viewed as the key competencies for youth entrepreneurship in Ireland. It is recognised that there is a need to innovate and change in terms of Entrepreneurship Education in Ireland and that learning and training needed to take account of structured learning but also of the socialisation of the learner, thereby highlighting a need for new methods of supporting and encouraging entrepreneurship.

Issues such as Ability to Plan, Creativity, Ability to Prioritize and Ability to Make Decisions are rated as important competencies amongst experts. This is because these issues cannot be easily delivered through formalised learning structures – rather they are intuitive based on the individual and are better developed through practice as well as facilitation by expert guidance.

Therefore a blended approach, such as that proposed in the I SEE YOU project is called for.